"Cape Town - Africa's Gateway. A traveller's and cultural guide to Cape Town and surrounds, with educational Xhosa language phrases." Development and evaluation of a hypermedia application for language learning.

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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 _____

Abstract

It is a common concern for many travellers to feel lost in the language and culture of another country. It can be exceptionally frustrating to tour a region and not be able to communicate with the locals. Therefore finding your way around, finding accommodation or bargaining for the right price will also be problematic.

The hypermedia computer application 'Cape Town – Africa's Gateway – A traveller's and cultural guide to Cape Town and surrounds, with educational Xhosa language phrases', was created to assist tourists visiting the Cape Town area. English and Afrikaans are commonly spoken in the Western Cape. English, being an international language, is spoken and understood by most Afrikaans speaking Capetonians. However, Cape Town and surrounds is also the home of many Xhosa speakers, of whom many do not understand or speak English well.

Tourists from other countries can be made aware of the diverse cultures in South Africa and the Western Cape area, especially the Xhosa culture. They could be motivated to communicate with Xhosa speakers directly by using their acquired knowledge of the Xhosa phrases through the use of the hypermedia application. Tourists can therefore travel through Cape Town without the help of a tour guide by using these phrases and information.

The hypermedia application was constructed in such a way, that tourists can find information about Cape Town, as well as Xhosa phrases relating to these topics. Videos and sound assist the users of the website to familiarise themselves with the Xhosa language. Many of the main tourist destinations in Cape Town are discussed. Additionally, there is a glossary with translations of Xhosa words and also an extensive help file to assist users who struggle in the website.

This minithesis contains the motivation and explanation of the hypermedia application. It also contributes to the studies of CALL (Computer Assisted Language Learning) through

the comparison of language learning theories and research in website design. These theories and website designs were used as an aid to create the informational and educational sections of the hypermedia application.

Opsomming

Dit is ‘n algemene gevoel vir menige toeris om in die taal en kultuur van ‘n vreemde land verlore te wees. Dit kan uiters frustrerend wees om deur ‘n land te toer en nie by magte te wees om met die inwoners te kommunikeer aangaande verblyf en die regte prys nie.

Die hipermedia-rekenaartoepassing ‘Cape Town – Africa’s Gateway – A traveller’s and cultural guide to Cape Town and surrounds, with educational Xhosa language phrases’, is geskep om toeriste wat die Kaapstad-area deurreis, te help. Engels en Afrikaans word algemeen in die Wes-Kaap gebesig en Engels wat wêreldwyd gepraat word, word deur die meeste Kapenaars gebruik en verstaan. Kaapstad en omliggende dele is egter ook die tuiste van menige Xhosa-sprekendes, van wie baie nie Engels goed praat of verstaan nie.

Toeriste kan bewus gemaak kan word van die uiteenlopende kulture in Suid-Afrika en spesifiek die Xhosa-gemeenskap. Hul kan oorreed word om direk met Xhosa-sprekendes te kommunikeer, deur gebruik te maak van die kennis wat hulle opdoen deur die hipermedia-rekenaartoepassing te gebruik. Toeriste kan deur Kaapstad reis deur die frases en inligting wat die program bied te gebruik en maklik met Kapenaars kommunikeer, met of sonder die hulp van ‘n toergids.

Die hipermedia-rekenaartoepassing is op so ‘n manier ontwerp, dat toeriste inligting oor Kaapstad en Xhosa frases oor dieselfde onderwerp kan vind. Videos en klank help die gebruikers van die webblad om hulself vertroud te maak met die Xhosa taal. Hoof-toeriste-bestemmings in Kaapstad word bespreek en daar is ‘n woordelys met vertalings van Xhosa woorde en ook ‘n uitgebreide hulpleêr, om gebruikers te help wat sukkel deur die webblad.

In hierdie tesis word die motivering vir die ontstaan en ontwikkeling van die hipermedia-rekenaartoepassing uiteengesit en ‘n verduideliking van die program self gegee. Die tesis wil verder ook bydra tot rekenaargesteunde taalonderrig (RGTO of in Engels CALL - Computer Assisted Language Learning) deur die vergelyking van taalleerteorieë,

webbladontwerp en daardie teorieë en webbladontwerpe wat gehelp het in die ontwerp van die informasie- en onderrigafdelings in die program.

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Table of Contents

List of Figures

Chapter 1: The Research Topic and Content

1.1 Introduction

The computer application, "Cape Town – Africa's Gateway – A traveller's and cultural guide to Cape Town and surrounds, with educational Xhosa language phrases," is an educational multimedia website, which is a combination of a tourism website and aspects of language learning. This application focuses on tourism. Therefore, large-scale use is made of graphics, such as photos and other audio media i.e. videos and sound, to support the body of text.

English is a well-known international language. It is spoken and understood by the majority of people in the world including South Africans. English is therefore used throughout the site to explain Xhosa phrases and to supply information about Cape Town and its surrounds. Xhosa is only used in the traveller's phrases sections. Finally, information on the different cultures of the Western Cape puts the history and character of the Cape and its people into context in a specially designed 'Cultural Aid' section.

The computer application is not a full-blown beginner's course in Xhosa, but the Xhosa language learning section can rather be seen as an electronic phrasebook. The objective is that travellers from other parts of the country and certainly other parts of the world can communicate with Xhosa speakers, thus helping themselves in certain travel situations in the absence of a tour guide or English translator.

The computer application is in website-format. It has information about general tourism destinations in and around the Cape Metropole. Commercial businesses like hotels, museums, winefarms, shopping malls and more might benefit from the exposure. On an educational and language learning level, tourists from other parts of South Africa and other countries can learn some crucial Xhosa phrases. This can make simple tasks like shopping and the search for accommodation much easier. These Xhosa phrases can also make the culture and the people more accessible.

Users who are connected to the internet, can click on the external links (for example links to homepages of Hotels etc.) and go to other pages on the World Wide Web, without leaving the application (another browser window pops up).

The role of this minithesis is to explain the planning, language learning methodology and web design research (site design, accessibility, multimedia use etc.) behind the application.

1.2 The Research Topic

The research topic can be defined as how to teach Xhosa to tourists without imposing a classroom situation upon them. This can be achieved by using a computer i.e. by developing a hypermedia application for language learning.

This hypermedia application is an educational language learning multimedia website with Xhosa phrases and information about Cape Town. The application will contribute to tourism through the education of tourists about the Xhosa language and culture.

The following aspects had to be taken into consideration:
The **Aim** of the application would not be to teach the entire Xhosa language to the learner. It is an introduction to the language through the use of basic travelling phrases, words and expressions which are bound to certain travelling contexts.

The **Outcome** would be that travellers will be able to communicate with Xhosa mother-tongue speakers (or other Xhosa second language speakers) in very basic Xhosa to meet their own needs. These needs could be to organise accommodation, to make a reservation at a restaurant, to buy food and clothes at a supermarket or to make use of public transport.

A few words or phrases can break the ice in any communication process. If the user is equipped with the correct knowledge of expressions and everyday phrases, it could be of great assistance to him/her.

Throughout the minithesis it will be explained how the multimedia website was planned, designed and developed and how the tourism and language learning elements were combined within the design.

1.3 The Research Content

Research on the topic includes a review of language learning theories and how they contribute to the methodology used in the application. General uses of CALL (Computer Assisted Language Learning) are explained and how CALL supports Foreign Language Learning.

An important aspect in language learning is knowledge of the foreign culture. Communication and culture go hand in hand. If a foreign language learner has prior knowledge of the culture of the language he/she is studying, it could speed up the learning process and make it easier.

The basic structure of the website application will also be investigated by looking at certain aspects of page layout, overall design, chunking of information, accessibility, navigation and the use of multimedia.

Another very important aspect of this study is the Quantitative Research element. The application was tested by numerous individuals by using a ticksheet questionnaire. Their findings were analysed and interpreted through the use of percentages. This part of the research intends to show the overall effectiveness of the application, but also its weaknesses.

1.4 Conclusion

The language learning application is aimed at those who wish to interact in Xhosa whilst experiencing the beauty of Cape Town and its many tourist attractions. Many Xhosa speakers are fluent in English and the language of most travel agencies, hotels and businesses are also English. For common courtesy purposes, many people have the desire to acquire the basic knowledge of Xhosa. Addressing people in their mother-tongue helps to foster better communication and cultural awareness.

For the above-named reason, I have tried to develop an application that can fulfil the tourist's needs concerning information on the Xhosa language. The combination of an educational and informational website can give people direct access to what they are looking for (information on Cape Town or Xhosa phrases) and it can all be found in one location.

Quantitative research clarifies whether this application has succeeded in supplying users with enough information on travelling in Cape Town and learning Xhosa.

Chapter 2: Language Learning Methods and Approaches, Computer Assisted Language Learning and Culture

2.1 Introduction

The 'virtual classroom' that a learner enters when using a CALL application needs just as much lesson planning, language teaching characteristics and language learning effort from the students as that of a real classroom.

The teacher cannot be present when a learner uses a self-study CALL application. Thus the learning methodology underlying the application must be clear. The application must aim at changing the knowledge, skills and beliefs of a learner to promote language learning. Teaching requires knowledge about the learners as well as lots of planning and organisation.

When the language in question is not a learner's native language and not spoken freely in their immediate surroundings, it is called Foreign Language Teaching. To teach a foreign language, aspects of the foreign culture must also be considered.

Learners must take a greater degree of control over the content and methods of learning whilst acquiring a foreign language. As they have to develop a capacity to learn independently, the context wherein they learn should allow them to do so. In this chapter, Language Learning methods and approaches which influence many aspects of Foreign Language Teaching (FLT) and learner autonomy will be discussed.

2.2 Language Learning Methods and Approaches

The application 'Cape Town – Africa's Gateway' consists of an educational section and an informational section. This section on Language Learning Methods and Approaches consists of three parts: 1. A historical overview, 2. Cognitive Learning Psychology (CLP) and Constructivist Learning Theory (CLT) and 3. Cognitive Theories of Instructional

Design. The historical overview, CLP and CLT, will try to explain the thoughts behind the educational section of my application and the Cognitive Theories of Instructional Design, will try to explain the thoughts behind the informational section.

2.2.1 An overview of the history of Foreign Language Teaching

The approach to teaching a foreign language changed throughout the years. In the mid-1880s to the mid-1980s, the language teaching profession was involved in a search for "methods" that would successfully teach students a foreign language.

Edward Anthony (1963) gave a definition of three hierarchical elements, namely approach, method and technique. An 'approach' is a set of assumptions dealing with the nature of language, learning and teaching. 'Method' is an overall plan for systematic presentation of a language based upon a selected approach. 'Techniques' are the specific activities manifested in the classroom that are consistent with a method and thus in harmony with an approach. Anthony's approach, method and technique were renamed by language theorists to approach, design and procedure, with a superordinate term to describe this three-step process. The process was now called 'Method'. The term 'Method' was an umbrella-term for the interrelation of theory and practice. (Brown 1994, p.48)

In the western world (early Greek and Latin times) foreign language learning was thought to promote intellectuality and was indispensable to a higher education. For hundreds of years language was taught by using the 'Classical Method'. There was a focus on grammatical rules, memorizing of vocabulary and of various declensions and conjugations. Translation of texts and written exercises were compulsory.

In the nineteenth century the 'Classical Method' was known as the 'Grammar Translation Method'. This was due to the use of grammatical rules as the basis for translation from the foreign to native language. Major characteristics of this method were that classes were taught in the mother-tongue with little active use of the target language. Vocabulary

was taught in the form of lists of isolated words. Grammar provided the rules for putting these words together. The reading of classical texts began at an early stage. The only drills were exercises in translating disconnected sentences from the target language into the mother-tongue while little or no attention was given to pronunciation. Until very recently the 'Grammar Translation Method' was used in many schools around the world. Many learners disliked this method of studying a foreign language. (Brown 1994, pp.52, 53)

At the turn of the century (1900) (Brown 1994, pp.55) the 'Direct Method' became increasingly popular and widely known. The basic understanding of the 'Direct Method' was that foreign language learning should be more like first language learning. There must be a great deal of interaction and spontaneous use of grammatical rules. For this method to work, classroom instruction was conducted in the target language. Everyday vocabulary and sentences were taught and oral communication skills were built up around question-and-answer exchanges. Grammar was taught inductively and both speech and listening comprehension were taught with an emphasis on correct pronunciation and grammar. This method needed individual attention and intensive study. In classes with too many students and too little time, individual attention to learners was limited. Many students did not study as intensively as they should have and needed constant motivation. It was no surprise that many schools returned to the 'Grammar Translation Method'.

Between the 1930s and 1950s (especially in America) there was a revolution in language teaching. Intensive language courses were designed which focused on oral/aural skills. Almost none of the grammar and translation of the earlier method was found in these foreign language learning classes. This new method, the 'Audiolingual Method', was firmly grounded in linguistic and psychological theory. New material was presented in dialogue form. There was a dependence on mimicry, memorization of sets of phrases and the structural pattern was taught using repetitive drills. Vocabulary was strictly limited and learned in context. Much use was made of tapes, language labs and visual aids.

Successful responses were immediately reinforced. The ‘Audiolingual Method’ enjoyed many years of popularity. (Brown 1994, pp.56, 57)

In the 1970s “designer” methods were marketed by entrepreneurs as the latest and best application of multidisciplinary research findings of the day. One of these “designer” methods was ‘Community Language Learning’. Language linguists started looking at the deep structure of language. A class was rather seen as a group and learners as clients. The group of clients had to establish in their native language an interpersonal relationship and trust. Clients were complete beginners in the foreign language. When one client wished to say something to the group or to an individual, he or she said it in the native language and the teacher or counselor translated the utterance back to the learner in the foreign language. The learner would then repeat the sentence (in the foreign language) as accurately as possible. The conversation continued in the group through the counselor.

If needed, the counselor took a more directive role and provided some explanation of certain linguistic rules. There was always the problem that the counselor could be too non-directive. Students often need direction in understanding the first stages of foreign language learning, i.e. the structure of the foreign language. (Brown 1994, pp.58, 59, 60)

One of the other new methods was ‘Suggestopedia’. “This method was derived from a Bulgarian psychologist Georgi Lozanov’s (1979) contention, that the human brain could process great quantities of material if simply given the right conditions for learning. These included a state of relaxation and handing over of control to the teacher”. (Brown 1994, p.61)

Music is central to this method. Baroque music was ideal, for it has a specific rhythm. It leads to relaxed concentration, thus decreasing blood pressure and pulse rate. Students would become “suggestible”. In the language learning session there would be silence in the classroom. The music was turned on and the teacher would read passages from the textbook or other teaching material, while students followed in their books. There would be silence for a while and then students were instructed to close their books and eyes and

relax while the teacher reads the passages again. Students would not receive grammar homework on these passages. They only had to read it once before they went to bed and after they got up in the morning. Although highly criticized, 'Suggestopedia' gave some insight into the power of the human brain. Tertiary institutes also use this method, for example the Department of Modern Foreign Languages at the University of Stellenbosch (near Cape Town, South Africa), in teaching German to first year students.

Another teaching method, called the 'Natural Approach', is centered on the theories of second and foreign language teaching, which was widely discussed by Stephen Krashen. Krashen (1982, 1991) felt that "learners would benefit from delaying production until speech 'emerges'" (Brown 1994, p.65). It is important to promote a relaxed classroom atmosphere so that learning of the foreign language can take place. Learners should not feel stressed or anxious in the classroom, for this might inhibit them from producing speech. 'Comprehensible input' is essential for triggering the acquisition of language. The 'Natural Approach' was aimed at the goal of basic personal communication skills, which is everyday language situations like conversations, shopping, listening to the radio etc. The task of the teacher was to provide comprehensible input i.e. spoken language that was understandable to the learner. Learners need not say anything until they felt ready to do so.

"The teacher was the source of the learner's input and the creator of an interesting and stimulating variety of classroom activities…." (Brown 1994, p.65) Although the 'Natural Approach' was criticized for letting the learner decide when to 'speak', it is a valid point as most teachers are prone to insist that learners speak immediately.

'Notional-Functional Syllabuses' evolved from the above-named methods, which in turn provided structure to the development of communicative textbooks and materials for language learning. A typical unit in such a textbook included a presentation of dialogues, conversation practice, role plays and an array of language exercises. (Brown 1994, p.67)

The Foreign Language learning section of the CALL application 'Cape Town – Africa's Gateway' was carefully comprised after looking at each of the above mentioned Methods. Each method has valuable points and a few inspired some ideas for my application. The 'Direct Method' contributed the following valid points: grammar is important, but not as important as in the 'Grammar Translation Method'. Speech and listening comprehension is also important. The 'Audiolingual Method' and 'Functional-Notional Syllabuses' are important due to the importance of dialogues and content-specific vocabulary. The 'Natural Approach' and its emphasis on comprehensible input had a definite influence on how I structured my language learning sections.

By keeping the above-named approaches in mind, learners were supplied (in the application) with comments which motivates them towards producing their own speech products (in Xhosa), but never pressuring them to do so. Lastly it is important to remember that the cultural element is the key to language acquisition. It can be beneficial to the learner if 'Intercultural Communication' takes place. This means that even though the learner belongs to a different culture he/she can accept the differences between his/her own culture and the foreign culture, through the study of the foreign language.

> "Language and culture are intricately intertwined. Anytime you successfully learn a language you will learn something of the culture of the speakers and that language…..Whenever you teach a language, you also teach a complex system of cultural customs, values and ways of thinking, feeling and acting." (Brown 1994, p.25)

The learning of the culture can thus make acquisition easier. When the learner has the chance, (after studying the application 'Cape Town – Africa's Gateway') he or she may be able to speak to Xhosa mother-tongue speakers, thus having the insight of cultural differences. (What not to say or do, traditional elements etc. as said in the previous quote.) See section 2.4 for more information on the influence of Culture.

2.2.2 Cognitive Learning Psychology and Constructivist Learning Theory

> "Beneath all the methods lies a progression of pedagogical efforts and theories to look carefully at the properties of communicative language and language acquisition, to ask how learners can best internalize a second language and to experiment systematically towards accomplishing learners' communicative goals." (Brown 1994, p.77)

Cognitive Learning Psychology (CLP) and Constructivist Learning Theory (CLT) are two learning theories, which contemplate ways and means of language teaching that are beneficial to learners. These theories help students study on their own by developing learning strategies and thus becoming autonomous learners.

CLP and CLT both have their own characteristics. Cognitive Psychology sees the human being as an information processing system. Many assumptions are made, that this system is equipped with complex knowledge components in which the total knowledge is structured and stored in a way that there is access to it at all times. Another assumption is that new knowledge is created through interaction between knowledge (stored in long-term memory and that is already available) and incoming stimuli. These mental operations optimize the knowledge system, i.e. they control the increase in knowledge and also rearrange the knowledge thus making it available.

Constructivist Learning Theory feels that construction processes differ between individuals and therefore the results of learning processes are never the same. Learning is always 'subjective' and therefore not the same for any two individuals. All new knowledge implies a restructuring of the information already available. Social context and interaction are of primary importance in the learning process and language is seen as a tool for interaction. This is the focal point. With language, a human being can think and learn from each other and therefore about each other. An important point is that self organisation takes place. Human beings are closed systems that can organise both themselves and the world around them. This self-organisation is directly connected with

self-responsibility. Human beings are also responsible for learning on their own. This can be linked to learner autonomy where learners must learn on their own through the use of effective learning strategies. In this way they ensure their survival as systems.

Learning can thus be seen as a discovery process in which hypotheses are constantly formulated and tested. Learning is an autonomous process and is thus done independently by the learner. It (learning) is seen as an active construction process where both incoming stimuli and already available information form a whole. Learning is also a course of action, driven by strategies which are supported by external measures. It is clear that the learning process is enhanced through a rich and authentic learning environment. (Wolff 1996, pp. 541-560)

Constructivism suggests that although there is a real world out there, it has no inherent meaning and meaning is imposed onto the world by people and cultures. The process (i.e. learning process) is more important than the end-product. Thus, guided discovery plays a more important role in an authentic learning environment than an artificial, over abstracted learning environment.

Constructivism suggests that cognition, i.e. learning, is the result of mental construction and knowledge is not received from outside, but by reflecting our own experiences. By fitting new information together with what we already know, we construct knowledge in our head. In that manner we construct our own understanding of the world we live in.

Emphasis must be on the learner, for it is the learner who interacts with objects and events and as a result gains the understanding of the features held by such objects or events. Learning is affected by the context, beliefs and attitudes of the learner. In the learning process, a teacher can guide a student thus shaping these beliefs and attitudes without imposing on the individual discovery process. There are a few important points to look at when these theories are used in real-world practice. Authentic material must be used to create more opportunity for the learner to connect his/her knowledge with new knowledge. The learning environment must be complex and learning material should

correspond with reality. By creating a learning environment which corresponds with real life, the skills and knowledge developed must also be suitable to use in real life, for example:
When in certain real-life situations, i.e. ‘greeting’, what sentence structures should be used? Would it be acceptable for a learner to use what he/she learnt in the classroom in every ‘greeting’ situation? Surely every ‘greeting’ situation is different. When greeting people in a foreign language (for example Xhosa), the learner will have to adapt his/her sentence construction to time, place and situation.

Real-life learning environments and authentic contexts can all contribute to the construction of an awareness of the learners own knowledge construction process. Teaching must also motivate for an independent choice and use of learning and working methods which support the learning process.

Referral to reality is very important. By using real-life situations, it will be easier for the learner to remember certain phrases and words. In my application (‘Cape Town – Africa’s Gateway’), I created dialogues and speech acts based on real-world situations. Learners can use the phrases they learned in different places, for example phrases concerning ‘greeting’, ‘buying food or clothes’, ‘seeking accommodation’ or going on an ‘outdoor excursion’. Cognitive foreign language teaching is the advancement of language awareness through discovery and active research by students and not through formal grammar teaching.

It is important that a language learner develops learning strategies. Learning strategies refer to methods that students use to learn. This can range from techniques for improved memory to better studying or test-taking strategies. Through learning strategies learners can plan ahead and through active practice they can improve and review their skills of the foreign language.

If learners are to develop their own learning strategies they must be able to learn autonomously. Learner Autonomy is the ability to take responsibility for one’s own

learning process. Autonomous learning can take place when a learner is aware of his/her own learning strategies. They must be able to determine their own learning methods, content and progress. An autonomous learner can choose his/her own learning methods and techniques and then evaluate that which has been learnt.

Autonomous learning in my application means that the user/learner must be able to learn on his/her own, because there won't be the help of a teacher or study aid. The learner has to find his/her own way of overcoming stumbling blocks, such as pronunciation and the structure of the language. The learner will have to make use of the resources supplied within the application.

Besides being an autonomous learner, it is important to know how learners think. Cognitive and learning styles play a big role here:

> "Cognitive styles refer to the preferred way an individual processes information […..] styles describe a person's typical mode of thinking, remembering or problem solving. Furthermore, styles are usually considered to be bipolar dimensions where as abilities are unipolar (ranging from zero to maximum value). Having more of an ability is usually considered beneficial while having a particular cognitive style simply denotes a tendency to behave in a certain manner. Cognitive style is usually described as a personality dimension which influences attitudes, values and social interaction." (Kearsley, 2004 a)

Learning styles specifically deal with characteristic styles of learning. Kearsley (2004 a) proposed a theory of experiential learning that involves four stages. These are known as:

1. Concrete experiences
2. Reflective observation
3. Abstract conceptualization
4. Active experimentation

Each person has a different combination of learning styles. Theoretically, cognitive and learning styles could be used to predict what kind of instructional strategies or methods would be most effective for a given individual.

One of the most important issues in the application of Learning Theory is sequencing of instruction. The order and organization of learning activities affects the way information is processed and retained. Linear or hypertext sequence of instruction could both influence the way a learner learns. Linear sequence of instruction guides the learner on a pre-determined (by the teacher) learning path in the learning application. Hypertext sequence of instruction gives the learner the freedom of discovering new information on his/her own by going through the information in any sequence he/she chooses. It is important to adapt instruction to the experience or interests of learners. (Kearsley, 2004c)

2.2.3 Cognitive Theories of Instructional Design

The link between instructional design and my language learning application is that instructional design is founded on good grounds of information presentation. As a result information must be available for learners and be applicable to the real-world.

Instructional Design can be identified as the design of systems (computer related) to better workplace education. Although instruction takes place, it is not focused on specific tasks but on generic areas of knowledge and skills. Workplace education is a vital link between employees and their employers through programs that provide awareness, orientation and an overview of the workplace.

These same principles that Instructional Design is based on can be applied when designing language learning applications. Language learning applications are a vital link between the learner and the teacher. Through this application a learner gains valuable knowledge about the foreign language. Similarly, this language application is designed with a specific aim.

Schneider (1995) quotes Gagné (1985) on his nine universal steps of instruction, which should be found in any instructional context:

1. Firstly, the attention of the audience must be gained by presenting them with a good problem, a new situation and plenty of multimedia.
2. The goal, task and state of a lesson should be described by asking what students will be able to accomplish and how they will be able to use the knowledge.
3. The recall of prior knowledge relevant to the current lesson should be stimulated (facts, rules, procedures or skills). It must show how knowledge is connected and provide a student with a framework that helps learning and remembering. Tests may be included.
4. A consistent presentation style and chunking of information must be followed, especially when material such as text, graphics, simulations, figures, pictures and sound are to be learned. Memory overload should be avoided and the recall of information should be promoted.
5. There should be guidance for learning and how the content should be processed.
6. There should also be performance 'practice'. The learner must be presented with exercises pertaining to the recently acquired behaviour, to practice skills or apply the knowledge.
7. Informative feedback should be provided to show correctness of the learner's response and to analyze the learner's behaviour. This (feedback) could also present a good solution for the question / problem.
8. Performance can be accessed through a test and after a lesson has been learned, it could give some general progress information.
9. There must be enhancement of retention and transfer while you should inform the learner about similar problem situations and provide additional practice. Put the learner in a transfer situation and let the learner review the lesson.

The field of Cognitive approaches to Industrial Design found that learners in general, learn easier when information is chunked and presented in a linear fashion. Firstly they should know the needs and goals for them to finish the program and then proceed with the program. It is important that many prototypes are designed to test the user interface,

flow of information, effectiveness and appeal of the instructional strategy and to get user feedback and reactions.

There is a paradox involved when foreign languages are taught. A decision must be made as to how much help the learner receives (e.g. translation into the native language etc.). Many fields where learning is concerned have the same problem, as can be seen from this statement:

> "Shall I simplify the problem and lead students by the nose or shall I throw them headfirst into the whirlpool of new information and try and hold them up as they gasp for air?" (Wilson 1997, *Cognitive Approaches…)*

There is a continuing problem between simplification and control versus exploration and exposure to real-world complexity. This simplification can also be called 'spoon-feeding'.

> "To learn, users must interact meaningfully with the system, but to interact with the system they must first learn?" (Wilson 1997, *Cognitive Approaches…)*

This same problem occurred while I was designing 'Cape Town – Africa's Gateway'. The target audience are tourists, who are used to surfing the web. The problem arises where the Xhosa phrases are concerned. Should all the phrases contain English translations, or should they at some stage be able to recognize words and structures? All the phrases were eventually given English translations and audio files so that users can listen to the phrases (in Xhosa) too. The users are now sufficiently equipped with all the learning material and resources to help them.

The cognitive approach also stresses the use of authentic texts to teach knowledge and skills in contexts that reflect the way the knowledge will be useful in real life situations.

The use of multimedia and stop/play videos will help to introduce these real-life situations to learners.

Cognitive flexibility theory stresses that learners must be confronted with real-world situations as content, which avoids over-simplifying instruction. This requires knowledge construction and not knowledge regurgitation. A primary teaching strategy would be the use of hypertexts. Hypertext is text which is not constrained to be linear. Hypertext systems allow users to author, edit and follow links between different bodies of text, which allows students considerable control as they explore and browse.

The application 'Cape Town – Africa's Gateway' makes use of real-world situations. Tourists are confronted with dialogues and phrases which they would be using in real-life when touring. The application also has many hypertext-based links. The learner/user can decide where to go in the program, thus giving him/her control of their learning environment. All of this prevents the constricted 'classroom situation'.

People construct meaning from their experiences. Foreign Language Learning should be meaningful and derived from an authentic context. People should thus be allowed to pursue individual learning goals.

2.3 Computer Assisted Language Learning (CALL)

Computer Assisted Language Learning (CALL) may be defined as "the search for and study of applications of the computer in language teaching and learning". (Levy 1997, p.1)

One of the uses of (language technology) CALL is to automate irrelevant and tedious tasks in much the same way course-ware (such as textbooks) does. This gives the teacher and learner the freedom to concentrate on more essential tasks. CALL software is used in individual self-instruction, in businesses and in universities to teach foreign languages. CALL surprisingly relies on technology that is not specifically designed for language

teaching, for example, hypertext, simple database technology, networking and authoring systems (e.g. Authorware).

Applications that make use of multimedia, the Internet and the World Wide Web have provided an incredible boost to CALL applications. Millions of viewers and learners have access to CALL applications everyday through the web. Desktop Computers are now able to play natural human speech with full screen interactive video. This was impossible just a few years ago. With a few clicks, users can connect to the Internet and have real-time virtual chats among native and non-native speakers.

It is important to know how learners interact with the computer whilst learning a foreign language. Therefore human-computer interaction is a major research field in CALL. Levy (1997, p.4) maintains that there are two strands to the theoretical framework for CALL. One strand is guided by developers who rely on intuition rather than on research of learning. The other strand is guided by cognitive psychology and second language acquisition theories.

Levy (1997, p.71, 72) also feels that English as a Foreign Language and Foreign Language teachers have been at the vanguard of the development and use of computers in the humanities and computers in education.

According to Levy (1997, p.221), "a theory of CALL would almost certainly derive from the field of second language acquisition and human-computer interaction." A CALL designer should therefore be aware of the target audiences' computer interaction to help him/her to design a successful CALL application.

Many students are much more at home with a keyboard, mouse, monitor and CD's than they are with pencil, paper and books. Foreign language teachers are starting to realise that they can stimulate creativity and imagination by focussing a learner's attention on-screen. Teachers should make an application so interesting that the learner wants to learn

and keep coming back for more. This is one of the positive things about CALL. It can revolutionise language learning and teaching in many ways.

Not all students master a language at the same rate and all do not have the same aptitude, proficiency, confidence, motivation or background. Tedious tasks (like grammar and vocabulary) which take up a lot of classroom time can easily be transformed into a CALL application. Slower learners can use the application outside the classroom and catch up on grammar.

> "CALL has the potential to enhance almost every facet of language learning, to create new configurations for the presentation of information from different sources and different media, to individualise instruction and to change patterns of use of lesson time and lesson programming." (McCarthy, 1992)

Carol Chapelle (1998*)* writes that there are certain hypotheses relevant for developing multimedia CALL. In one of these hypotheses she stresses that the linguistic characteristics of target language input need to be made salient. This relates to Krashen's (1982) idea that all target language input facilitates second language acquisition. This is done by distinguishing between useless language noise and target language input that may influence language development. Materials used, must prompt learners to notice certain syntactic forms. CALL design methods must have effective "input enhancement". Information to be learned must therefore be enhanced by interesting graphics, media or colours.

Another hypotheses states that learners need to have opportunities to produce target language output. Output can be produced mindlessly or can be created by the learner under conditions that facilitate acquisition. This is called comprehensible output. Learners might need an audience for this linguistic output.

In the application 'Cape Town – Africa's Gateway', the multimedia aspects of the program are valuable input for the learners. Video, sound and graphics play a big role in language acquisition. Learners are encouraged by audio files, while on the same page they can follow the dialogue. Two types of comprehensible input (audio and text) collaborate so that comprehensible output can be achieved by the learners.

2.4 Culture

Culture can be defined as:

> **"**The complete way of life of a people; the shared attitudes, values, goals and practices that characterize a group; their customs, art, literature, religion, philosophy, language etc.; the pattern of learned and shared behaviour among the members of a group." (*Define: Culture,* Cobblestone Publishing Company, 2004)

In my application, culture is an important aspect of language learning. Culture is the 'how' and 'why' of people – how they do things and why they say things. The Xhosa are a very 'obedient' culture – the spirits of the forefathers play a big role in their religion and elders get the utmost respect. In the use of idiomatic expressions, these cultural traits are very important.

Foreign language learning and culture are deeply intertwined. It is very important that the foreign language learner is presented with all the aspects of the foreign culture whose language he/she is studying. If this does not happen, there might be the risk of the learner experiencing a culture shock. It (Culture shock) is defined as follow on the HyLL website: (*Culture,* 2004) "A sense of confusion and uncertainty sometimes with feelings of anxiety that may affect people exposed to an alien culture or environment without adequate preparation."

This has many implications for the development of language learning applications. The content of the application should be culturally acceptable to the users and to the culture in

question. Multimedia use should also be considered. Explanations concerning videos, graphics or anything foreign to a certain culture, should be given.

It is very important to remember that when you learn a foreign language, it involves an understanding of the corresponding culture. You cannot just string a few words together, make a quick sentence out of it and accept that this is the correct use of the language.

Anon (2004, *Taking it Global…*) says:

> "It is often uncomfortable to be in a country where everyone only speaks the native language. Why should there be this problem? Communication is the key to success. As the world advances, more and more countries are having to team up and work together to solve problems that occur globally. The people within those nations should be just as responsible as their leaders to know the customs and languages of those who they work with. Only then can there be peace…."

Different cultures have different ways, tones and hidden meanings in what they say. With the Xhosa language (as in the application 'Cape Town – Africa's Gateway'), there are many idiomatic expressions which are being used in everyday speech. This is also known as figurative speech. Many foreign language learners might not know what a certain sentence means. Here is an example:

'Akukho krebe?' – Are there any sharks?

The literal meaning of this sentence in English is: 'Aren't there any Sharks?'

The Xhosa sentence is written in a negative construction. If it was written in the positive, as in English, it seems like someone is looking forward to the prospect of there being sharks as is evident in this example:

'Kukho ookrebe?' – Are there any sharks?

The meaning stays the same in English. The above is only a small example, but many more are important to know. In the section involving 'Greetings' in the application, it is explained that there is a great deal of tradition involved when you greet Xhosa people.

Upon walking into a room with people of different age groups, it is polite to always greet older people first.

The greeting of many people at once will also always be aimed at older people in the room (out of respect). See the example below:

'**Molweni manenekazi'** – Hello ladies

as opposed to

'Molweni makhosazana' – Hello young ladies

2.5 Conclusion

The different Language Learning theories certainly have a great impact on CALL and the design of my application. Cognitive Learning Psychology and Constructivist Learning Theory hold valid points concerning learner autonomy and learning strategies. This is particularly relevant to my application, due to the fact that the users will be working alone (no classroom or teacher guidance) and will have to develop their own autonomous learning skills. For this to be successful, the application has enough resources (i.e. Xhosa phrases, video and sound materials, pronunciation and structure guide and a glossary) to help the learner acquire the language.

Instructional Design contributes its structural- and instruction friendly attitude to language learning. This includes the fact that learners must be confronted with real-world scenarios, as is done in my application.

CALL definitely has the potential to take language learning to new limits. Today's computers are able to handle big video and sound files, while processing speed is greater and faster. The information mentioned afore all contributes to the videos and sound playing smoothly, clear and easily. Monitors have greater resolution and millions of colours as opposed to the 256-colours of about five years ago. All of this makes interactivity possible and much easier. Learners do not have to wait evermore when they click on links to hear the sound or for the video to play. Feedback is immediate and can

also be supported by sound, video or graphics. The application (‘Cape Town – Africa’s Gateway’) has small ‘javascript’ quizzes which enable users to test their knowledge on a certain topic. It also scores them, but gives valuable feedback in the process.

Finally, it can never be stressed enough how important culture is and how big a part it plays in foreign language learning and teaching. Language learning and culture should be combined in all foreign language teaching. For this reason, my application is set up with ‘Did you know’ pop-up’s which have cultural information on Xhosa and the Xhosa-speaking people.

Chapter 3: Hypermedia Web Design

3.1 Introduction

Hypermedia is defined as multimedia hypertext. Hypertext in turn is defined as text which is not constrained to be linear. Hypermedia is a term used with hypertext, which is not constrained to text and can thus include graphics, video and sound. The use of hypermedia includes linking between interactive pieces of work (sound, video, text which forms a link to other documents) on the Internet.

When designing Hypermedia CALL applications, there are many things to remember concerning page design, accessibility, multimedia use and more. The rest of this chapter will consist of a few ideas for designing hypermedia CALL applications and which of these were implemented in the application 'Cape Town – Africa's Gateway'.

3.2 Web Design elements

3.2.1 Planning the Site

Wendy Willard (1998) defines five phases of Web Design. The first phase would be to define the scope. This involves information gathering, background research, comparative studies between design methods, risk and budget analysis, understanding time constraints and establishing goals and targeting the audience. The scope needs to be clearly defined. If the scope is not clearly defined from the beginning, there might be problems later on in the program. These problems could have been prevented earlier on.

The second phase concerns all tasks in planning the project. All the information gathered needs to be re-evaluated and verified. The architecture of the site needs to be developed and the framework built. Sitemaps and flowcharts are commonly used in this part of development. Content needs to be developed and specific features of the site such as

sound and dynamic content (slide-out menus, dynamic HTML elements) are defined and approved.

The third phase includes designing and testing. Designers must work to add visual representation to the thoughts and ideas presented in the first two phases. The look and feel of the webpage (layout, multimedia graphics, text) is established. Usability is the ease of use of the site and defines the user-friendliness of a website. Usability is very important, so testing takes place even though the site is not entirely finished. Testing can check HTML tagging bugs to programming errors or just give feedback on the usability of an interface.

Phase four is production and implementation. This phase encompasses the merging of content with the designed layout. All pages are then coded and graphics produced. The testing that takes place now must ensure that the site performs at its highest level. All the final pieces are put into place.

Phase five is maintenance and updates. This phase could include the other phases mentioned before if re-design is needed or if additional content is added.

3.2.2 The User Interface

The Graphic User Interface is the part of the software which the user interacts with. An example would be when you switch on the computer: you have a Windows (or Mac) interface with a desktop and icons on the desktop. By clicking on the icons or the start button, you are making use of the graphical user interface to interact with the computer.

Graphic user interfaces (GUI's) were designed to give people control over their personal computers. This level of design sophistication is expected from web pages too. The designer needs to provide for the needs of all the potential users and never require readers to conform to a restricting interface. A user-interface can be restricting when a user has

little means of navigating through the site. The user should have the freedom of deciding where to go in the site.

Navigation always needs to be clear and consistent. Users should always be able to easily return to the 'Home' page and other main navigation points. Graphic buttons provide basic navigation links and the graphic tells the user exactly what to expect. Graphic headers or banners should also be consistent. A button bar should be predictable and provide a consistent graphic identity throughout the site (see page 29 of this minithesis, for an example of a consistent button bar, which can be found in my application).

Users want to obtain information in the least amount of steps. Real content should only be a click or two away. The interface should always be simple, familiar and logical. The user interface of the website should follow general navigation and layout conventions of major websites, because the users will already be used to those conventions. By using the same layout grids, graphic themes, editorial conventions and hierarchies of organisation, the user will feel more at home and go through the site with ease. There should also be consistent visual and functional confirmation of the user's whereabouts in the site, either in the title bar, in the design, part of a graphic, navigation buttons or uniformly placed hypertext links.

Accessibility is very important. A defining principle of the web is that it should provide all people, regardless of physical or technological readiness, with access to information. When there is information in any medium besides plain text in your website, there should always be an 'alternate' or fallback. One example is 'alternate' text. Users without graphics capabilities can then function on the pages with descriptions only. Blind users (using specially designed software) will hear the alternate messages and will not fail to benefit from the content of pictures and graphic buttons.

To make content design more uniform and consistent, cascading stylesheets can be added to the website (a very simple stylesheet is also used in my application). Pages can be customised and formatted by users if for example colours present to be a problem. With

CSS-styled pages the user can transform web content into a format that addresses their requirements for accessibility. The designer or the user can change the stylesheet to suit his/her needs. These needs can range from colour-use (user may be colour blind) to text size. The use of stylesheets also helps to make the upkeep of a website easier.

A big problem that I also experienced, is not knowing the state of a user's computer and browser. Most users don't have up to date equipment and a fast internet connection. A solution can be not to design for **your** machine or the lowest machine (versions of browsers and equipment wise), but to design for an average reader/user.

An important aspect of navigation that I have applied in my application ('Cape Town – Africa's Gateway') is applying 'previous' and 'next' buttons, instead of 'back' and 'forward' buttons. With 'previous' and 'next' buttons in the document, the buttons are fixed links to associated documents.

With 'back' and 'forward' buttons a reader might want to retrace his/her steps to other parts in the application that he/she already visited. These buttons will work on the same principle as a browser's 'back' and 'forward' buttons, which can take you to any place in the application where you have been. The 'previous' and 'next' buttons in my application can only take the user through a predetermined path (as laid out by me), in a linear sequence.

The buttons don't prevent users from reading information wherever they choose, but they allow the readers to follow the sequence I have laid out. For example:

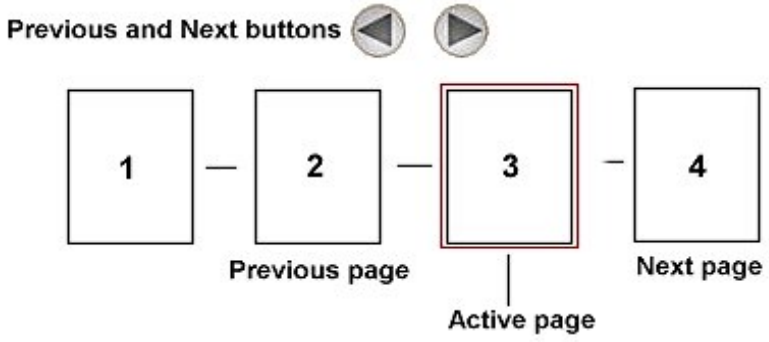

Fig. 1 Linear navigation through the use of Previous and Next buttons

Button bars can be built with text-based links or a series of individual button graphics at the top or bottom of the page. I have added graphic buttons and a jump menu at the bottom of the pages in my application. Below is an example of the button bar. This is the lower level of navigation. (3rd level of navigation)

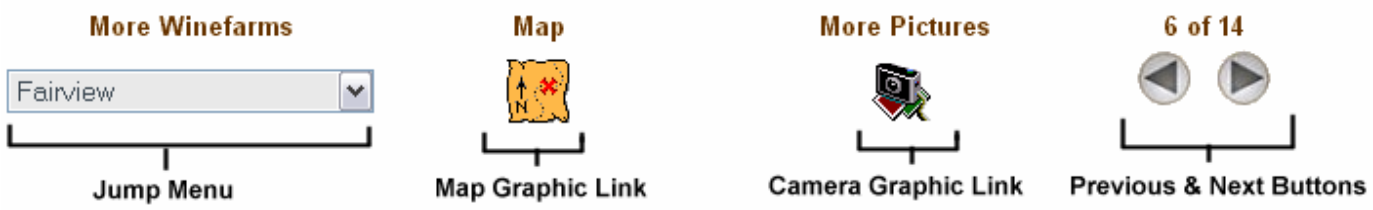

Fig. 2 Lower level menu button bar with graphic buttons and jump menu.

The application is frame-based. The primary way of getting around the site is the main menu which is always present. (See Fig. 3) The second level of navigation are hypertext links at the top of the page just below the banner graphic. (See Fig. 4)

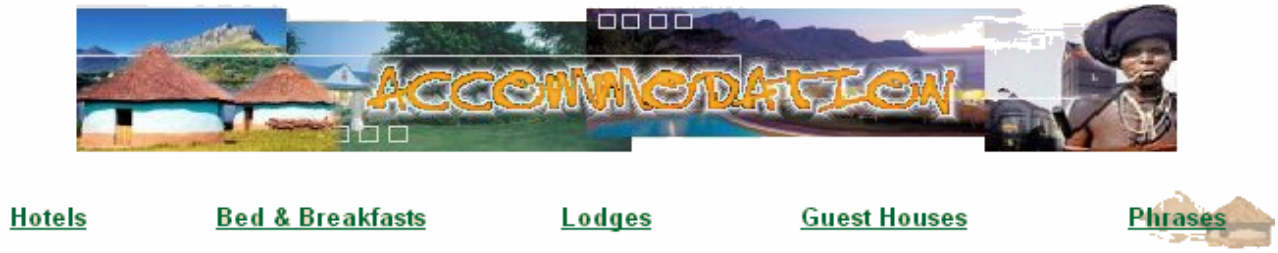

Fig. 4 Second level of navigation. Banner graphic with hypertext links

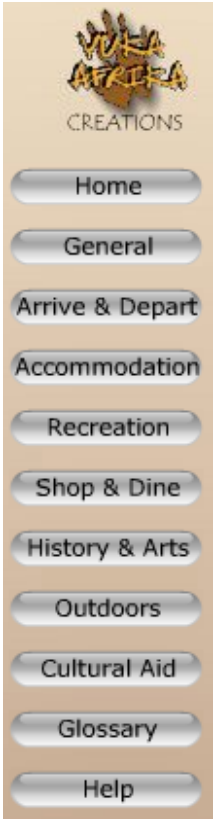

Fig. 3 Main Menu with button graphics and logo

3.2.3 The Site Design

The site design is dependant on an organisational framework. This once again depends on the user needs and how you 'chunk' your information. *Webstyleguide* (Lynch and Horton, 2002) proposes five basic steps in organising information:

1. Divide content into logical units.
2. Establish a hierarchy of importance among the units.
3. Use the hierarchy to structure relations among units.
4. Build a site that closely follows your information structure.
5. Analyze the functional and aesthetic success of your system.

The best way to organise information is to 'chunk' it. A 'chunk' is an easy legible piece of text or graphics which contains important points of information in a page and doesn't fill more than one computer screen at any time. The concept of a chunk of information must be consistent with common sense, logical organisation and convenience. Concise 'chunks' fill a computer screen. Long web pages tend to disorientate readers.

In my application, I have organised information into 10 logical units. Information is 'chunked' according to topics (i.e. sections with similar topics of interest). The different units are:

1. Home
2. General
3. Arrive & Depart
4. Accommodation
5. Shop & Dine
6. Recreation
7. History & Arts
8. Outdoors
9. Glossary
10. Help

I have tried to chunk information and limit the information on each page to one screen, but this is not always possible. Where the Xhosa phrases are concerned, I felt it was better to keep all learning content together, but also not to make the pages too long. This keeps the learner focused on what needs to be learned on a certain page. Information is not scattered over 3 - 4 pages. Information is still organised into easily understandable

and legible chunks, but pages are a bit longer to keep certain concepts and thoughts of a topic together.

The phrases that were used are based on everyday travel situations. The phrases are easy to understand, with English translations and sound files. By asking numerous travellers what they would want from an electronic phrasebook, I finally compiled the Xhosa phrases sections in the order that you see on page 30. The phrases start in the General section. Information and phrases about greeting is supplied as well as phrases about the weather, medical enquiries and exchange of personal information. It continues onto when travellers arrive in Cape Town (Arrive & Depart section), which can also be used when the traveller Departs. The other sections all have basic phrases about the relevant topics which can be used to obtain more information from Xhosa speakers.

> "Education-based sites are often self-directed learning and design strategies can be very restrictive and linear. Education-based design must permit fast access (this can be done through the navigation and accessibility of a site) to a wide range of topics, should be well designed with graphics and illustrations (which explain concepts) and should have easy printing options." (Lynch and Horton 2002, *Webstyleguide*)

'Cape Town – Africa's Gateway' has a linear and hypertext design (see page 15 of this document for an explanation of linear and hypertext design). Learners can reach information with the least amount of clicks and Xhosa phrases are easy to print out. Tourists want fast access to information, so it is important that they reach the desired information quickly and that they have many resources to their disposal.

These resources can be in the form of printouts of the Xhosa phrases which they can take with them on their travels through Cape Town and surrounds. On the next page is an example of phrases tourists can printout and take with them. (See Fig.5)

Personal Information

The following are just a few easy phrases which you can use when getting to know someone or reply to these questions aimed at you at any place.
(Phrases indicated by numerals are generally used and those with letters are answers to questions or variations of phrases you can use in that situation.)

nr.	Xhosa	English
1	Ungubani igama lakho?	What is your name?
a	NdinguJohn / Lisa / Themba.....	I am John / Lisa / Themba.....
2	Ungubani ifani yakho?	What is your surname?
a	Ifani yam nguFletcher.	My surname is Fletcher.
3	Ndiyavuya ukudibana nawe.	I'm pleased to meet you.
4	Uhlala phi ngoku?	Where are you staying now?
a	Ndihlala eBellville.	I stay in Bellville.
b	Ithini idilesi yakho?	What is your address?
5	Ithini inombolo yefoni yakho?	What is your phone number?
a	Nceda bhala phantsi inombolo yefoni yakho.	Please write down your phone number.

It is common for Xhosa speakers to enquire about the weather and your health too. Go to the next page for more information.

Fig. 5 Example of phrases tourists can printout and take with them

3.2.4 Multimedia

> "Perhaps the most powerful aspect of computing technology is the ability to combine text, graphics, sound and moving images in meaningful ways." (Lynch and Horton 2002, *Webstyleguide*)

There are many technical limitations to the delivery of audiovisual content via the web, but there are many solutions such as plug-ins or new browser software. It is therefore important to provide controls for videos and other big sound files. Without controls, viewers will have no means to manage their viewing environment.

Illustrations, photos and graphics are a welcome addition to any site, but this also has problems. When designing, it is better to stand by one type of graphic i.e. only photos or only illustrations. “Pictures are understood despite the confusion caused by scale (objects drawn smaller or larger than they actually are) or media that is unfamiliar. So, for a concrete object, event or place, visuals may be appropriate for most readers.” (*Hypertext Design for learning*, 2003.)

Graphics and images can help the user understand the context of material which needs to be learned. This is especially helpful in foreign language learning.

In my application I have used graphics to help learners understand certain concepts, which are mentioned in speech acts and dialogs, for example speech bubbles in photos. By inserting text in a speech bubble, learners can get the feel of the conversation and see in what environment it is taking place. The picture below is a taxi driver who wants to find out more about someone’s occupation.

Fig. 6 The use of graphics to explain concepts

Video was incorporated to help learners see how two Xhosa-speaking people interact when greeting and also on other informational tourism pages. Sound is very important. The use of sound is important to help learners hear the right tone of Xhosa words and sentences. The clicks of the Xhosa language can be demonstrated through sound.

Every web designer is faced with different decisions concerning the site he/she is developing. Most of these decisions depend on the target audience. The media to be used, colour usage and formatting of the website needs to suit the needs of the target audience.

In my application, tourists who are eager to learn some Xhosa phrases were the target audience. The tourists should be able to understand and read English and would be between the approximate ages of 18 and 60. They would need a basic education, so they can read and be able to plan their travels. Tourists need a lot of graphics for visual stimulation and they want to see what interesting sites there are in Cape Town. Videos and sound therefore play an important part in the application.

The colours used in the application gives it an 'Africa' feel, but other brighter colours (yellows, greens, blues and dark reds) were also used to give it a 'Euro-Africa fusion' look. The colours used must not be so sharp as to hurt the eyes. For my application I tried to stay with pastel beiges and browns for the background. The layout is a simple two-pane framework which doesn't confuse the user. The design of the menu pages and other topic pages are constant throughout the application.

3.3 Conclusion

The layout, page and site design, multimedia use and overall look of the application was specifically designed and implemented with tourists in mind. They want fast access to information through the least amount of clicks and least amount of menu pages to go through, as well as a lot of visual and audio stimulation. The Xhosa phrases and other important information must be easy to print out for later use.

The specific layout and use of colours was also decided upon to make the application design more exciting for travellers. The combination of linear and hypertext navigation, gives the user more choice in the way he/she wants to navigate through the educational and informational sections of the website.

The design of the website is specifically aimed at tourists, although anyone can use it. The design and layout is simple and the user interface easy to understand and use. Information contained in the website should be able to entertain young and old since there is no age restriction on the imagination and dreams of travelling to far-away places!

Chapter 4: Quantitative Research

4.1 Introduction

To research the effect that the application 'Cape Town – Africa's Gateway' had on users, a ticksheet questionnaire was developed (See Appendix 1).

This can be seen as a small survey research for the collection and analysis of responses of a small sample of people from different walks of life. By filling in the questionnaire, they could give their opinions and thoughts about the application. Statistical methods were used to tabulate and interpret the results.

4.2 Quantitative Research

4.2.1 Use of the Questionnaire

> "Quantitative methods include the presentation of a number of descriptive statistical data, sampling techniques and the use of advanced mathematical models and computer simulations of social processes. Quantitative analysis has become popular in recent years as a means of revealing possible causal relations […..]." (Microsoft Encarta Encyclopaedia 2000, *Quantitative Methods*…)

The decision was taken to use a questionnaire for the reason that it is a fast and easy way of getting information. The test subjects or users of the application can go through the program and afterwards fill in the questionnaire by ticking either the 'yes' or 'no' tick boxes next to the questions. For that reason it was called a ticksheet questionnaire. Users can also write down some 'comments' about the program. A few blank lines were provided at the bottom of the questionnaire for that purpose.

Questions in the questionnaire were organised under five sections:
Section 1: Navigation
Section 2: Graphics
Section 3: Language learning content
Section 4: Accessibility
Section 5: Overall impression

The questions were put together in a way that is easily understandable for users who do not know anything about HTML design and Foreign Language Learning. Please see Appendix 1 for the format of the questionnaire involved.

4.2.2 Results

The questionnaires were filled in anonymously by 10 people of ages ranging between 18-58, male and female. They were all from different walks of life; some were students, others had extensive computer knowledge and some had no computer knowledge. Many were well-travelled individuals who know what to expect from a tourist website or informational source. It took each of the users between 2 and 3 hours to go through the application.

The overwhelming response to the application was positive. For the benefit of the users, the application was called a 'program' because not all people are familiar with the term 'application'. They were asked to go through the program and then complete the questionnaire without influence or help from anyone else. The results were as follows: (See Fig. 7 - graph indicating results)

A) Section 1 : Navigation

Question 1: 90% of the users found the navigation easy to understand and use. 10 % did not find it so easy.

Question 2: 100% of the users found that they reached the desired information in the least amount of clicks.

B) Section 2: Graphics and Media

Question 3: 100% of the users found the graphics suited to language learning content and tourism.

Question 4: 100% of the users found that the videos and sound are clear and understandable and contributes to the content.

C) Section 3: Language Learning content

Question 5: 70% of the users found the Xhosa phrases easy and useful. 30% struggled with the phrases.

Question 6: 100% of the users found that they did learn something about the Xhosa culture and language.

D) Section 4: Accessibility

Question 7: 60% of the users struggled at some point in the program to progress. 40% did not have any problems.

Question 8: 100% of users found informational and motivational comments useful and thus progressed through the program with ease.

E) Section 5: Overall impression

Question 9: 100% of users found the program suitable for tourists.

Question 10: 100% of users would recommend it to others.

The written comments were overall very positive. It was written that the information in the application is useful and relevant. User friendliness was praised and graphics and colour schemes were said to be easy on the eyes. The only negative comments were that

some users felt lost in some places of the navigation and that page numbering would maybe help to solve this problem. Many of the users learned a great deal about the Xhosa culture and language and said that they would definitely recommend it to others.

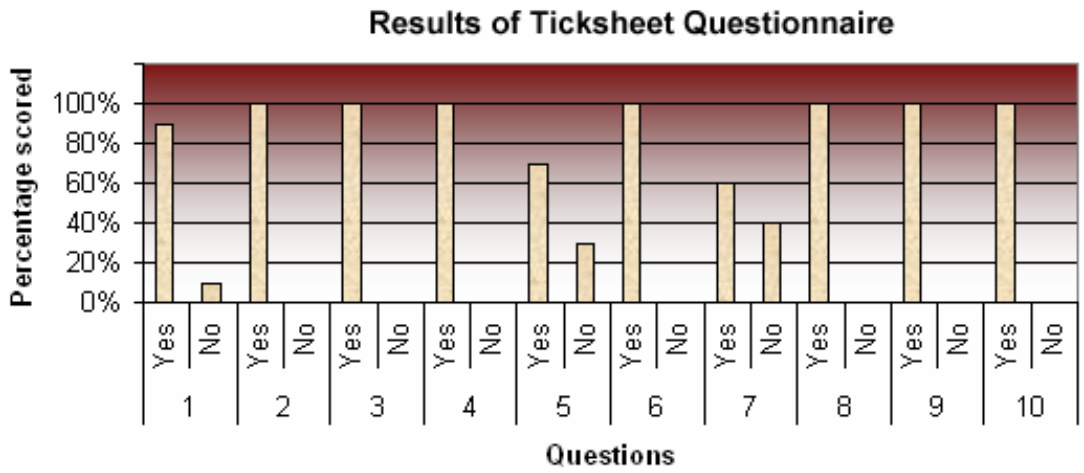

Fig. 7 Graph of user's feedback in percentage

There are a few conclusions that can be gathered from the ticksheet results:

- Navigation on the 3rd level can maybe be made easier by the addition of page numbering
- Xhosa phrases can be chunked in easier understandable pieces of information
- More 'Audio Assisted' phrases can be added to help with pronunciation

4.3 Conclusion

Results show that the reaction to the program was overwhelmingly positive. By calculating the percentages, the application scored an average of 92%. The results indicate that some aspects of the program were more difficult for certain users, for example: navigation, Xhosa phrases and progression through the program. This can be attributed to their different abilities and computer/internet skills. Many users are not used to surfing the web. They are not as familiar with the structure of hypertext links and how to use the browser window buttons.

Some users were more open and motivated to learn a new language than others. Many struggled with the pronunciation of the Xhosa phrases and then decided to give up. One user found that the navigation made him feel lost in the program. This was due to the lack of page numbering on the lower level menu.

Different people have different ways of understanding and learning and thus consuming information. Each one progressed through the program in a different sequence, as I was told by each of them after they finished going through the program. This indicates that every user is different and has diverse interests.

Chapter 5: Discussion of findings and conclusion

5.1 Introduction

This chapter is a short summary of the research findings and an overview of the literature I have read. All the chapters in this minithesis are combined in a summary, which attempts to explain the language learning aspects and web design of the application.

5.2 Concluding thoughts and findings

In the second chapter Language Learning Theories, CALL and Culture were discussed. It was found that the application is based on different methods and theories of CALL and Foreign Language Learning. Xhosa is the foreign language in question. In historical approaches to language teaching, the Audiolingual Method, Direct Method and Natural Approach are relevant to the way my applications' language learning content was designed. Intercultural communication (communication between Foreign Language learners and mother-tongue speakers) is very important.

Cognitive Learning Psychology and Constructivist Learning Theory have some valid points, which are also incorporated into the application. It conveys that learning is subjective and that it should take place in social context with a lot of interaction. This is of primary importance for language learning. Learner autonomy is also very important. Users/learners need to learn autonomously in this application without help from a teacher or any classroom situations.

Cognitive Theories of Instructional design had a definite influence on the application. It proposes that the goals of the lessons should be described and that prior knowledge should be stimulated. It should show how knowledge is connected. This was done in the application by letting users firstly go through the information about Cape Town. Users then had to become learners and go through the Xhosa phrases which are based on the information about Cape Town. Dialogue pages force learners to go back to previous

phrases if they do not remember them well. Previous knowledge is thus stimulated and if learners can remember the phrases, then the learning goal is achieved.

There should also be a consistency in the presentation style. Information should be chunked and informative feedback should be given. In the application the navigation was consistent throughout and learners were supplied with motivational comments in the language learning sections. The application was designed to teach tourists a foreign language i.e. Xhosa. This is done through the use of Xhosa phrases and not by grammatical exercises.

The software must be used in individual self-instruction to teach a foreign language. The use of multimedia (as in the application) should enforce interactivity and help in the learning process. Videos, photos and sound play an important role in my application to help learners understand the Xhosa language and culture better.

Culture plays an important role in the language learning process. In the application, users learn about the Xhosa culture and this will help them understand why the language is constructed the way it is and why it is spoken in certain ways.

In chapter 3 five phases of planning a site were explained. In designing the application these phases were considered to make the design progression swiftly. Where the user interface is concerned, navigation is clear and consistent. It is a hypertext system but also has some linear traits which are better when educational aspects are concerned. The site should also be accessible and thus the application has ‘alternate text’ with graphics and buttons.

The application is frame-based. The site design also allows information to be chunked in understandable and logical units. Easy access and printing options are also important. Multimedia use comprises of photos, button graphics, video and sound in the application. This presents the user with audio and visual stimulation.

Chapter 4 involves Quantitative research. To test the application a questionnaire was designed (see Appendix 1). Results proved the program a success, but for a few minor problems (difficulty of Xhosa phrases and navigational means). Due to the user's level of computer and internet knowledge and skills, these results may vary.

5.3 Conclusion

The minithesis aims to be the explanation of the application and what the motivation was to design a tourism-related, educational/informational website.

I hope that the application can contribute to tourism in Cape Town, but more so to support the Xhosa language through the design of a website containing an educational Xhosa language element. Communication is very important and if there is access to educational Xhosa applications more people can have the chance to learn this African language and the customs of its people.

Appendix 1

University of Stellenbosch
MPhil in Hypermedia for Language Learning

Ticksheet questionnaire for language learning (website based) program:

Cape Town – Africa's Gateway

A traveller's and cultural guide to Cape Town and surrounds, with educational Xhosa language phrases

Please tick the applicable box (either **Yes** or **No**) with a **X**

		Yes	No
A.)	**Section 1 - Navigation**		
1.	Do you find the navigation (buttons and links) easy to understand and use?		
2.	Do you reach the desired information in the least amount of clicks?		
B.)	**Section 2 – Graphics and Media**		
3.	Are the graphics suited to the language learning content and to tourism?		
4.	Are the videos and sound clear and understandable? Do they contribute to the content?		
C.)	**Section 3 – Language learning content**		
5.	Do you find the Xhosa phrases easy and useful?		
6.	Did you learn anything, with respect to culture and the Xhosa language?		
D.)	**Section 4 – Accessibility**		
7.	Did you at any point struggle to progress through the program?		
8.	Was the informational and motivational comments of any use in progressing through the program with more ease?		
E.)	**Section 5 – Overall impression**		
9.	Do you think this program is suitable for tourists? (international and local)		
10.	Would you recommend it to anyone who would like to tour Cape Town and learn fast and easy Xhosa phrases?		

Comments:

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Created by Charise Janse van Rensburg ; 14-09-2004 v. 2

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