

**AN INVESTIGATION INTO THE EFFECT OF KLAUSMEIERS'
"FOCUSED INSTRUCTION" ON THE CONCEPT REGULAR VERB
IN NATIONAL INTERMEDIATE CERTIFICATE STUDENTS AT A
TECHNICAL COLLEGE.**

MARY MAGDALENE PETERS

DECLARATION

I, **MARY MAGDALENE PETERS**, DECLARE THAT THIS THESIS COMPRISES OF MY OWN WORK AND THAT ALL SOURCES HAVE BEEN ACKNOWLEDGED.

M. Peters
SIGNED

Pickmanburg *11/2/96*
AT DATE

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In loving memory of

my father

OLIVER ANDREW PETERS

(26:07:1929 - 14:10:1984)

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CHAPTER 1 - DEFINING THE PROBLEM.

1.1 INEFFECTIVE CONCEPT FORMATION.

Schools are assigned the task of producing responsible and productive citizens. This means that students leaving schools and other places of learning must have assimilated, to a reasonable degree, the norms and values of society and the necessary skills to enable both the individual and that society to progress.

Presently, and until the new South African schools bill is implemented in 1997, there are only 2 official languages. Consequently, until the implementation of this bill, many students, like others before them have to learn within the various subject disciplines and write examinations in a language that is not their mother tongue.

English Language Subject Educators, like other educators, have to try and enable students to think critically and creatively. Students are expected to develop skills and critical abilities that will impact in other social contexts and in other subject areas.

Being able to understand is a crucial aspect of communication skills and language. Pierce [1989] considers this competence as being necessary for learning "the ability to say and write what one means; to hear what was

said and what is hidden; to defend one's point of view; to argue; to persuade; to negotiate; to create; to reflect; to invent; to explore relationships - personal, structural, political; to speak, read and write with confidence; to make one's voice heard; to read print and to resist when necessary" [cited in Nyamapfene & Letseka 1995, pg.166].

It is clear that in most English classes most of these skills are never developed. Many students have an inability to solve problems, to think critically, to assess issues relationally and to articulate their views both verbally and in writing.

These shortcomings in the English class impact throughout the curriculum. Inability to master the necessary language skills inhibit the mastery of a number of other subjects as well. Thus a poor command of the English language can and does have serious repercussions in school.

Success in science and technology is dependant on a working knowledge of English. Many concepts within these subjects have English labels and an understanding of these concepts is dependent on an understanding of the English language.

Green [1994], carried out an experiment based on the acquisition and development of scientific concepts. He

found that "the program had less of an effect on concept acquisition and development in second language learners than it had on learners whose mother tongue was English" [pg 75].

Examinations also present numerous difficulties for second language students. Before being able to carry out instructions one has to understand the instructions first. This understanding is facilitated by the necessary language proficiency.

Many teachers fail to realise that pupils have " become very adept at using abstract terms with apparent appropriateness - when they have to - even though their understanding of the underlying concepts is virtually non existent" [Ausubel, 1968, pg.38].

But there are also broader social consequences as well. Access to employment of a meaningful nature can also be severely curtailed for these students. Most employers require their employees to be bilingual. The implication here is that a knowledge of English is required for economic and social empowerment. In the same way access to higher education can be very problematic.

Nyamapfene and Letseka [1995] carried out a study of

problems that first year students encountered at South African universities. They found that students experienced a failure to both understand concepts and principles and to appreciate the difference between capturing the information and knowing or understanding it.

They also found that due to poor communication [English] skills students were unable to understand concepts and principles. Successful studying at universities involves coming to terms with vast bodies of information. This is only possible if the students have the ability to acquire concepts inherent in the material through gaining an understanding of its meaning and then using that understanding for conceptual development.

In order to do this the student has to be able to engage meaningfully with the concepts and patterns of ideas. This also requires the ability to transfer or apply the relationships to new situations.

The writers also point to the disturbing trend of "a decline in the quality of the learning and teaching of English in South African schools" Students are "unprepared in writing, reading and classification of issues - the skills necessary for inquiry" [Nyampfene & Letseka 1995, pg.162]

1.1.1 BUSINESS ENGLISH.

Business English as studied at Technical Colleges has a modified syllabus that differentiates it from English studied at mainstream schools. The Business English syllabus was designed to meet the needs of the business world.

The syllabus is very concise and concentrates on equipping students with skills like letter and report writing. The syllabus is divided into 4 basic sections viz Language and comprehension, Correspondence, Literature and Theory.

However the points made earlier about English as a language and about learning and teaching English apply to Business English as well. All students who study Business English on the National Intermediate Certificate [NIC] level at a Technical College have also gone through at least 6 years of conventional schooling. This is because the prerequisite for entry to this course is that the student must have completed standard 7.

Since the NIC course was designed to meet the needs and requirements of the business world, the students electing to study this course are not always inclined towards academic learning.

The following table illustrates the results of students, both first and second language, from different Technical Colleges. This information was provided in 1996 by the Principals of various Colleges in response to requests made by the researcher.

COLLEGE	YEARS	NO WROTE	NO PASSED		NO FAILED	
			ACTUAL	%	ACTUAL	%
A	1992- 1995	429	322	76	107	24
B	1992- 1995	38	36	95	2	5
C	1992- 1995	220	104	47	116	53
D	1992- 1995	158	95	60	63	40
TOTAL		845	557	66	288	34

Table 1. The examination results of first and second language speakers of Technical Colleges for the period 1992 - 1995.

College A has a well equipped language laboratory which is used to enhance and develop the English language skills of their students. A large number of their students are second language learners. College B has no second language students at all. At colleges C and D the majority of the students are second language learners.

As can be seen 34% of these students did not pass Business English. On the surface, perhaps, these results are not so disturbing, especially in the South African context [and the fact that these statistics stretch over a 4 year period]. Deeper analysis reveals a somewhat different picture.

The Business English exam is an open book examination. Students are also allowed to use dictionaries and 5 other reference works. 40% of the total mark used to determine success or failure is made up of a year mark that's a result of continuous assessment throughout the year. The passmark that students have to attain in order to get onto the NSC level is 40%.

Notwithstanding the above one third of the students cited in table one still failed. These results inspired this study. It was felt that a change in teaching methodology might impact positively on the students' concept acquisition and, consequently, their examination results.

It was obvious that there was a dire need for a solution to this serious problem. This study arose out of the search for that solution. It was hoped that this study would yield valuable information regarding the students acquisition of concepts and, at the same time, test an alternate teaching

methodology.

1.2 ROOT CAUSES OF INEFFECTIVE CONCEPT DEVELOPMENT.

1.2.1 BANTU EDUCATION AND CHRISTIAN NATIONAL EDUCATION.

Vera [Nyamfene & Letseka, 1995. pg.161] states that the source of the inability to understand concepts and principles for Black students in South Africa is "their inferior schooling and the inadequacy of the matric system"

In 1948 Christian National Education became policy and in 1953 the Bantu Education Act was passed. In depth discussion of these acts and their repercussions on the hearts and minds of the people they were intended to impact on is beyond the scope of this dissertation.

The fundamental philosophy behind Bantu Education was "that the [native] will be taught from childhood that equality with Europeans is not for them" [Cited in Christie 1986, pg.12].

The result of this was a school system for Blacks that was underfunded and overcrowded, with too few schools and too few and undertrained and underqualified teachers. Black teachers were provided with training that centred on CNE.

This enforced an "authoritarian classroom culture [Nyamapfene & Letseka 1995, pg.161].

It is the view of the researcher that Bantu Education was a central contributor to the destruction of the culture learning and teaching. It has to be understood that the conditions that prevailed at Black schools and that constantly reinforced Black inferiority can scarcely be credited with creating a love of knowledge and learning.

Apartheid education thus "promoted compulsory ignorance" [Nyamapfene & Letseka, 1995, pg.161]. In 1994 a total of 441853 students wrote the matriculation examination. Only 175142 [52%] passed and of these only 16% gained a matric exemption. Only 49% of the students of the Department of Education and Training passed their matriculation examination in 1994. This figure dropped to 43% in 1995. [Education foundation 1996, pg.14].

1.2.2 TYPES OF LEARNING AND TEACHING.

The lack of meaningful training of teachers has resulted in the establishment of a pattern of poorly structured classroom programmes in which rote learning flourished.

Ausubel [1968, pg.21] mentions that "from the standpoint of enhancing school learning, no theoretical concern is more relevant or urgent in the present state of our knowledge than the need for distinguishing clearly among the principle kinds of learning - rote and meaningful learning, concept formation and verbal and non verbal problem solving"

Meaningful learning involves both reception learning and discovery learning. It occurs when the learner compares what is to be learned in a logical, meaningful and substantive way to what she already knows.

The learner is required either to discover the content by herself and assimilate or accommodate it cognitively, or the content is mediated to her in a meaningful way that enables her to use her prior knowledge and the new knowledge to develop cognitively.

Rote learning also contains within it the dimensions of reception and discovery learning. However, here these dimensions are qualitatively different both in terms of input and outcomes. Rote reception learning involves having the entire content that is to be learned being presented to the learner in a final form. No effort is required from the learner in terms of interacting with the knowledge herself.

Rote discovery learning refers to trial and error learning. The student arrives at the correct answer, not through the process of rigorous thought and critical enquiry, but through a process of elimination.

Rote learning thus occurs when the learning tasks consists of "purely arbitrary associations that the learner adopts in an arbitrary verbatim fashion" [Ausubel, 1968, pg.24].

Paulo Friere severely criticized the rote learning style which he referred to as "banking education"; a process where the teacher simply deposits knowledge into the heads of the students. The student is a passive recipient who memorises and repeats information. [Friere,1972,pg.45]

Perkins [1992] mentions that teaching is a traditional craft because so little has changed in half a century. {pg 3}. Schooling is an end in itself where the recitation script or rote learning flourishes.

This results in 2 shortfalls when it comes to educational achievement. [Perkins 1992, pg.20]. Firstly, the fragile knowledge syndrome refers to students not knowing things that they ought to know. In other words this knowledge is missing from the students minds. He mentions a number of ways in which students knowledge is fragile.

Inert knowledge refers to knowledge that learners possess but will only remember when tested about it. This knowledge is thus not transferred or put to any use. This knowledge lies dormant and is the result of conventional education.

Naive knowledge refers to when students retain stereotypical notions about the world even after they have been taught otherwise. They know better and have received instruction, but still cling to and articulate naive views.

Missing knowledge refers to important pieces of information that have been taught to the learner but are missing from the learners mind. Lastly ritual knowledge refer to students playing the school game. This means that they learn things that they are required to learn but only use this knowledge for school purposes . There is no connection to their beliefs about the way things really are.

The second educational shortfall is poor thinking. Conventional teaching practices do not encourage problem solving and critical thinking.

These shortfalls have 2 causes. Firstly there is the trivial pursuit mentality that refers to learning as being the accumulation of facts and strategies. The second reason is the belief that successful learning arises out of the

individuals innate ability and is not the result of effort.

1.2.3 SECOND LANGUAGE ISSUES.

Many students in South African classrooms find themselves learning and being taught in a language that is not their mother tongue. This situation results in many learning problems and, consequently, inferior results.

Language plays a seminal role in the acquisition of concepts. Language by virtue of its refining and symbolic powers makes a crucial contribution to the process of concept acquisition and development. The processes of refinement and symbolic representation are central aspects of the mental operations that lead to concept acquisition and development.

Second language students are thus faced with a two - fold problem: Firstly there is the need to master the second language itself and its concepts and secondly the need to use the mastery of the second language to acquire and understand concepts of other subjects and disciplines.

These students' struggle with the second language is reflected in their struggle across the curriculum. "The

very process of concept assimilation through definition and context would be utterly inconceivable without language." [Ausubel,1968, pg.123].

Due to the high level of anxiety experienced by these students and the sometimes chronic failure rate, many develop a rote learning style because they lack confidence in their ability to learn meaningfully.

Second language students, in order to assimilate the concept, have to first master the language that labels or names the concept. "The use of language in education is also influenced by cultural factors that are prevalent within the different groups of people in society" [Sentson,1994,pg.109].

The medium of instruction is thus also bound to the transmission of a culture. Thus mother tongue instruction involves a familiarity in terms of the cultural and linguistic setting that a second language does not.

1.2.4 TEACHER TRAINING AND THE QUALITY OF PRETERTIARY EDUCATION.

The conventional wisdom assumes that the presentation of the content to be learnt is sufficient for learning to

occur. This Traditionalists' paradigm places the responsibility for learning with the students. However the responsibility to ensure meaningful learning as an outcome of classroom interaction is shared by the teacher and the student.

Consequently teacher training should concentrate on equipping the teacher with the necessary skills to enable the following outcomes. "The teacher must generate interest in the subject matter, inspire commitment to learning, motivate pupils and help induce realistic aspirations for educational achievement, [she] must decide what is important for pupils to learn, ascertain what learnings they are ready for, pace instruction properly and decide on the appropriate size and difficulty level of learning tasks.... to ask critical questions...to evaluate learning and development and where feasible to promote discovery learning and problem solving ability..." [Ausubel 1968, pg.9].

Teacher training is a crucial starting point in the fight to change education. Meaningful teaching and learning methods are useless in the hands of an unskilled facilitator.

It is believed that teachers teach in the way they were

taught to teach. Most teacher training programmes do not include in their curricula aspects like thinking skills programmes. Neither do they concentrate on enabling the teacher to teach for concept development.

Teachers have the power to subvert meaningful change unless they themselves are taught the importance of developing their professional judgement through self reflection and praxis.

Teachers need to be equipped with the skills that both recognises the centrality of the learners understanding and cognitive processes in the learning situation and enables their further development

Teachers need to be trained so as to enable concept acquisition and development in the classroom. This means that learning must be viewed as an outcome of thinking and understanding and not the accumulation and repetition of facts and strategies in a rote like fashion.

However because many South African teachers are not trained to be strategic or equipped with the necessary skills, it is believed that many of them resort to survival teaching. This results in classrooms where critical thinking and hypothetico - deductive reasoning and questioning are

absent.

Some teachers expect students to provide answers in an examination that are a replica of what was presented to them in class. Students realize this very quickly and , consequently, abandon any efforts at meaningfully relating to the subject matter.

Teacher training is crucial to the teaching for concept acquisition and development. A number of studies, [Nelson, 1976, Klausmeier and Allen 1978, Perkins and Simmons 1988], etc, [Cited in Kluasmeier & Sipple, 1980,pg.7] have shown that teaching for concept acquisition and development can have powerful effects on the learners understanding.

Thus if we wish to change what is happening in so many South African classrooms, we need examine the quality of teacher training programmes. "The place that rote learning still enjoys in South African education is largely a reflection of the type of training that most [South} African teachers have received. [Nyamapfene & Letseka,1995, pg.161].

1.3 LANGUAGE - THE BRIDGE TO COMMUNICATION.

Increasingly, the world is becoming a smaller place.

Technological advancements like the Internet are ensuring that communication with people across the globe is only the touch of a button away.

Communication is only " one of mans multifarious daily activities, but it is without doubt the one he indulges in most, the one he cannot exist without, the one that ensures his personal and collective progress.[Fourie, 1977, pg.1]

Alongside this is the importance that we attach to language as a means of understanding ourselves, our society, our world. Language is also both a means of resolving tensions that arise out of human interaction and an issue around which tensions arise.

Language is also crucial to the process of concept acquisition and development. The process of naming or labelling a concept facilitates an understanding of it. According to Ausubel [1968,pg 523], language plays a central facilitating role in the acquisition of concepts.

As the world contracts into the Global Village and technological and other advancements strive to bring us even closer, the lingua franca for successful communication is increasingly the English language. English is used as a main or second language in over 60 countries and is

either dominant or well established on all the continents.

The domination of British and American culture through popular fashion, cinema and music; the domination of Americans like Bill Gates in the computer world has aided the advancement of English as a global language.

Inherent in this then is the idea that people are rapidly achieving consensus on: a knowledge of English as a communication medium is necessary for social and financial success.

1.4 ENGLISH - A PREREQUISITE FOR SUCCESS.

Language and communication is a process of ordering our world and our existence. Consequently as our world as a psychological entity becomes smaller and more complex and our existence is defined by a multiplicity of experiences, both our own and that of others; knowledge of English as a language of communication becomes increasingly essential as a means of ordering out world and solving problems.

Roelofse [1982 pg.12], mentions that the process of naming something is in fact an act of abstraction that creates a reference point to which one can return. This process of abstraction is crucial to communication.

By naming what you are confronted with, one creates a concept. "Conceptualising is indispensable to the process of structuring and ordering called communication. Concepts are instruments through which we gain access to the world and are able to refer to the world" [Roelofse, 1982,pg.13].

Language is essential to this process of naming; whether it is in the field of science, engineering, computers etc. All disciplines or fields of study require the acquisition of concepts. Acquisition of concepts or conceptualisation is dependent on being able to name or to label.

In a world, where increasingly, the language of the disciplines is English, a knowledge of English is essential, not only for the acquisition of concepts but also to being able to communicate that understanding of the concept.

Many Black South African students have rejected learning in the vernacular as a medium of instruction. According to Sentson [1994, pg.109], this rejection is based on a desire for socio - political and economic advancement in the international arena.

South Africa's new bill and language policy makes provisions for mother tongue instruction if the community

desires it. The outcome should prove informative when this bill is implemented in 1997.

In South African schools, almost all pupils are required to both study English as a subject and study through English as a medium of instruction from standard one right up to matriculation level

1.5 THE FORMAL TEACHING OF GRAMMAR - A DEBATE.

Since this dissertation concerned itself, in part, with the acquisition of a grammatical concept, it would be prudent to discuss the controversial movement in second language teaching that developed in the 1970's.

Stephen Krashen propounded an influential view of the relationship between acquisition and learning. He advocates communicative competence with a subconscious natural process - acquisition - that focuses on the everyday use of language without the impeding role of linguistic rules being formally taught. [Krashen & Terrell, 1983 pg.97].

"Throughout his history man has learned to use languages

other than his native tongue for communicating with members of other language groups and other cultures. It is unlikely that much use was made of formal grammar studies to aid in this task since it is doubtful that such studies or even such knowledge existed." [Krashen & Terrell, 1983, pg.7].

Linguistic competence refers to knowledge of the grammatical structures of the language being formally learned. Formal learning cannot lead to acquisition to acquisition of a second language. Krashen also discusses the concept of a Monitor as part of the learned system. "The Monitor is part of the learners internal system that appears to be responsible for conscious linguistic processing. [Dulay, Burt & Krashen, 1982, pg.58] The knowledge that one gains through the process of monitoring can be used to consciously correct and formulate sentences.

"To acquire the ability to communicate in another language, one must use the language in a communicative situation. Communicative ability is usually acquired quite rapidly, grammatical accuracy, on the other hand, increases only slowly and after much experience using the language. [Krashen & Terrell, 1983, pg.16].

In the 1970's a movement developed against methods that "stressed the teaching of grammatical forms and paid little

or no attention to the way a language is used in everyday situations." [Crystal,1988, pg.374].

In a recent newspaper article Liz Lightfoot [Sunday Times, 27/10/96, pg 6] discussed the high school grammar book that was released in London by the National Association for the Teaching of English. This book, [The Grammar Book by Elspeth and Richard Bain] brands those who believe that students should be taught rules of grammar as fetishists.

The authors argue that pupils should not be taught any rules but should rather observe the patterns of language and how they change over time.

However views opposed to this, state that while the old conventional methods of teaching grammar are questionable, there are never-the - less rules and conventions which must be learned. It must be acknowledged that much of the criticism is directed at the old drill and phrase translation that characterised language teaching. Focused Instruction [Klausmeier,1992,pg.280] is an entirely different teaching methodology.

Successful concept acquisition and development should be the desired outcome of any educational process. In order for this to be achieved, greater emphasis needs to be

placed on teaching for concept acquisition and development. There also needs to be a firm acknowledgement, especially in the multilingual and multicultural South African setting, of the seminal role of language within concept acquisition and development.

An investigation of a particular teaching methodology based on a theory of concept development forms the basis of this study. This methodology allegedly has a very positive impact on the development of a more complex understanding of concepts.

CHAPTER 2: THEORIES OF COGNITIVE DEVELOPMENT, CONCEPT DEVELOPMENT AND ACQUISITION AND TEACHING FOR CONCEPT DEVELOPMENT: A LITERATURE SURVEY.

2.1 COGNITIVE DEVELOPMENT.

A person's ability to act on the world, to gain an understanding of it and to acquire skills to change aspects of it is determined by the cognitive structures that that person already possesses. Consequently, all through our experiences with the world - material and spiritual - our cognition sets the boundaries within which that experience occurs.

Conceptual development, which is an attempt to understand and make sense of the world, is determined by these cognitive structures. Consequently any theory of concept development will develop out of a larger theory/s of cognition.

"In order to understand the evolution and current state of theory and research..... one must first look at the metaphors that have motivated that theory and research"
[Sternberg 1990, pg.3]

The three main metaphors or models of cognition will be

discussed here

- A] The Vygotskian model
- B] The Piagetian model
- C] The Information Processing model.

2.2 THEORIES OF COGNITIVE DEVELOPMENT, CONCEPT ACQUISITION AND CONCEPT DEVELOPMENT

2.2.1 THE VYGOTSKIAN MODEL

Contrary to theories that emphasise the importance of the individuals' internal processes and structures of cognition, Vygotsky emphasises the importance of the individual's social environment in the development of cognition. The individual's structures and processes thus develop through mediation. Cognitive development is thus a movement from without to within.

Vygotsky stresses the importance of language as " the key to understanding complex human behaviours" [Gredler 1992 pg.264] The mental activity of the individual arises out of that individual's social experience.

Two different but linked processes are involved in the

development of cognition: Firstly, there is the "mastery of the external means of cultural development and thinking such as language" [Gredler,1992 pg.271]. The second process involves the individual learning to use these external means to gain control of her own thinking.

This transition from the external social plane to the internal psychological plane involves 4 processes:

Firstly others act on the individual. The individual then enters into this interaction and then begins to act on others. Lastly the individual begins to act on herself. Like Piaget, Vygotsky regarded the acquisition of speech as a major activity in cognitive development. [Vygotsky, 1978, pg.25].

The nature and development of complex thought are explained through the characteristics of higher mental functions and the Zone of Proximal Development.

The higher mental functions include abstract thought, self regulation, logical memory and categorical perception. These functions arise out of mediation. The transition from lower to higher mental functions mirrors the movement of the locus of control from the environment to the individual.

The level of development that the individual has already attained can be assessed on the basis of the tasks that the individual can carry out without any help. However Vygotsky also believed that the individual's potential for further development should also be measured, so as to enable the eventual realisation of that potential.

He defined the difference between an individual's actual developmental level and the level that that individual can attain with help as the Zone of Proximal Development - ZPD. In other words the ZPD " defines the level of problem solving that occurs through imitative activity" [Ibid, pg 282]. Problem solving is thus learned through collaboration with adult mediators or more competent peers.

Vygotsky thus stresses the importance of the environment in the development of the individuals's cognition. The signs and symbols of a culture are learned through mediation and this ultimately enables the individual to achieve independent cognitive activity. Cognitive development thus occurs through the movement from " the social to the psychological plane, from the intermental to the intramental, from the socially regulated to the self regulated" [Tharp & Gallimore, 1988, pg.30]

2.2.1.1 THE VYGOTSKIAN VIEW OF CONCEPT DEVELOPMENT.

Vygotsky believed that the transition from nature to culture was the basis for a "new and superior form of activity"[Vygotsky 1978. pg.29] Through social interaction the child develops everyday or spontaneous concepts. A child will learn the alphabet through simple games played with others. These everyday concepts are then used by the child in her activities and becomes an important aid in cognitive development.

Vygotsky proposed that the natural acquisition of concepts occurred in 3 stages:

- i. Stage 1 is characterised by "unorganised congeries wherein word meaning denotes nothing more to the child than a vague syncretic conglomeration of individual objects that have somehow coalesced into an image in his mind" [Keil,1952, pg.5].
- ii. Stage 2 is characterised by "thinking in complexes wherein objects are united in the child's mind not only in his subjective impressions but also by bonds actually existing between these objects." Thus concept formation is guided by overall similarity. [Keil,1952, pg.6]

iii. The final stage is one of true concepts. There is "abstract logical thought, wherein single principles or logically coherent sets of principles are the basis for conceptual structure". There is now grouping on the basis of a single attribute. [Gredler 1992, pg.6]

Cognitive skills occur twice, according to Vygotsky. Firstly on the social plane and then on the psychological plane. A concept is first used interactively and only then is it internalised for intrapersonal use. Internalisation involves reconstruction of the concept, which is essential for understanding. Language plays a crucial role here, for only once language is internalised does one have the ability to represent concepts in a more abstract way.

The transition from everyday concepts to scientific concepts occurs at school. The development of scientific concepts becomes possible once the learners' everyday concepts have achieved the necessary maturity.

Scientific concepts develop out of structured activities that focus on "analytic procedures" [Panofsky, John - Steiner & Blackwell, 1990, pg.251]. They show the opposite pattern of development to natural concepts.

Thus while everyday concepts arise out of the child's

concrete social experiences, scientific concepts arise out of qualitatively different experiences at school. "They are taught by explicit instruction and are first presented in terms of definitions and only later filled out with examples" [Keil, 1989, pg.7]

Thus the process involved in the development of scientific concepts first begins with a specified intentional activity aimed at introducing and providing a verbal definition of the concept. The acquisition of the concept is not a byproduct of the interaction, but is the aim and intention.

Once the concept has been acquired and understood in terms of the characteristics that define it, the learner is exposed to examples of it. Thus acquisition of scientific [schooled] concepts follows a route that is in direct opposition to the acquisition of everyday [naive] concepts.

However the everyday concepts are the building blocks for scientific concepts. In turn the level at which the child develops the scientific concept forms "a zone of proximal possibilities for the development of everyday concepts." [Vygotsky, 1987, pg.169].

This emphasises the fluidity of the barrier that exists between these two types of concepts. The individual

development of one is influenced by the individual development of the other. There is constant and reciprocal interaction within the learners consciousness.

Vygotsky believed that with the appropriate educational programme "the development of scientific concepts outstrips the development of everyday concepts" [Rieber & Carton 1987,pg.168]. The accumulation of knowledge increases the level of scientific thinking. The early development of scientific concepts arises out of the cooperative elements of the educational process.

The Zone of Proximal Development thus contains those concepts that the child is in the process of acquiring. The child thus stands a greater chance of acquiring these concepts with the help of an adult or more capable peer than alone. [Goldin - Meadows, Alibali & Church, 1993, pg.281].

2.2.2 THE PIAGETIAN MODEL.

Piaget viewed cognitive development as a biological function of the process of adaption.[Piaget,1936, pg.15]. The development of cognition is traced through different stages of growth.

Piaget believed that there are 4 factors necessary for cognitive growth:

- i. Contact with the physical environment that provides new knowledge.
- ii. Maturation of the individual's nervous system that enables maximum benefit from the physical experience.
- iii. The social environment that includes language and education and social contact which allows the learner to assess the viability and accuracy of her thoughts and ideas.
- iv. Equilibration, which is a self correcting process that enables the learner to self regulate, allows cognitive development to proceed in a coherent and organised fashion. [Gredler,1992, pg.221].

Cognitive development involves the development of schemes. These are webs of concepts that enable the individual to adapt to the environment ; and are neither innate nor static

Through interaction with the physical and social environment the individual acquires new information. This new information is compared to the already existing cognitive structures or schemes the individual possesses.

During the process of comparison the state of balance or equilibrium of the individual is upset. There is thus a state of cognitive conflict or disequilibrium.

This state of conflict is important in cognitive development as it allows the individual to assess existing schemes and to reorganise to higher levels of thinking.

This reorganisation consists of 2 processes:

If the information encountered is not that different from the information that already exists in the individual's schemes, then a process of assimilation occurs. This is the integration of new data with existing cognitive structures. This process allows the enrichment and growth of the schemes.

However, if the information encountered is different from the existing schemes, the process of accommodation occurs. This is when the internal structures are adjusted to the new information. This new information can also be rejected so that the previous state of equilibration is reestablished.

Equilibration serves the function of adjusting and readjusting between assimilation and accommodation. This

adjustment and readjustment is a continual process. It is the continual self regulation that enables the individual to grow, develop and change while maintaining stability.

Piaget proposed that children progress through 4 stages of cognitive development. A stage is a period in which a long episode of equilibration is experienced. New abilities emerge at each stage that enables the child to develop increasingly more complex ways of thinking.

While within a specific stage, the child's schemes will be relatively stable. Maturation and encounters with new information causes disequilibrium that can be the impetus needed for the child to move to the next stage.

At each stage the child's schemes are qualitatively richer and more complex and thus enable major accomplishments on the part of the child. Each stage is "marked by the emergence of new intellectual abilities that allow people to understand the world in increasingly complex ways" [Slavin, 1991, pg.28]

These stages are summarized by Slavin [1991, pg.28] as follows:

The sensori - motor stage -The major accomplishments of this stage are the formation of the concept of object permanence and a gradual progression from reflexive behaviour to goal directed behaviour.

The Preoperational Stage - The major accomplishment here is the development of the ability to use symbols to represent objects in the world. Thinking remains egocentric and centred.

The Concrete Operational Stage - There are improvements in the ability to think logically. New abilities include the use of operations that are reversible. Thinking is decentered and problem solving is less restricted to egocentricism. Abstract thinking is not possible.

The Formal Operational Stage - Abstract thinking and purely symbolic thinking is possible. Problems can be solved through the use of systematic experimentation.

Clearly Piaget's theory has important implications for learning. However problematic areas like his assertions that development precedes learning and that the child's experience in her social setting can have no effect on her development through the stages, clearly have important implications for education.

2.2.2.1 The Piagetian perspective of concept development.

Conceptual development in individuals is clearly dependent on the stage in which that individual is located. As was mentioned earlier, Piaget believed that development preceded learning.

Consequently the individual must possess the necessary structures in order to assimilate and accommodate the new information.

Piaget believed that individuals possess schemes that enable the individual to deal with the world. These schemes are large organisations of knowledge that the individual already possesses through previous learning encounters.

When new information is encountered the individual experiences disequilibrium. This cognitive conflict must be acknowledged and the rules and schemes already available must be analyzed and considered in order for further growth to occur.

Acredolo et al [cited in Goldin - Meadows et al 1993, pg. 282] maintain that this uncertainty serves as a " primary

force underlying cognitive growth and that this uncertainty stems from the confusion children experience when they consider more than one rule"

A number of theorists within the Piagetian tradition viz Langer[1969], Snyder and Feldman [1977] [cited in Goldin - Meadows et al, 1993, pg 282] argue that at least 2 functional structures are displayed by an individual in transition with respect to a concept. The individuals' acknowledgement of the incompatibility between the two functional structures leads to cognitive conflict which in turn acts as a catalyst for cognitive change and concept acquisition.

The individual can accept this new information by either assimilating or accommodating it into existing schemes in order to achieve equilibration. On the other hand the individual can reject this new information and reestablish her previous state of equilibration.

Meaningful assimilation and accommodation can only occur if this new information is encountered by the individual in a developmental stage that enables her to deal with it. The learner must possess the necessary capabilities in order to acquire the new concept.

2.2.3 THE INFORMATION - PROCESSING MODEL.

This is a cognitive theory of learning that describes the " processing, storage and retrieval of knowledge from the mind"[Slavin 1991, pg.130].

According to Mcshane [1991, pg 6] the 2 central metatheoretical assumptions of this model are:

- " to specify the precise steps that are involved in processing precisely specified units of information " and
- " that human thought should be understood as a result of applying rules to information".

In other words the focus of this model is on the various ways the individuals " perceive, organise and remember information"[Gredler,1992, pg.171]. The other area of focus is how individuals use processed information to solve problems.

Theories within this model abound. Extensive discussion of each of these falls without the ambit of this dissertation. As Mcshane [1991, pg 27] mentions, Information processing " is best viewed as a framework within which particular theories are constructed". A brief discussion of this framework is provided below.

Firstly the view is held that the cognitive system is divided into various parts. The way in which these parts work on information is analyzed. Secondly the theories within this model emphasise the codes that an individual uses to store that information.

There is also a great emphasis on how an individual uses the knowledge acquired to become an increasingly more capable problem solver and the strategies that are used in this process. The self regulation procedures that an individual uses here are also analyzed.

Incoming information from the environment is known as external stimuli. This information meets the first component of information processing which is known as the sensory registers.

As soon as attention is paid to a particular stimulus, information is transferred to the second component which is the short term or working memory.

This component is " a storage system that can only hold a limited amount of information for a few seconds" [Slavin,1991, pg.136].Information enters this component either from the sensory registers or the long term memory. The information that is stored here is in the form of

concepts or concept webs known as schemes.

The long term memory is the component that stores the information for a long period of time. It has a large capacity for storage. Tulving [1985] cited in [Slavin, 1991, pg.138] describes long term memory as being composed of a number of systems that serve different purposes:

- i. Episodic Memory - contains images of experiences organised by when and where they happened.
- ii. Semantic Memory - schemes - mental organisations in networks of connecting ideas or relationships eg concepts.
- iii. Procedural Memory - contains abilities eg how to drive a car.

Information is encoded when further processing is required. Information selected for encoding depends on the individuals interests and abilities. This encoding occurs in short term memory through Primary Rehearsal - reciting of information over and over again and Elaborative Rehearsal which refers to the transformation of the information. [Gredler, 1992, pg.185]

The schemes are stored in summary form. Key elements are retained in long term memory. "The mind constructs and manipulated symbols" These are abstract characterisations

of how information is represented by the brain. [Mcshane 1991,pg.320]

Retrieval thus means retrieving information that has been acted upon and broken down by the mind. Thus the process of recall depends a great deal on how the information was encoded and stored." successful learning thus depends on the learners actions rather than on events in the environment" [Gredler, 1991,pg.192].

The learner must thus be guided in terms of providing "rich store of knowledge and effective strategies for making decisions about her own learning and content related problems. [Gredler,1991, pg 192].Instruction should also direct the learners attention to the relevant information.

Information Processing models are concerned with the processes that a person uses to deal with new information and how these processes can lead to more complex cognitive acts built on less complex ones.

2.2.3.1 THE INFORMATION PROCESSING PERSPECTIVE OF CONCEPT DEVELOPMENT.

Concepts are a result of a cognitive process called categorisation.[Mcshane. 1991, pg.124]. This is a process

that involves the grouping together of entities based on their similarities to one another. At the same time that this process allows grouping according to how things resemble each other to occur, it also enables differentiation based on dissimilarities to occur.

In order for an object that is in itself unique to become part of a generalised class of objects " there must be a cognitive representation that is more abstract than its instances" [Mcshane,1991, pg.124].

Of interest here is the entity relations that form these representations or categories and "the relations that determine hierarchical organisation among concepts" [Mcshane,1991,pg.124]

Prototypes of a concept that include similarities and dissimilarities are formed that enable concept acquisition. Concepts are organised into hierarchies at which the " basic level is the highest level at which objects share commonalities "[Mcshane,1991,pg.132]. Ascension of the hierarchy results in greater inclusiveness but less distinctness.

Categorisation implies that an individual is born with the ability to form concepts. Consequently an individual must

also be born with " a set of preferences that determine which stimulus dimensions are to form the representational basis of concepts" [Mcshane, 1991, pg. 133].

Categorisation is thus part of the "innate architecture of cognition" [Mcshane, 1991, pg.137]

2.3 THEORIES OF CONCEPT ACQUISITION AND CONCEPT DEVELOPMENT.

Concept acquisition refers to the initial process where the individuals' cognitive structures first encounter and accommodate new information. It thus refers to the initial stage of change that occurs within the individuals' cognition and that leads to the actual mental construction and organisation of new information.

Concept development refers to the individuals subsequent and more complex interaction with the concept. The new concept is attained at increasingly higher levels of understanding. This leads to the initial representation of the concept changing and becoming more complex.

2.3.1 DEFINITIONS OF CONCEPTS.

The word "concept" has a different or related meaning for

different theorists depending on the school of thought that they represent. Consequently it is felt that a more holistic understanding can be gained of the concept "concept" by examining a multiplicity of definitions provided by different theorists. The following quotations, from a range of theorists, illustrate the variety of definitions provided by theorists of concept development.

" A concept is a mental representation of a category, which allows one to place stimuli in a category on the basis of some similarities between them. Each category has an associated set of likely symptoms." [Howard,1987,pg.2].

" Concepts are constructed as intrinsically relational sorts of things. They are not isolated entities connected only in the service of propositions. No individual concept can be understood without some understanding of how it relates to other concepts. Concepts [contain] systematic sets of causal beliefs" [Keil,1989,pg.1]

"Concepts refer to a mental representation that determines how entities are related" [Mcshane, 1991, pg. 124].

"Conceptual behaviour can be described as the occurrence of a common response to a class of objects or events where we can be assured that this common response is not due to

stimulus generalisation" [Johnson, 1975, pg. 53].

"To categorize is to treat a set of things as somehow equivalent" [Neisser [ed], 1987, pg.1].

"A concept is a complex mental formulation of empirical experience" [Chinn and Kramer 1991 cited in Morse 1995, pg.33].

Concepts thus enable us to organise our experiences of the world by allowing us to organise our thinking regarding those experiences. This ability enables us to live in the world without being weighed down and overwhelmed by the wealth of experiences within it. Concept formation prevents us from becoming "slaves to the particular" [Bruner & Austin, 1956, pg.1].

Bolton defines a concept as "a stable organisation in the experiences of reality which is achieved through the utilization of rules of relation and to which can be given a name.[Cited in Morse 1995, pg.35].

He goes on to discuss rules that facilitate the examination of the formation of concepts:

- i. Concepts are the expressions of the ways in which the experience has become organised arising from the

subjects intention.

- ii. All concepts are the results of particular instances becoming general, by being treated as examples of a type or rule and these general meanings are stabilized with the use of language in social interaction.
- iii. Concepts are the results of coordination, and the elements inherent in the concept are adhered by the same relation.
- iv. An individual perceives a concept as a means to organise events and expects that the concept is capable of being applied to fresh instances.
- v. Because a concept is the application of a rule to a particular situation, concept formation must be examined by studying the "emerging correlation between such acts and the stimulus conditions to which they are related. There is a reciprocal relationship between the interpretative acts by which we construct our models of reality and the properties of reality itself. [Morse, 1995, pg.35].

A perusal of the literature on the concept "concept" reveal diverse views and theories on the subject. A brief discussion on this now follows.

2.3.2 CLASSICAL THEORY OF CONCEPT FORMATION

This approach has 3 major propositions:

Firstly a concept is formed either by abstracting the intrinsic attributes from some of its examples or by being given the attributes.

Secondly each attribute is necessary to define the concept and all the attributes together are sufficient to specify the concept.

Finally the attributes of the higher order concept are vested in all of its subordinates concepts and their subclasses. [Klausmeier in Jones & Idol, 1990, pg.98].

David Ausubel [1962], a writer within this paradigm, describes the Piagetian like stages in the acquisition of concepts. These stages are sequential and begin with "a discriminative analysis of different stimulus patterns" The last stage is the "representation of the new categorical content by a language symbol that is congruent with conventional usage" [pg 517]. There is thus a movement in complexity and qualitative understanding of the concept as one moves through the 8 stages.

Ausubel [1962], also classifies the types of categories using the model developed by Bruner, Goodnow and Austin [1956].

The first category developed is the category of Conjunctive concepts - Here all the critical aspects of the concept must exist in each and every exemplar.

The second category is the Disjunctive concepts - where all the critical aspects do not have to be present or can be present in varying degrees.

Finally the category of Relational concepts are defined by relational attributes.[pg 510].

The classical view of concepts is described as "monothetic" [Mcshane,1991, pg.126] because members of a class share at least one common property. If the instance is found to possess the relevant feature then it belongs to the concept. [Ibid, pg 127].

It is also referred to as the "rule model" [Howard,1987, pg.90], since acquisition of a concept is very much like learning a rule and applying it when classifying stimuli.

The classical view of concepts has been criticised on the

grounds that there are many concepts eg justice that have no obvious defining features. A second criticism states that the classical view cannot account for typicality and unclear cases.

Howard [1987] states that unlike the view put forward by classical theorists, characteristic features instead of defining ones are sometimes used to categorise. [pg 20].

Classical theory has been described by Klausmeier [Jones & Idol, 1990, pg.98], as being relevant only to conjunctive concepts and criticised on the grounds that the defining attribute of a concept are intrinsic only.

2.3.3 PROTOTYPE THEORY OF CONCEPT FORMATION

Some theorists disagree with the classical theorists in that they deny that concepts "have necessary and sufficient features that defines instances of the concept" [Mcshane,1991,pg.129]. Instead it is believed that the "salient structure of these categories tended to reside in a large number of attributes true of some but not all category members."

These theories in general are referred to as prototype

theories of concept formation.

The prototypicality effect refers to the " high correlation between measures of family resemblance scores and the ratings of typicality" [Mcshane,1991, pg.129] An instance of the concept is thus seen as the best exemplar of that concept and becomes a prototype.

A concept is learned and represented as a prototype of a class of objects. This prototype is constructed out of experience with examples of the class and includes just the typical features and not all the defining attributes of the class. [Klausmeier in Jones & Idol,1990, pg. 99].Thus according to these theorists , most typical instances will have a high degree of family resemblance to the instances already encountered. [Mcshane, {1991}, PG130].

A prototype is a model. Thus a "category is represented by some measure of central tendency of some instances which can be highly typical or an idealisation." [Howard, 1987, pg.93].

The term idealisation is used here because a prototype combines features that no single member actually has. The stimulus is compared to the prototype and is only categorised as an example if the two are sufficiently

similar. [Ibid, pg 96].

A prototype may be formed by:

Firstly exposure to a typical example that reflects the characteristic features of the class.

Secondly abstracting the characteristic features of two or more examples of the class and

thirdly being presented with its typical features.

[Klausmeier in Jones & Idol, 1990, pg 99]

Eysenck and Keane [1991,pg 264], summarise the basic proposals of this theory:

- i. Concepts have a prototype structure that is either a collection of characteristic attributes or the best exemplars of the concept.
- ii. There is no delimiting set of necessary and sufficient attributes when it comes to determining a stimulus' membership of a category.
- iii. Category boundaries are not strictly defined - but fuzzy and unclear. This allows for the slipping of stimuli between categories.

- iv. Instances of a concept can be ranged in terms of their typicality.
- v. Category membership is determined by the similarities of the stimulus in terms of its characteristics to the prototype of that category.

Prototype theorists have been criticised for paying too little attention to the structure of concepts, to the relationship of characteristics within the structure, and to the relationship of the concept to other concepts. [Meadows, 1993, pg.110].

Furthermore there is the danger that nondefining attributes of the concept may be learned as characteristic features.

Furthermore, prototypes cannot be formed for abstract concepts eg Eternity and distinctions are not drawn between the prototypes of naive persons and that of experts.

Finally Prototype theory provides little insight into the core of a concept in terms of its relations to thought in general. [Klausmeier in Jones & Idol, 1990, pg.100].

2.4 KLAUSMEIERS' THEORY OF CONCEPT LEARNING AND DEVELOPMENT

[CLD]

2.4.1 INTRODUCTION: CONCEPTS.

Herbert. J. Klausmeier was the Codirector for Research and then Center Director at the Wisconsin Research and Development Centre for individualised Schooling. Here he identified the primary problem area to be " the improvement of Education through a better understanding of cognitive learning" [Klausmeier & Sipple, 1980, pg.3].

Related to this he formulated 5 propositions regarding learning and instruction:

- i. Concepts provide much of the basic material for thinking. They serve as mediators between sensory input and overt behaviours.
- ii. Concepts and Principles comprise the major outcomes of learning.
- iii. Cognitive processes, such as cognizing, hypothesizing and evaluating are learned. These basic concepts and skills enable problem solving and independent

learning.

- iv. The learning of concepts and other cognitive outcomes is related to conditions within the learner and the conditions within the situation. The conditions within the learner relate especially to attention, motivation and the current level of cognitive functioning. External conditions relate to content, sequence of instruction, quality of instruction and methodology.
- v. Knowledge about cognitive learning, skills, conditions and concepts generated by scholars must be validated within a school setting. [Ibid, pg 4]

Klausmeier states that concepts may be regarded as "tools of thought" [Klausmeier in Jones & Idol, 1990, pg.93]. A concept refers to both an individual's mental construct of a thing as well as the societally standardised meaning of the word that names the concept. In other words, the "scholars meaning of the word that names the concept" [Ibid, pg 93].

In his discussion of concepts as mental constructs, Klausmeier makes the following points:

- i. These mental constructs consist of a person's

organised information about an item or a class of items.

- ii. This enables discrimination of items and classes of items to occur.
- iii. A person's concepts are unique to them, being what the person constructs from formal and informal experience, what the person represents internally and stores in memory. [Ibid, pg 94].
- iv. Mental constructs of an item will change as the individual attains the concept at increasingly higher levels of understanding. Eventually the individual is able to understand the concept the way an expert in the field does.
- v. "Concepts as mental constructs are the building blocks of a person's cognitive structure" [Klausmeier, 1992, pg. 268].

Klausmeier's view of concepts differs from the views offered by the other theories in a number of key areas.

Firstly he states that a concept can be attained at successively higher levels of understanding where at the

beginning level" the mental construct of a concept is a visual image of an example..." At a fully functioning level the mental construct" includes the perceptible and non perceptible attributes of the concept and the socially standardised meaning of the word or words that name the concept" [Ibid, pg 268].

Secondly concepts have relational attributes ["an invariant relationship between 2 or more items"], functional attributes ["how something functions and what it is used for"] and intrinsic attributes [invariant property of an observable thing or class of things that typically can be pointed to] [Ibid, pg 269].

Unlike prototype theorists, Klausmeier not only explains the learning of concepts, he has also developed instructional applications.

2.4.2 CONCEPT LEARNING AND DEVELOPMENT [CLD] THEORY.

CLD theory proposes that an individual forms a concept at 4 successively higher levels of understanding. An individual must have attained the concept at one level first in order to achieve it at a higher level of understanding.

These levels are attained once the individual "becomes capable of carrying out various mental processes" [Klausmeier,1992,pg.272].These processes emerge as a result of neural Maturation because the necessary cognitive structures and processes must be present to enable functioning at a particular level and reciprocal interaction between neural maturation, informal experience and formal education.

Klausmeier asserts that not all concepts can be attained at all 4 successive levels. Concepts that have only 1 example, do not have any observable examples or are defined in terms of a single dimension or quality fall into this category. [Klausmeier & Sipple,1980,pg.26].

Thus concepts that have more than one example, have observable 3 dimensional examples or examples expressed in the form of drawings, words or other symbols and that are defined in terms of intrinsic, functional and relational attributes will be attained at all 4 successive levels of understanding.

These levels of understanding taken from Klausmeier [1992, pg.273] are as follows:

The concrete level - At this level the learner is capable

of recognising an item as being one that was encountered earlier in exactly the same spatiotemporal context. The mental processes involved here include "attending to an item, discriminating the item from its surroundings, representing the item in long term memory as a visual image, being able to [attend] to the item when it is encountered again in the identical context and retrieving the representation and using it in recognising the item as the same entity discriminated earlier.

The identity level - Understanding at this level is demonstrated when the individual can recognise an item as being the same as one encountered in a different spatiotemporal or modality. The mental processes involved here include those at the concrete level as well as the ability to "[generalise] that the item, though experienced differently, is the same as the one discriminated earlier".

The classificatory level - Understanding at this level involves being able to recognise at least two items as being equivalent. The mental processes involved here include those of the previous 2 levels as well as being able to " [to generalise] that at least 2 items are equivalent" The learner, at this stage, can identify and discriminate nearly all examples and non examples but cannot offer an adequate explanation of the basis of this

classification.

The formal level - At this level the learner can identify nearly all examples and non examples, "name the concept and its defining attributes", give the "expert's definition of the word or words that name the concept" and specify the critical attributes that differentiate the concept from other closely related concepts" The mental processes involved here include those of the previous levels as well as " either a set of inductive processes that include hypothesizing, evaluating and inferring or a set of meaningful reception operations that include processing and correctly using the given information"

Klausmeier also makes the distinction between an immature concept and a misconception. An immature concept is one that is formed at the Concrete, Identity or at the beginning of the Classificatory stage. Here the learner has a basic understanding of the concept but is incapable of functioning at the level of an expert because the necessary mental processes are not functioning.

However, a misconception is formed when the necessary mental processes are functioning but the learner still exhibits deficiencies in identifying examples and non examples and using the concept adequately. The learner "has

a meaning that differs from that of the experts, draws incorrect inferences or demonstrates some combination of these" [Klausmeier,1992,pg.274].

2.4.3 FOCUSED INSTRUCTION: TEACHING FOR CONCEPT ACQUISITION.

According to Klausmeier [in Jones & Idol, 1990, pg.93], concepts are acquired at a simple level of understanding and use without guidance. "On the other hand carefully designed instruction enables students to avoid misconceptions and to learn concepts to the same high level of understanding and use as that of scholars in the various subject fields"

CLD Theory attributes great importance to schooling by emphasising that concept development can be greatly enhanced through formal instruction.

Klausmeier has designed a teaching methodology that contains within it instructional principles that can enable concept development. He refers to this methodology as "Focused Instruction": Teaching with the intention of enabling conceptual development.

The following instructional principles must be used in order to enable the learner to achieve increasingly more

complex understandings of the concept at hand.

The provision of orienting Instruction involves the deliberate creation of the desire within the learners to learn the concept. In order to do this the learners attention must be focused on the aspect to be learned. This creates a motivation within the learners to learn the concept. "As long as the intention remains, activity continues towards goal attainment"
[Klausmeier,1992, pg.280].

The teaching of concepts in groups of 2 or more related concepts. This enables the ability to Classify and Discriminate to develop. The learner will thus be able to identify points of commonality between them and also use one concept as a non example of another. [Klausmeier, 1992, pg.279].

The provision for recall early in the Instructional sequence. This "enables the learner to reinstate in working memory, prior knowledge" This will also enable a teacher to identify and eliminate misconceptions. This is a prerequisite for attaining the target concept"
[Klausmeier,1992, pg.280].

The use of as many examples and non examples as possible

because this "markedly facilitates learning" These examples must be presented in a sequence from the most typical to the least typical. The typical examples enable the learner to "develop a prototype" while the least typical examples," very much like non examples, prevent undergeneralisations which is not correctly identifying an item as an example". Non examples " prevent overgeneralisation which is incorrectly identifying a non example as an example" [Klausmeier,1992. pg.280].

The presentation of the concept in a variety of ways eg 3 dimensional models, drawings, pictures, visually, verbally etc.

The provision for and or eliciting from the learner a "definition that includes the attributes of the concept.[Klausmeier, 1992, pg.281]

The Provision of affirmative feedback is important because "it aids initial learning of a concept and its defining attributes. Corrective feedback is essential for preventing the formation of a misconception" [Klausmeier, 1992, pg.281].

Klausmeier also mentions the importance of follow up instruction because it "insures initial concept attainment

and subsequent transfer." [1992, pg 282]. He adds that transfer of the concept is facilitated by a formal understanding of the concept and follow up instruction that addresses firstly whether the learner can specify the relations among concepts.

Secondly whether the learner can use the concepts in understanding principles of which the concept is part and finally whether the learner can use the concept in solving problems involving understanding of the concept.

2.5 POINTS OF SIMILARITY: CLD THEORY AND THE THREE MAJOR THEORIES OF COGNITIVE DEVELOPMENT.

2.5.1 CLD THEORY AND THE PIAGETIAN APPROACH

CLD theory with its view that an understanding of a concept develops both in quality and complexity can be described as a stage theory. This has a lot in common with Piaget's view regarding the 4 stages of cognitive development. This emphasises the emergence of qualitatively different and superior intellectual functioning as the individual moves through each stage.

CLD theory also mentions the importance of neural maturation to the development of a conceptual understanding. This is very similar to Piaget's view that the individual must possess the necessary cognitive structures in order to assimilate or accommodate new information.

2.5.2 CLD THEORY AND THE INFORMATION PROCESSING APPROACH.

The mental processes identified by Klausmeier that occur within the different levels of understanding highlights the similarity between the 2 theories.

The mental process of attending to an item says the same as the Information Processing theorists do when they talk about the importance of paying attention.

Other processes like generalising, hypothesising, retrieving information after storing it in long term memory etc all clearly indicate the influence of Information Processing Theory on the development of CLD.

2.5.3 CLD THEORY AND VYGOTSKIAN THEORY.

Focused Instruction has clear points of similarity with Mediated learning and the Zone of Proximal Development that was outlined by Vygotsky.

Klausmeier's belief that intentional intervention through Focused Instruction will enhance the development of concepts and the subsequent cognitive growth of the learner is clearly an echo of Vygotskian theory.

Vygotsky also believed in a "general stage like transition" [Kiel, 1989, pg.8]. This view is echoed by CLD theory.

Klausmeier's view on the importance of neural maturation clearly coincides with Vygotsky's view that, before a certain point in cognitive development, the learner will experience great difficulty in representing concepts in an abstract principled way. [Keil, 1989, pg.7].

Klausmeier's Concept Learning and Development Theory as clearly an eclectic one that draws ideas and inspiration from the 3 major theoretical approaches to cognitive development.

CHAPTER 3: EXPERIMENTAL DESIGN

An assessment of the effect of Focused Instruction used to teach the concept Regular Verb formed the main focus of the Experiment. Consequently all the tests for all the groups and the teaching methodology used for the Intervention group were designed using Klausmeiers' Concept Learning and Development theory

3.1 RESEARCH METHOD

Three groups of National Intermediate Certificate [NIC] students were the subjects of the experiment. The first group, [NIC -1], was the Intervention Group. NIC - 2 was the Comparison Group and NIC - 3 was the Control Group.

Each group wrote the pretest in order to assess their already existing knowledge of Regular Verbs.

The Control Group received no instruction in between writing the pre and post - tests. This was a deliberate strategy employed to assess the test effect on concept development.

The other two groups received 2 qualitatively different styles of instruction after the pretest. The Comparison

Group received conventional "banking " [Friere, 1972, pg.45] education. The Intervention group received "Focused Instruction" as advocated by Klausmeier.

The pretest and a post - test varied only in terms of the form of the actual questions being asked. This post - test was used to determine if any changes in the students' level of conceptual development had occurred after the pretest and instruction.

Furthermore the Intervention Group also wrote a third test after the June vacation, when approximately 10 weeks had elapsed from the time of the post - test. This test also only varied in terms of the form of the actual questions being asked; and was designed to test the durability of the concept acquisition by the Intervention group.

3.2 SITE OF STUDY

The study was carried out at a Technical College in Pietermaritzburg. The College was initially under the control and supervision of the House of Delegates. However at the time of this study, due to the amalgamation of the various Education Departments, the controlling body was the Provincial Education Agency Services.

The College consists of 3 Divisions of Study:

- A] The Division of Cultural Enrichment offers part time, community oriented hobby courses.
- B] The Division of Engineering Studies caters for the needs of Apprentices in the Technical field.
- C] The Division of Business Studies offers both full time and part time courses oriented around the commercial and secretarial field of study. The entire research study occurred within this Division.

3.3 STUDENT POPULATION

While the medium of instruction is English, the student population is racially mixed, with the majority of students being English second language learners. This had been the case from about 1990.

The College is a co - education institution with a total student population of 900. Instruction in the Business Studies Division ranges from the NIC level right up to the N6 level, which is a post matric level. The student population of this Division at the time of this study was 250.

3.4 STUDY SAMPLE

All 3 NIC classes were used as subjects for this study. The NIC course is a year long course and is roughly equivalent to standard eight at a conventional school. At the time of this study, the majority of these students [90%] were English second language speakers.

Each class had a total of 25 registered students. However due to political and social upheavals and chronic absenteeism, the actual numbers in each class were lower. Consequently the tests were written by 17 students in NIC-G1, 21 students in NIC-G2 and 17 students in NIC-G3.

The NIC course, because it is a course for school leavers, normally attracts students of low ability according to conventional assessment. These learning problems are exacerbated by language difficulties.

3.5 SUBJECT MATERIAL

The Regular Verb was chosen as the concept of study. It has been noted by the researcher that the NIC students experience great difficulty with the acquisition of English formal language structures, more especially with the acquisition of Verbs. Palmer [1987] mentions that " for

almost any language the part that concerns the Verb is the most difficult. Learning a language is to a very large degree learning how to operate the verbal forms of that language..." [page 1].

This difficulty has a very great impact on the students ability to use English as a means of communication successfully. The Regular Verb was chosen because it was felt that at the NIC level and within the limited confines of this study, the idiosyncratic tense changes of irregular verbs would be too complicated for students to deal with.

Formal exposure to English language, especially parts of speech, begins in primary school. Thus at the NIC level students should, at least, demonstrate an acquisition of the concept Regular Verb at the concrete level.

Students at the formal level of understanding of the concept verb should be able to use the concept to solve related linguistic problems by making the necessary cognitive links and adjustments.

The following cognitive map illustrates the route of development that the students should go through in order to achieve this formal understanding of the concept Regular Verb:

A regular verb is a doing word that maintains a recognisable form during Tense changes.

last verb in the verb phrase. Can form a complete meaning on its own.

Helps main verb to form a Tense. Cannot form a complete meaning on its own.

main

auxiliary

classification

Definition

Introduction

REGULAR VERBS

Tenses of regular verbs

Types of regular verbs

Active and passive voice

Past - action is over
Perfect - action completed at a particular time in the past.

Transitive verbs

Active voice - sentence starts with subject - doer of the action.

Continuous - past action in relation to another action.

Verb has an object

Indefinite - no definite time of completion of action.

Intransitive verbs

Passive voice - sentence starts with object - sufferer of the action.

Present - action is taking place now.

Verb has no object.

Perfect - action started in the past not yet completed or just completed.

Continuous - action continuing in the present time.

Indefinite - no definite time of completion of action.

Future - action will take place.

Perfect - action still has to take place and will be completed at a specific time in the future.

Continuous - action will take place and continue into the future.

Indefinite - no definite time of completion of action.

3.6 RESEARCH DESIGN

The design of the experiment was based on the Concept Learning and Development theory of H.J. Klausmeier. [1992] All 3 of the tests [pretest, post - test and third test] were designed using his levels of concept acquisition as a guide. The Intervention strategy received by the Intervention group was designed using Klausmeiers Focused Instruction.

All 3 tests were designed along comparable lines with regard to the level of concept development that each question was testing for. These tests varied only in terms of the wording of the actual questions asked.

Each question set tested for a particular level of concept acquisition. This meant that each question also tested for the abilities and processes, described by Klausmeier, that a learner should be able to demonstrate at that particular level.

If a learner scored 3 points in a particular question out of a maximum of 5; then it was assumed that the learner had a conceptual understanding of the regular verb at that level represented by the question. These test questionnaires and marking memoranda are included in

appendix A, B and C.

3.7 TEST DESIGN

3.7.1 ADMINISTRATION OF TESTS

The pretest was administered to all 3 groups on the same day at exactly the same time. Each group wrote the test in a different venue at the college.

The post - test was administered in exactly the same way to all 3 groups one day after the instruction had ceased.

The third test was administered only to the Intervention Group approximately 10 weeks after the post - test was written. It was administered in exactly the same way as the previous tests.

Each question of the test was explained by the invigilator and what was required from the students by each question was also explained fully. This explanation served the purpose of attempting to alleviate any language difficulties that the students could have encountered while writing the test. This was done in an attempt to prevent second language difficulties from acting as a

significant variable in the results.

The tests were designed to be as user friendly as possible, with examples being provided so as to clarify what was expected in each question.

3.7.2 DESIGN OF PRETEST, POST - TEST AND THIRD TEST

The questions were designed taking into account the fact that the majority of the students were Second language learners. It was felt that the objective of the questions was to elicit knowledge rather than to cause confusion and stress.

The questions were accompanied, as far as possible, by examples. This was to make the test as user friendly as possible by attempting to eliminate any confusion caused by misunderstandings and second language issues.

The sentences and names used in the various questions were taken out of the students everyday experiences at the College. This was an attempt to create a feeling of familiarity and to dispel any test anxiety.

There was also an attempt, through the test design, to reduce the amount of actual writing done by the student. Thus all questions were answered on the question sheet.

There was also a number of questions that only required crosses and one word answers, instead of complicated explanations. This enabled them to make maximum use of the time that was available to them to write the test.

QUESTION ONE - Identify the regular Verb by underlining it within each of the following sentences.

COMMENT - This question tested for concept acquisition at the Concrete level. Consequently the sentences provided only contained main verbs in the present tense. An understanding of the concept regular verb at this stage meant that the learner was able to identify a word as being a verb because this word was encountered as such within a similar sentence context.

QUESTION TWO - Identify the regular verbs in each of the following sentences and write it down in the space provided.

COMMENT - This question tested for concept acquisition at the Identity level. An understanding of the regular verb at this stage meant that the learner was able to identify verbs encountered previously in one context, in a different

spacio - temporal context. This different context involves changes in tense and the introduction of auxiliary verbs.

QUESTION THREE

- 3.1. A] Underline the Regular verbs in each of the following sentences.
- B] Identify the main and auxiliary Verb using the same sentences and fill in your answers in the box below.
- C] Explain the above answer
- 3.2. A] Explain whether the Regular Verbs in the following sentence are transitive or intransitive by placing a cross in the correct box.
- B] Explain the above answer
- 3.3] Identify the tense of the regular verb within each of the following sentences.

COMMENT - This question tested for concept acquisition at the Classificatory level. An understanding of the concept regular verb at this stage meant that the learner was able to identify and classify verbs according to tense, transitive and intransitive, main and auxiliary and to

provide an explanation for the answers given.

QUESTION FOUR

- 4.1. A] Indicate, by placing a cross in the box provided, whether the following sentences are in the Active or Passive voice.
- 4.1. B] Explain your answer
- 4.2] Change the following sentences into the Passive voice.

COMMENT - This question tested for concept acquisition at the Formal level. An understanding of the concept regular verb at this stage meant that the learner was able to use her understanding of the concept to solve related linguistic problems. The learner was able to identify the regular verb, its tense, whether it was transitive or intransitive and to choose the relevant auxiliary verbs when solving these problems.

3.8 THE INTERVENTION PROGRAMME

Three National Intermediate Certificate [NIC] groups were the subjects of the experiment.

NIC - 3 was the Control group and received no instruction at all.

NIC - 1 was the Intervention Group. This group received instruction on regular verbs that was based on Focused Instruction. This teaching methodology encouraged discovery learning and differed greatly from teacher based methodology that is conventionally employed. The aim of Focused Instruction is to develop a formal understanding of the concept.

NIC - 2 was the Comparison Group. This group received the conventional teacher based instruction that encourages what Perkins [1992] refers to as the "recitation script". The aim here being to provide the information, to have it memorised by the students and recited or produced by them at the relevant time. The pupils were not encouraged to take an active part in the learning process and were required, instead, to simply listen and copy down information after teacher based instruction. They were provided with straightforward sentence type questions as application exercises to test their knowledge.

The Intervention and Comparison Groups received 5 consecutive 1 hour periods of instruction. This instruction began the day after the pretest was administered. The post

test was administered one day after instruction ended.

3.8.1 LESSON ONE

TOPIC: Introduction to Regular verbs

THE COMPARISON GROUP.

The topic of the lesson was written on the chalkboard. The lecturer explained to the class that verbs were an example of parts of speech. The lecturer asked the students if they could define a verb. After a few minutes the lecturer provided the definition. The lecturer then went on to explain the difference between regular and irregular verbs. After this the students appointed by the teacher worked on identifying examples provided by the lecturer on the board. Notes, provided by the lecturer, were then copied by the students. The class was provided with a homework exercise that comprised sentence type questions.

THE INTERVENTION GROUP.

No heading was written on the board. This lesson focused on "orienting instruction" [Klausmeier, 1992, page 279]. This involved creating within the students the desire to learn the concept. The students were divided into groups. Each group was given a worksheet with various paragraphs on it. The lecturer informed the class that the first group that could explain the various paragraphs would win a bar of chocolate. The students indicated, after a little while,

that the paragraphs made no sense. The lecturer asked them to try and decide why this was so and to substitute words that would make the paragraphs meaningful.

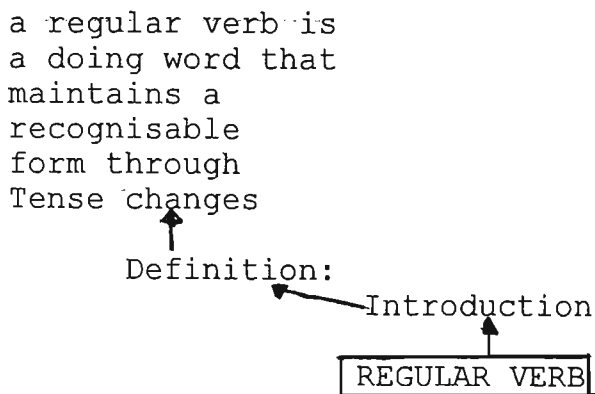
Once each group had made their substitutions, the lecturer asked the students to try and identify these new words in terms of the role they played in the sentences. The lecturer then wrote the topic of the lesson on the board. A discussion followed out of which arose a suitable definition of verbs based on the paragraph exercise.

The lecturer then wrote down examples of regular and irregular verbs on the board indicating their various tense changes. The students were asked to discuss and identify the differences between the examples. By stating that some of the words changed form completely during tense changes, the students were able to identify the difference between regular and irregular verbs. The students could consequently define a regular verb. This definition was thus "elicited" from the students.

The students then played a game called "follow your leader" in which each student took a turn to write down a sentence on the board and nominate another student to identify the verb therein.

This lesson also involved the introduction of related concepts since concepts like nouns, pronouns, adverbs and sentence were introduced to the students. Students were also encouraged to follow the lecturer's example by providing "affirmative feedback" The sentences that students wrote on the board exposed them to many examples of regular verbs. Students were also exposed to non examples of regular verbs to " prevent over generalisation"

The students were provided with a concept map to reinforce the lesson:



The lesson ended with students being asked to use a newspaper article at home by identifying and underlining all the regular verbs that they came across in the article.

3.8.2 LESSON TWO

Topic: Classification of regular verbs.

COMPARISON GROUP - The lesson began with the correction of the homework exercise. The topic of the lesson was written on the board. The lecturer then wrote a sentence on the board and asked the students to identify the verb. The lecturer then informed the class about why their identification was wrong and explained the verb phrase to them. The terms "main" and "auxiliary" were also explained. Further examples were worked out on the board. Class notes were provided on the lesson. Students were given an exercise to complete as homework.

INTERVENTION GROUP - The lesson began with a discussion of the homework. The articles of volunteer students were used for a general class discussion as a means of reinforcing the previous lesson. Klausmeier [1992] refers to this as "providing for recall early in the instructional sequence" [page 280]. The previous lesson had also involved the use of simple examples of the concept. This lesson was introduced using the homework exercise and involved the introduction of more complex examples of the concept.

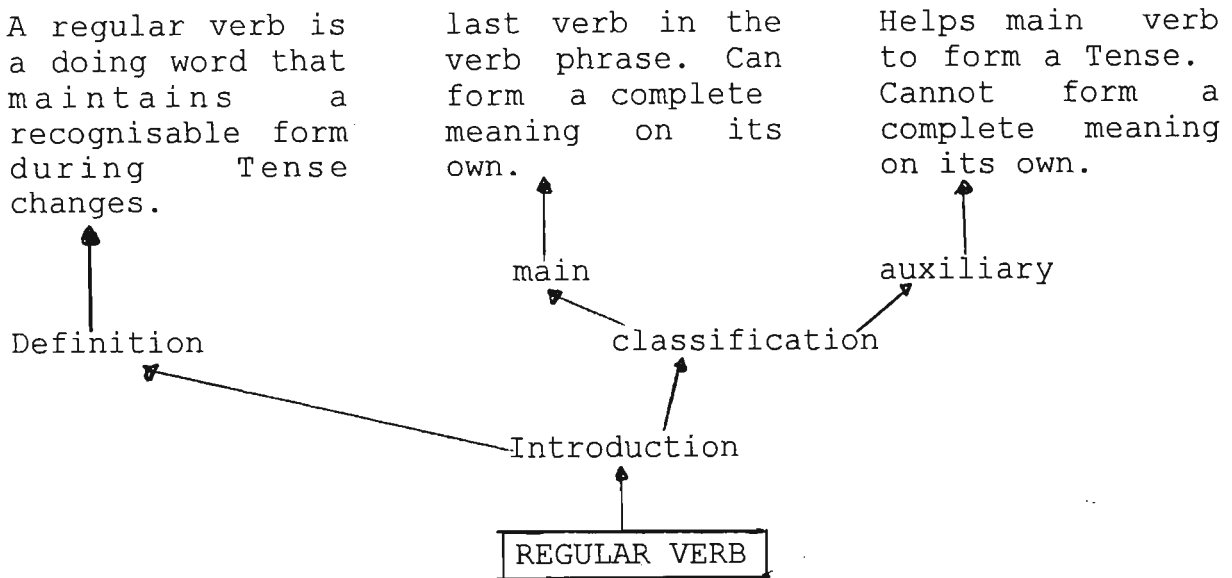
The lecturer asked some of the students to write out some

of their sentences with the verb identification on the board. The lecturer asked the students to explain why some of their identifications were wrong. To aid this explanation the lecturer used the metaphor of scaffolding. The students were asked about what could be done if the scaffolding used by a painter was not high enough. The students replied that an extra piece would be added on.

The lecturer explained that the words left out by the students in the identification were like those extra parts of scaffolding. At this stage students were introduced to the phrase as a related concept. The lecturer explained the terms "main" and "auxiliary" to the class and used a few more examples from the students homework to reinforce the lesson.

The lecturer asked the class to attempt a definition of each term based on their experience of them. After group discussion, students offered a partial definition which the lecturer completed. A definition was thus "elicited" from the students. [Klausmeier, 1992, page 280]

The lesson ended with the inclusion of the new information on the concept map:



3.8.3 LESSON THREE

TOPIC: Tenses of regular verbs

COMPARISON GROUP - The lesson began with the correction of the previous day's homework. The lecturer defined the concept of tenses and explained the differences between the various tenses.

The class took down notes provided and worked on an exercise with the lecturer on the board. A homework exercise was provided for the class to work on.

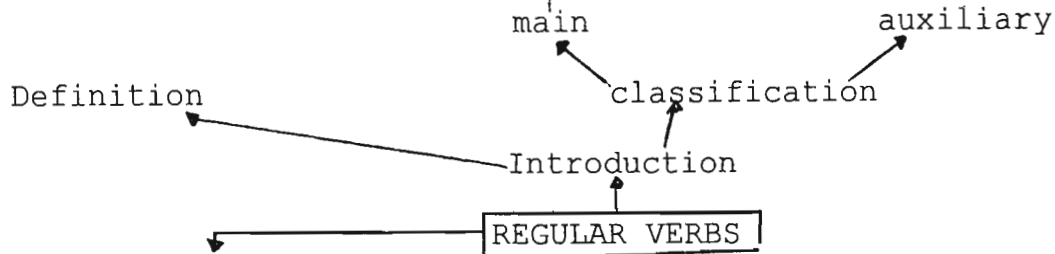
INTERVENTION GROUP - The lesson began with the lecturer reminding the students about the previous lesson when they had discovered that a verb denotes action in a sentence. The lecturer then wrote a few examples from the students newspaper article exercise on the board and asked the class to think about when each action in each sentence was taking place. The aim here was to introduce the related concept of time to the action.

The lecturer then used different sentences showing a different tense of the same verb to elicit some sort of definition of each tense from the students. Using the students contributions, as far as possible, the lecturer refined the definitions. The lecturer reinforced the previous lesson by drawing the students attention to how important the auxiliary verb was in aiding the main verb to change tenses. The lesson ended with the 'follow the leader " game. The lecturer extended the concept to include the new information.

A regular verb is a doing word that maintains a recognisable form during Tense changes.

last verb in the verb phrase. Can form a complete meaning on its own.

Helps main verb to form a Tense. Cannot form a complete meaning on its own.



Tenses of regular verbs

Past - action is over

Perfect - action completed at a particular time in the past.

Continuous - past action in relation to another action.

Indefinite - no definite time of completion of action.

Present - action is taking place now.

Perfect - action started in the past not yet completed or just completed.

Continuous - action continuing in the present time.

Indefinite - no definite time of completion of action.

Future - action will take place.

Perfect - action still has to take place and will be completed at a specific time in the future.

Continuous - action will take place and continue into the future.

Indefinite - no definite time of completion of action.

3.8.4 LESSON FOUR

TOPIC: Types of regular verbs.

COMPARISON GROUP - The lecturer began the lesson by correcting the previous lesson's homework. The lecturer then wrote the topic of the lesson on the board and explained the difference between transitive and intransitive verbs. The class then spent some time identifying examples provided by the lecturer on the board. The class took down the notes provided by the lecturer. A homework exercise was provided.

INTERVENTION GROUP - The lecturer, using the newspaper article exercise of volunteer students, wrote down 2 sentences on the board. The various groups were then asked to discuss these and to provide feedback on the way the sentences differed. The contents of the report back were written on the board by one person of each group.

Subsequently these were refined and the lecturer introduced the related concepts of "transitive" and "intransitive" "subject" and "object". These related concepts were explained. The class then played the "follow my leader" game. As a means of reinforcing the lesson, the lecturer expanded the concept map to include the new

information.

A regular verb is a doing word that maintains a recognisable form during Tense changes.

last verb in the verb phrase. Can form a complete meaning on its own.

Helps main verb to form a Tense. Cannot form a complete meaning on its own.

Definition

main

auxiliary

classification

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REGULAR VERBS

Tenses of regular verbs

Types of regular verbs

Past - action is over

Perfect - action completed at a particular time in the past.

Continuous - past action in relation to another action.

Indefinite - no definite time of completion of action.

Transitive verbs

Verb has an object

Intransitive verbs

Present - action is taking place now.

Perfect - action started in the past not yet completed or just completed.

Continuous - action continuing in the present time.

Indefinite - no definite time of completion of action.

Verb has no object

Future - action will take place.

Perfect - action still has to take place and will be completed at a specific time in the future.

Continuous - action will take place and continue into the future.

Indefinite - no definite time of completion of action.

3.8.5 LESSON FIVE

TOPIC: Active and Passive voice.

COMPARISON GROUP- The homework of the previous day was corrected first. The lecturer then wrote down the topic of the lesson on the board and explained to the students how each Voice is different. Suitable sentences were provided to clarify these differences.

The lecturer then showed the students how to change a sentence from one voice to another. The class and the lecturer then worked out examples on the board. The class then took down their notes and worked on a short exercise. The lesson ended with the correction of this exercise.

INTERVENTION GROUP - The lecturer provided the class groups with 2 different letters each. They were requested to discuss these and to report any differences. Students noted that one was friendlier and the other was more businesslike and distant. The lecturer used these insights to introduce the related concepts of Active and Passive voice.

2 sentences from each letter were written on the board and a discussion about their differences arose. The lecturer

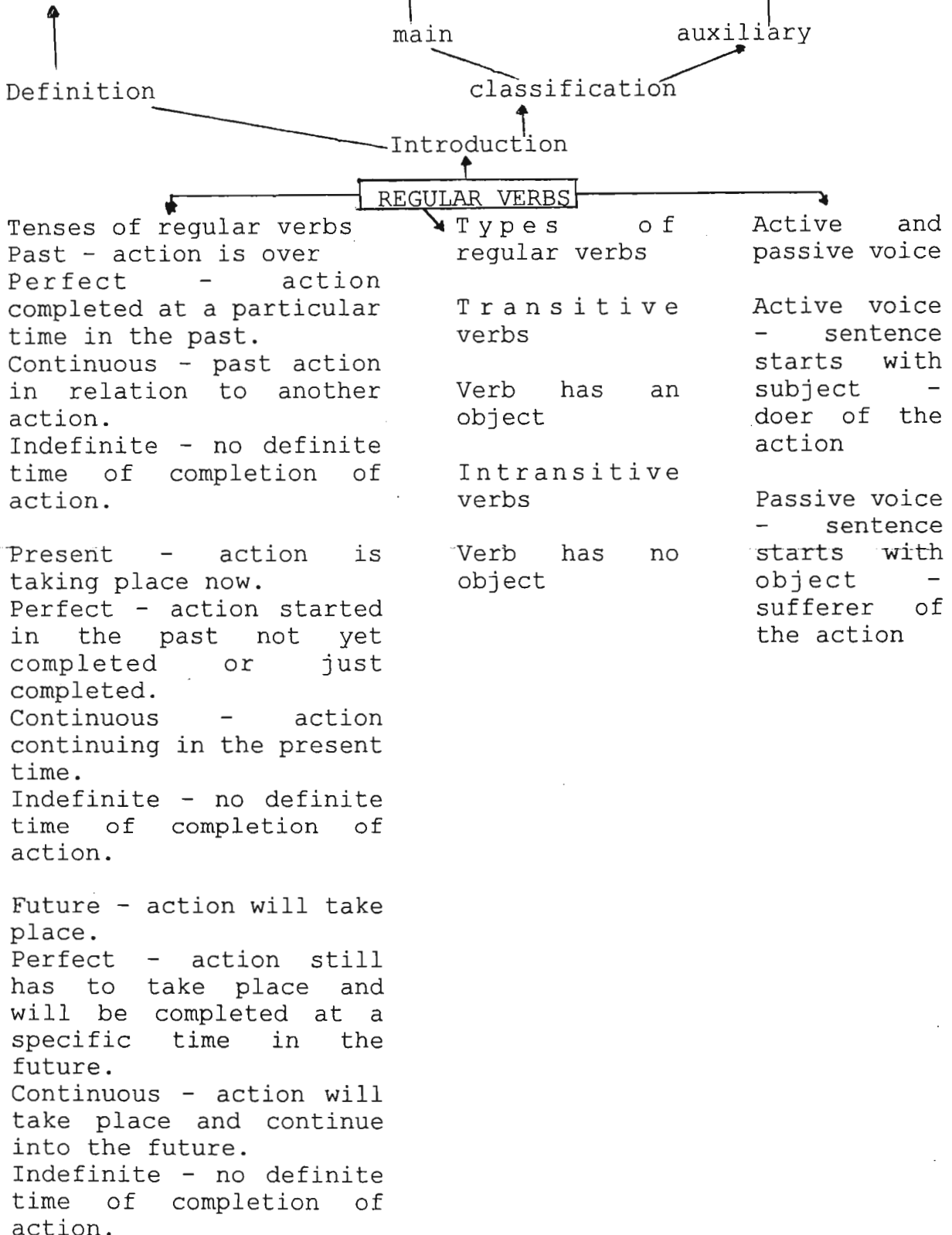
provided for recall by urging the students to use the previous lesson's information. Student's answers were refined and this new information was introduced onto the concept map.

The students then played "follow your leader" again and spent some time practising changing the Voice of the sentences on the board. The lecturer then asked them to form into their groups again and a competition was held. Each group was asked to change the Active Voice letter to the Passive Voice. The first group that completed the exercise most successfully won a bar of chocolate.

A regular verb is a doing word that maintains a recognisable form during Tense changes.

last verb in the verb phrase. Can form a complete meaning on its own.

Helps main verb to form a Tense. Cannot form a complete meaning on its own.



CHAPTER 4: PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS.

All three class groups wrote the pretest and the post - test. The data yielded only by students who wrote both the pretest and the post - test was considered. A total of 55 students thus form the focus of this study.

The third test that was drawn up to test for Transfer was written by 17 students from the Intervention group. In this case only the results of those who had written all 3 tests were considered for analysis.

All 3 tests were set on identical lines with only a variance in the form of the actual questions being asked. The tests were divided into 4 sections or questions. Each question represented and tested for a level of concept acquisition as laid down by Klausmeier. Each question carried a total of 5 marks. The ability to gain a minimum of 3 marks out of a total of 5 indicated that the student had a conceptual understanding of the Regular verb at that level.

4.1 ANALYSES OF PRETEST RESULTS

The level of conceptual understanding that each student possessed at this stage was determined by the total that each student attained in each question. As indicated

earlier, a total of 3 points or more indicated that the student had a conceptual understanding of regular verbs at that level.

QUESTION NUMBER	CONCEPTUAL LEVEL
1	1- Concrete
2	2- Identity
3	3- Classificatory
4	4- Formal

Table 2 The relationship between questions and level of concept acquisition

As indicated by table 2, each question represented an increasingly higher level of concept acquisition, culminating in question 4 that tested for understanding at the formal level. The researcher thus used the total points gained by each student in each question to identify the level of conceptual development of that particular student.

The following data was yielded by each group:

LEVEL	1	2	3	4
CONTROL GROUP	17	0	0	0
INTERVENTION GROUP	17	0	0	0
COMPARISON GROUP	20	1	0	0

Table 3 The number of pupils in the 3 groups at each level of concept development.

The researcher used the results yielded by the pretest to determine whether each class was comparable in terms of the levels of concept development indicated by the students at this stage. In other words was the allocation of students to each group done on a random basis or on the basis of intellectual development.

The Chi Squared test of independence was used to determine whether the variables were independent of one another.

The following hypotheses were generated to use the chi - squared test:

Hypothesis 1 - The class distribution of students was done on a purely random basis and hence the classes came from the same student population.

Hypothesis 0 - The level of concept development exhibited by each student was determined by the class in which that student was located.

The following contingency tables were used:

LEVEL	1	2	3	4	TOTAL
CONTROL GROUP	17	0	0	0	17
INTERVENTION GROUP	17	0	0	0	17
COMPARISON GROUP	20	1	0	0	21
TOTAL	54	1	0	0	55

Table 4 The observed numbers of students [O] at each level of concept development for each group.

The next step is to calculate the expected frequencies [E] by multiplying together the totals for the row and column [R.C] in which the cell is located and then dividing by the total sample size [N].

Thus $E = \frac{R.C}{N}$

N

An example of how the calculations for E were arrived at is indicated below.

$$E1 = \frac{17[54]}{55}$$

55

$$= 16.69$$

$$E2 = \frac{17[1]}{55}$$

55

$$= 0.31$$

$$E3 = \frac{17[0]}{55}$$

55

$$= 0$$

$$E4 = \frac{17[0]}{55}$$

55

$$= 0$$

LEVEL	1	2	3	4	TOTAL
CONTROL GROUP	16.69	0.31	0	0	17
INTERVENTION GROUP	16.69	0.31	0	0	17
COMPARISON GROUP	20.62	0.38	0	0	21
TOTAL	54	1	0	0	55

Table 5 Expected numbers [E] of students at each level of concept development for each group.

The next step involves the calculation of X^2 . In order to do this the expected figures [E] must first be subtracted from the observed figures [O] for each cell.

LEVEL	1	2	3	4
CONTROL GROUP	0.31	-0.31	0	0
INTERVENTION GROUP	0.31	-0.31	0	0
COMPARISON GROUP	-0.62	0.62	0	0

Table 6 The difference between observed and expected values for each cell

The next step involves using the figures represented in each cell of TABLE 6. The formula for this step is:

$$X = \frac{[O-E]^2}{E}$$

E

$$= \frac{0.31^2}{16.69} + \frac{-0.31^2}{0.31} + \frac{0.31^2}{16.69} + \frac{-0.31^2}{0.31} + \frac{-0.62^2}{20.62} + \frac{0.62^2}{0.38}$$

$$= 0.0058 + 0.31 + 0.0058 + 0.31 + 0.019 + 1.012$$

$$= 1.6626$$

The degrees of freedom must be calculated before the value of X can be compared to the critical value in the chi-squared table. The degrees of freedom are calculated using the following formula:

df = [the number of rows in the table minus 1] multiplied by [the number of columns in the table minus 1]

$$= [3-1] [4-1]$$

$$= [2] [3]$$

$$= 6$$

The value calculated earlier for Chi - squared [1.6626] is less than the 0.050 critical value for chi - squared with 6 degrees of freedom [12.592]

Consequently the null hypothesis is accepted. Thus the assumption can be made that all three groups of students involved in the experiment came from the same population.

4.2 ANALYSES OF POST - TEST RESULTS

As indicated earlier all three tests [pretest, post - test and the third test] only varied in terms of the form or wording of each question. The basic format of the tests remained the same, with each question testing a specific level of concept acquisition. The researcher thus analyzed each student's performance in terms of the points accumulated in each question. A total of 3 or more points in a question indicated a conceptual understanding of regular verbs at the level represented by the question.

The post - test yielded the following data for each group:

LEVEL	1	2	3	4
CONTROL GROUP	16	1	0	0
INTERVENTION GROUP	3	2	2	10
COMPARISON GROUP	3	17	1	0

Table 7 The number of students in each group at each level of concept development

In order to determine whether the differences in results yielded by the data between the pretest and the post - test arose out of the research experiment and were not due to chance; the chi - squared test was used again. The following hypothesis was tested:

Ho: The level of concept development demonstrated by each student is a result of chance and is not due to the particular class in which that student is based.

LEVEL	1	2	3	4	TOTAL
CONTROL GROUP	16	1	0	0	17
INTERVENTION GROUP	3	2	2	10	17
COMPARISON GROUP	3	17	1	0	21
TOTAL	22	20	3	10	55

Table 8 Observed numbers [O] of students at each level of concept development for each group.

LEVEL	1	2	3	4	TOTAL
CONTROL GROUP	6.8	6.49	0.62	3.09	17
INTERVENTION GROUP	6.8	6.49	0.62	3.09	17
COMPARISON GROUP	8.4	8.02	0.7	3.82	21
TOTAL	22	21	2	10	55

Table 9 Expected numbers [E] of students at each level of concept development for each group.

LEVEL	1	2	3	4
CONTROL GROUP	9.2	-5.49	-0.62	-3.09
INTERVENTION GROUP	-3.8	-4.49	-1.38	6.91
COMPARISON GROUP	-5.4	8.98	0.24	-3.82

Table 10 The difference between the observed numbers [O] and the expected numbers [E] of students at each level of concept acquisition for each group. [O - E]

The figures of each cell of TABLE 10 were used to calculate X, using the following formula:

$$X = \frac{[O - E]^2}{E}$$

$$= \frac{9.2^2}{6.8} + \frac{-5.49^2}{6.49} + \frac{-0.62^2}{0.62} + \frac{-3.09^2}{3.09} + \frac{-3.8^2}{6.8} + \frac{-4.49^2}{6.49} + \frac{1.38^2}{0.62} + \frac{6.91^2}{3.09}$$

$$+ \frac{-5.4^2}{8.4} + \frac{8.98^2}{8.02} + \frac{0.24^2}{0.76} + \frac{-3.82^2}{3.82}$$

$$= 12.45 + 4.64 + 0.62 + 3.09 + 2.12 + 3.11 + 3.07 + 15.45 + 3.47 + 10.05 + 0.08 + 3.82$$

$$= 61.94$$

The degrees of freedom needed to compare the value of X to the critical value in the chi - squared table were calculated as follows:

$$\begin{aligned}
 & [R - 1] \quad [C - 1] \\
 = & [3 - 1] \quad [4 - 1] \\
 = & [2] \quad [3] \\
 = & 6
 \end{aligned}$$

The value for chi - squared that was calculated earlier [61.94] is larger than the 0.0010 critical value for chi - squared with 6 degrees of freedom[22.458]

Consequently the null hypothesis is rejected. It can therefore be stated with great confidence that the changes in the data generated by the students from the pretest to the post - test is a result of the group in which they were located and consequently a result of the experiment conducted and the type of teaching intervention used. Hence the greater level of concept attainment can be attributed to Focused Instruction.

4.3 ANALYSES OF RESULTS

The data yielded by each group for both the pretest and the post - test are indicated in tables 11, 12 and 13 below. This enables an illustration of the shift, if any, that occurred after each method of intervention.

LEVEL	PRETEST		POST TEST	
	ACTUAL	%	ACTUAL	%
1- CONCRETE	17	100	16	94
2- IDENTITY	0	0	1	6
3- CLASSIFICATORY	0	0	0	0
4- FORMAL	0	0	0	0

Table 11 Performance of the **Control Group** at four levels under pretest and post test conditions

It is clearly evident that the control group has shown an improvement that is so slight as to be negligible. Since this group received no instruction and only wrote the pretest and post - test, this slight shift can be ascribed to the test effect. Evidently the act of writing the tests had the effect of increasing, to a very minute degree, the level of conceptual development of one student

LEVEL	PRETEST		POST TEST	
	ACTUAL	%	ACTUAL	%
1- CONCRETE	20	95.23	3	14.29
2- IDENTITY	1	4.76	17	80.95
3- CLASSIFICATORY	0	0	1	4.76
4- FORMAL	0	0	0	0

Table 12 Performance of the **Comparison Group** at four levels under pretest and post test conditions.

The comparison group received conventional teacher centred instruction. This had the effect of only moving the majority of the group up one level from the Concrete to the Identity level. Less than 5% of the group attained a conceptual understanding at level 3. No students attained an understanding of the concept at the Formal level. Conventional instruction, clearly, did not impact significantly on the student's conceptual understanding of regular verbs.

LEVEL	PRETEST		POST TEST	
	ACTUAL	%	ACTUAL	%
1- CONCRETE	17	100	3	17.65
2- IDENTITY	0	0	2	11.76
3- CLASSIFICATORY	0	0	2	11.76
4- FORMAL	0	0	10	58.82

Table 13 Performance of the **Intervention Group** at four levels under pretest and post test conditions.

The most dramatic change occurred in the Intervention group. More than 58% of the group attained an understanding of the concept Regular verb at the Formal level. This means that they had displayed the ability to use the concept to solve linguistic problems. A further 11.76% attained an understanding at the third - classificatory - level

GROUP	%
CONTROL	0
COMPARISON	0
INTERVENTION	58.82

Table 14 The percentage of students from all three groups who attained a formal understanding of the concept in the post test

TABLE 14 clearly illustrates the viability of Kluasmeier's Focused Instruction as a teaching methodology. Focused Instruction clearly is an extremely rewarding and useful tool for enabling students to reach an understanding of concepts at the formal level.

The South African classroom is a multicultural and multilingual one. The statistical information detailed in chapter 1 of this dissertation clearly indicates the problems that are encountered by second language learners in understanding concepts and using them to solve problems. Focused Instruction is clearly an invaluable tool in this regard.

4.4 DURABILITY

Durability is a limited aspect of the larger issue of transfer. Thus testing for the issue durability of concept acquisition means testing to see if the passage of time has impacted in any way on the level of concept acquisition for each student.

It is believed that the true test of concept acquisition is whether the student is able to use the concept in a manner that displays the same understanding, at a formal level, in a different temporal context. In other words, would a third test yield the same results if it was administered after a period of time had elapsed.

It could be argued that the results yielded by the Experimental Group in the post - test are an example of what Salomon and Perkins [1989] refer to as " low road transfer" A result of " extensive and varied practice" that had occurred during the teaching of the concept using Focused Instruction as a methodology.

Thus a third test would reveal whether the above statement is in fact, true, or whether Focused Instruction enables a conceptual understanding that can withstand the test of

time. A third test would enable an assessment of whether the post - test results were actually the result of deep grained conceptual acquisition and development and not simply of repetition and constant exposure over a limited period of time.

Klausmeier [1992] did address the issue of transfer. He suggested that once the concept had been acquired at the formal level, follow up instruction should be provided. This instruction should be oriented around the following issues:

- a] whether the learner can specify relationships among concepts.
- b] whether the learner can use the concept in understanding principles of which the concept is part.
- c] whether the learner can use the concept to solve problems which involve an understanding of the concept.

He suggested that a formal understanding of the concept combined with this follow up instruction could enable transfer to take place.

However for the purpose of this experimental study, follow up instruction was not provided. The intention here was to assess:

- a] whether Focused Instruction enables conceptual development at the formal level and
- b] whether Focused Instruction enables durable concept development to take place.

It is believed that the viability of an instructional methodology as a tool for concept teaching rests on its ability to enable the development of the above mentioned aspects.

4.5 ANALYSIS OF THIRD TEST RESULTS.

This test was only given to the Intervention group in order to test the durability of their concept acquisition. Thus a total of 17 students yielded data in this stage to be analyzed. As mentioned earlier in the chapter, only the data yielded by students who wrote the pretest, the post - test and the third test was considered.

The third test yielded the following data for the Intervention group:

LEVEL	ACTUAL	%
1- CONCRETE	3	17.65
2- IDENTITY	4	23.52
3- CLASSIFICATORY	7	41.17
4- FORMAL	3	17.65

Table 15 The number of students of the **Intervention group** at four levels of concept acquisition.

The results yielded by the Intervention group for the pretest, the post - test and the third test are indicated below.

LEVEL	PRE-TEST		POST-TEST		THIRD-TEST	
	ACTUAL	%	ACTUAL	%	ACTUAL	%
1 -	17	100	3	17.65	3	17.65
2 -	0	0	2	11.76	4	23.52
3 -	0	0	2	11.76	7	41.17
4 -	0	0	10	58.82	3	17.65

Table 16 Performance of students of the **Intervention group** for the pre test, post and the third test at four levels of concept acquisition.

It is clearly discernable that there has been a decrease of 41.19% in the number of students at the formal level of concept acquisition. While level 1 showed no increase, levels 2 and 3 increased by 22.87% and 29.41% respectively.

Clearly Focused Instruction as a teaching methodology was not entirely successful in maintaining an understanding of the concept Regular Verb at the formal level over a period of time. The durability of the concept acquisition that occurs after Focused Instruction is therefore questionable.

However it must also be noted that the results yielded by pretest showed all the students of the Intervention Group to be at the concrete level of understanding with regard to the concept Regular Verb. Focused Instruction enabled more than 80% of the class to develop a more complex understanding of the concept.

It would also have proven informative to use results yielded by the Comparison Group in a third test. This would have enabled a less one sided assessment of the ability of Focused Instruction to enable durable concept development.

It must also be noted that the results of the Intervention Group in the third test, that was written after 10 weeks had elapsed, is still superior to the results of the Comparison Group in the post test, that was written immediately after instruction had ceased

LEVEL	COMPARISON GROUP POST TEST	INTERVENTION GROUP THIRD TEST
1- CONCRETE	14	17
2- IDENTITY	81	24
3- CLASSIFICATORY	5	41
4- FORMAL	0	18

Table 17 Percentage distribution of the post test results of
the **Comparison** group and the third test results of
the **Intervention** group.

CHAPTER 5 - OBSERVATIONS, CRITIQUE AND SUGGESTIONS FOR FURTHER RESEARCH.

5.1 OBSERVATIONS AND CRITIQUE.

The post - test results yielded by the Intervention group clearly demonstrates the efficacy of Klausmeier"s theory of Concept Learning and Development. Focused Instruction is clearly a valuable tool to be used in increasing the conceptual understanding of the students.

Another very important gain to be made when using Focused Instruction is the obvious enjoyment of the students which was observed by the researcher during the intervention lessons. The focused Instruction classroom had a greater vibrancy, commitment and aura of learning than the conventional classroom.

There was a feeling of barriers breaking down: Barriers between the teacher and learners, between learners with the class and between learners and the material. Where before, there was a feeling of drudgery, of going through the motions and of having very little impact on the learners and their motivation to learn, now there was a greater sense of commitment and a greater sense of something of consequence being accomplished.

The teacher/researcher was challenged to find novel ways of presenting the information and maintaining the interest of the students. Teaching had previously been an act of a kind of arrogance. Knowledge was passed on by the teacher to the students with little consideration being paid to their previous experience and knowledge.

Focused Instruction enabled the teacher/researcher to gain a new respect for the learners through becoming aware of how much knowledge and insight they already possessed.

A new understanding of the process of testing was also developed. Focused Instruction demands testing for understanding and not for recall, testing for problem solving and not formulaic responses, testing that enables personal growth and not fear and anxiety.

Focused Instruction enabled the students to use their own experiences to discover meaning. It also enabled the teacher to become a more meaningful facilitator and to mediate and guide the learner through the experience.

The essence of meaningful learning, according to Ausubel [1968 ,pg 38], is that ideas are related in a meaningful way to the learners prior knowledge. The learner must be motivated to learn by finding the material meaningful.

Focused Instruction thus strikes a happy compromise between the School of Discovery Learning where the student discovers what is to be learned and the School that advocates guidance and mediation from others who are more capable in the learning situation. eg [Vygotsky 1960].

It seems that many teachers, this researcher included, are not taught the value of teaching for concept acquisition and development during their their initial training. Also, many teachers, themselves are not aware that such a methodology exists. The advantage of Focused Instruction is that no complicated, long drawn out process of teacher training is required to enable the teacher to use it as a teaching methodology.

Many other thinking skills programmes eg Feuerstein's Instrumental Enrichment Programme, require extensive and expensive training of the teacher before it can be implemented in the classroom.

Focused Instruction, on the other hand, merely requires rigorous inquiry and preparation on the part of the teacher. Because it is grounded in a theoretical framework that is clear and understandable , the strategies and guidelines are relatively easy to implement.

However, for the teacher having to work through an extensive syllabus in a relatively short period of time, Focused Instruction may be a little problematic to work with. It requires more time than conventional teaching and problems may be experienced in terms of completion of the syllabus.

Also it requires high energy levels on the part of the teacher. For many teachers with long teaching hours, heavy classloads and extra curricula activities, this may be difficult to achieve.

However the rewards to be gained from using this methodology should be weighed against any constraints of time and energy. It is felt that, at the end, the benefits, both for teaching and learning, outweigh any disadvantages.

5.2 SUGGESTIONS FOR FURTHER RESEARCH.

5.2.1 DURATION OF THE STUDY

The time period for the teaching and consequently for the acquisition of the concept was 5 hours stretched over a period of a week. It is possible that this relatively short period of time affected the durability of the concept acquisition. Further

research and study might focus on varying the time period using different groups to test for its effect on concept acquisition.

A more longitudinal study might also test for the development of successively higher levels of the concept that occurs over a long period of time. According to Klausmeier [1980, pg.45] "individuals develop the four successively higher levels of the same concept continuously for many years.

Comparison groups might also be used in a further study to test the effect that the long break and a lack of opportunity to use the new concept had on the durability of the concept acquisition. Could a lack of opportunity to use the concept have affected the student's grasp of it? Further study can investigate this.

5.2.2 INFLUENCE OF PRIOR EXPERIENCE ON CONCEPT ACQUISITION

It is possible that the students had become so accustomed to the old style of teaching and learning, that the new method introduced an element of insecurity. Their previous experience with the teacher in a somewhat different role could have lead to a

degree of mistrust that could have affected the durability of the concept acquisition. Further research might examine this phenomenon for any viability.

Students could also have been too grounded in their old style of learning. Focused Instruction could have had a short term effect, but the results of the third test could be attributed to the students reverting to the old "fragile knowledge" syndrome. [Perkins, 1992, pg.21]. Further research might investigate this.

Focused Instruction occurred for one week in one subject only in the experience of the students. Conventional teaching and learning went on in the other subjects. It is possible that the novelty of the situation in one subject while a totally different style was being reinforced in the other subjects impacted on the durability of the concept acquisition. Further research might focus on team teaching using Focused Instruction across the curriculum to test for its impact on durable concept acquisition.

5.2.3 THE TEACHER EFFECT.

Further research might focus on introducing an Action

Research component or a peer assessor/researcher to determine the effect that the personality, knowledge and teaching of the teacher has on the acquisition of concepts by the students. "It seems self evident that the teacher should constitute an important variable in the learning process... how comprehensive and cogent his grasp of his subject matter field is....he may be more or less able to present and organise subject matter clearly, to explain ideas lucidly and incisively and to manipulate effectively the variables affecting learning." [Ausubel,1968, pg. 449].

Earlier it was mentioned that no training was required for a teacher to implement Focused Instruction. However further research might focus on teacher training and its effect on the acquisition of concepts by students. Comparison groups could be used, being taught the same concept by 2 different teachers; one with training and one without training.

5.2.4 DURABILITY AND TRANSFER

The success of any teaching and learning situation is the ability of the learners to transfer that classroom knowledge to different and more demanding contexts. In other words the ability to use prior experience to impact

upon current learning situations.

Salomon and Perkins, [1989, pg. 114], discuss 2 mechanisms of transfer. The first - the low road transfer - "depends on extensive, varied practice and occurs by automatic triggering of well learned behaviour in a new context".

The second mechanism - the high road transfer - occurs by "intentional mindful abstraction of something from one context and application in a new context."

Further research might focus on whether high road transfer can be achieved through the use of Focused Instruction. This study, using the same context and almost identical tests, makes no such claims. However further study that focuses on varying the contexts and the problem situations certainly could test for high road transfer.

Further study might also investigate the aspect of the durability of the concept acquisition and development by also providing a third test for the Comparison Group. This would enable a further comparison of conventional teaching and Focused Instruction

5.2.5 ENVIRONMENTAL DEPRIVATION.

Klausmeier [1992] , Piaget [1936] and Vygotsky [1978] make reference to the fact that the necessary cognitive structures must be in place in order for new knowledge to be acquired. Further study can focus on a number of social issues that impede or prevent the development and maturation of these structures eg malnutrition and violence, and how this impacts on concept acquisition.

Bernstein, [Atkinson, 1985, pg 42], discusses language in relation to social and family issues. A restricted code or Public language "with its lack of verbal elaboration and explication of meaning and motive" arises from a highly segregated family system.

An elaborated code or formal language where "subjective intent may be verbally elaborated and made explicit" arises in family settings where complex, logical relations are articulated.

The role of language in terms of concept acquisition has been discussed earlier. Further research might focus on this with special reference to the work of Bernstein.

5.2.6 INDIVIDUAL DIFFERENCE AND READINESS

individuals have different rates of physical and cognitive development . These individual differences can impact on certain student's ability to acquire certain concepts. Further research might examine the way Focused Instruction takes into account individual rates of learning.

5.2.7 SECOND LANGUAGE ISSUES.

As was mentioned earlier the subjects of this investigation were 3 classes in which the majority of the students were L2 speakers. Further study might investigate the role that the first language has on both the acquisition of concepts in the L2 and the durability of that acquisition. The following issues could be investigated.

Linguistic Distance and Interlanguage could form the basis of further research. linguistic distance refers to "grammatical, syntactical and structural differences that exist between 2 languages" [Sentson, 1994, pg.110].

Stevens [1971], [cited in Sentson, 1994,pg.111], asserts that the task of learning English as a second

language would be made more difficult by a greater sociolinguistic distance between English and the child's L1. It is the linguistic distance between English and sub-Saharan African languages that increase the difficulty experienced by L2 learners. [Sentson, 1994, pg. 110].

Further research could investigate linguistic distance and its effect on acquiring concepts in a second language i.e. English. Can the native language of the learner affect her acquisition of concepts in a second language?

Further research could also investigate the effect of the medium of instruction on the acquisition of concepts. Is it possible that if tests were given in the mother tongue, performance and concept acquisition will improve? A comparison could be made by using Focused Instruction and testing in both the first and second languages to assess any differences in concept acquisition.

Linguistic interdependence might also form the basis of a further study. This term was developed by Cummins and means that "a student who is well educated in her own native tongue will more easily acquire

cognitive/academic language proficiency in a second language" [Rosenthal,1996, pg.50]. However a number of issues prevent a learner from becoming proficient in her native language.

Violence, upheavals, natural disasters etc can cause relocations and breakdowns in the child's cultural experience. Feuerstein [1979, pg.57] refers to this as "cultural deprivation". This is when the mediated learning experience where " the interactional processes between the developing human organism and an experienced intentioned adult mediates the world to the child" is lacking.[Feuerstein, 1979, pg.71]. This affects the development of cognitive structures within the learner which impacts on the ability to acquire concepts.

Further research could focus on these two linked areas viz cultural deprivation and linguistic interdependence and their effects on both concept acquisition and the durability of that acquisition.

Further study could investigate the affective filter. This refers to the fact that emotions, motivations and anxiety affect second language acquisition. Krashen, [1983], pg30 -31], explains

how the affective variable relates to success in second language acquisition. Further research could focus on affective variables that arise during Focused Instruction and how these impact on concept acquisition.

5.3 CONCLUSION.

South Africa will see the official launch of a new curriculum in January 1998. This curriculum effects a shift from content based education to an outcomes based one based on the principles of lifelong learning. Teaching for concept acquisition and development is a crucial aspect of outcomes based education.

Numerous studies, [Nelson, {1976}], [Klausmeier and allen, {1978}], have indicated the effectiveness of Focused Instruction for the development of a more complex understanding of concepts.

Educational materials such as textbooks will also be needed to implement the new curriculum. There is great potential in this area for the principles of concept acquisition and development inherent in Klausmeiers' Concept Learning and Development theory to be used in the design of the

materials themselves.

A new curriculum can only be meaningful if the styles of learning and teaching also change. Material cannot be meaningful in a vacuum. It requires the mediation of a skilled facilitator to bring it to life and to realize its goals.

Teaching for concept acquisition and development means adopting a methodology that engages the learner and creates a desire to learn. The research reported in this dissertation indicates that Focused Instruction has the potential to enable meaningful learning and teaching that lays to rest the teacher centred ethic that has dominated learning in South Africa for far too long.

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APPENDIX A
PRETEST - REGULAR VERBS
MARKING MEMORANDUM

QUESTION ONE

Identify the regular verb by underlining it within each of the following sentences :

- a) Thembi types a letter. (1)
b) I prepare supper. (1)
c) Boomshaka answer fan's letters regularly. (1)
d) Beauty uses the taxi everyday. (1)
e) Siyabonga returns his library books every Friday. (1)
[5]

QUESTION TWO

Identify the regular verb or verb phrase in each of the following sentences and write it down in the space provided.

- Eg. John visits Helen regularly visits
- a) Helen works in Durban. works (1)
b) She travels to Durban daily. travels (1)
c) John will be staying at home today. will be staying (1)
d) He had promised his mother. had promised (1)
e) He will wash the windows. will wash (1)
[5]

QUESTION THREE

- 3.1 A) Underline the regular verb or verb phrase in each of the following sentences.

A1) John shall pass his examinations.

A2) She has finished her homework.

- B) Identify the MAIN VERB and the AUXILIARY VERB in sentence A2 and fill in your answer in the box provided below.

NO.	MAIN VERB	AUXILIARY VERB
EG. A1	pass	shall
A2	<u>finished</u>	<u>has</u>

- C) Explain the above answer.

finished is the main verb because it is the last verb in the verb phrase and it forms a complete meaning on its own (1)

- 3.2 A) Indicate whether the regular verb in the following sentence (no. 1) is transitive or not by placing a cross (X) in the correct box.

EG. She baked a cake.

TRANSITIVE	<input checked="" type="checkbox"/>	INTRANSITIVE	<input type="checkbox"/>
------------	-------------------------------------	--------------	--------------------------

- i) It is raining softly.

TRANSITIVE	<input type="checkbox"/>	INTRANSITIVE	<input checked="" type="checkbox"/>
------------	--------------------------	--------------	-------------------------------------

- B) Explain the above answer.

The verb has no object and is therefore
an intransitive verb

(1½)

- 3.3 Identify the tense of the regular verb or verb phrase within each of the following sentences. Write down your answer in the space provided next to each sentence.

EG. I visited Durban. Past indefinite tense

- | | | | |
|----|-----------------------------------|---------------------------|-----|
| a) | It will be raining tomorrow. | <u>future continuous</u> | (½) |
| b) | The boy had delivered the parcel. | <u>Past Perfect</u> | (½) |
| c) | The teacher is marking tests. | <u>Present continuous</u> | (½) |
| d) | He will have cut the grass. | <u>future perfect</u> | (½) |
| | | | (2) |
| | | | [5] |

QUESTION FOUR

- 4.1 A) Indicate by placing a cross [X] in the box provided whether the following sentences (A1 + A2) are in the Active or Passive Voice.

EG. The car is being fixed by John.

ACTIVE VOICE	<input type="checkbox"/>	PASSIVE VOICE	<input checked="" type="checkbox"/>
--------------	--------------------------	---------------	-------------------------------------

- A1) A cake was baked by her.

ACTIVE VOICE	<input type="checkbox"/>	PASSIVE VOICE	<input checked="" type="checkbox"/>
--------------	--------------------------	---------------	-------------------------------------

- A2) Thulani attended a Boomshaka concert.

ACTIVE VOICE	<input checked="" type="checkbox"/>	PASSIVE VOICE	<input type="checkbox"/>
--------------	-------------------------------------	---------------	--------------------------

- B) Provide a reason for each of the above answers in the spaces provided below.

A1) The sentence begins with the object (1)

A2) The sentence begins with the subject (1)

4.2 Change the following Active Voice sentences to the Passive Voice.

Eg. They will mow the lawn.
The lawn will be mown by them.

A) They have started a Tuckshop. (1)

A tuckshop has been started by
them

B) Jabu is answering the phone. (1)

The phone is being answered by Jabu

C) They expect us. (1)

We are expected by them.

[5]

APPENDIX B
POST TEST - REGULAR VERBS
MARKING MEMORANDUM

QUESTION ONE

Identify the regular verb by underlining it within each of the following sentences.

- a) Bongani purchases chips from the tuckshop. (1)
- b) Mrs Suknandan visits the Tuckshop every day. (1)
- c) The N4 students work in the Tuckshop. (1)
- d) The students expect good food from the Tuckshop. (1)
- e) Bake-O-Rama delivers cakes to the Tuckshop. (1)
- [5]

QUESTION TWO

Identify the regular verb or verb phrase in each of the following sentences and write it down in the space provided.

- EG. Yvonne Chaka Chaka sings beautifully. sings
- a) Brenda Fassi dances well. dances (1)
- b) Leleti Khumalo acts in Sarafina. acts (1)
- c) Thema will be working in Durban. will be working (1)
- d) Tully had visited Margaret in hospital. had visited (1)
- e) Students had boycotted lessons on Monday. had boycotted (1)
- [5]

QUESTION THREE

- 3.1 A) Underline the regular verb or verb phrase in each of the following sentences.

A1) Sherwin will finish his assignment.

A2) Tombi has passed her exam.

- B) Identify the main verb and the Auxiliary verb in Question A2 above and fill in your answer in the box below.

NO.	MAIN VERB	AUXILIARY VERB
EG. A1	finish	will
A2	passed	has

- C) Explain the above answer.

Passed is the main verb because it is the last verb in the verb phrase and forms a complete meaning on its own. (1)

- 3.2 A) Indicate whether the regular verb in the following sentence (No. 1) is Transitive or Intransitive by placing a cross [X] in the correct box.

EG. They purchased new stock.

TRANSITIVE	<input checked="" type="checkbox"/>
------------	-------------------------------------

INTRANSITIVE	<input type="checkbox"/>
--------------	--------------------------

i) They deliver.

TRANSITIVE	<input type="checkbox"/>
------------	--------------------------

INTRANSITIVE	<input checked="" type="checkbox"/>
--------------	-------------------------------------

B) Explain the above answer.

The verb is intransitive because it
does not have an object
(1½)

- 3.3 Identify the tense of the regular verb or verb phrase within each of the following sentences. Write down your answer in the space provided next to each sentence.

EG. We helped him.

- a) The earth revolves around the sun.
b) They were picking vegetables.
c) They expect us home soon.
d) I am watching TV

Past indefinite tense

Present indefinite
Past continuous
Present indefinite
Present continuous (2)
[5]

QUESTION FOUR

- 4.1 A) Indicate, by placing a cross (X) in the box provided whether the following sentences (A1 + A2) are in the Active or Passive Voice.

EG. The test is being studied for by her.

ACTIVE VOICE	<input type="checkbox"/>
--------------	--------------------------

PASSIVE VOICE	<input checked="" type="checkbox"/>
---------------	-------------------------------------

A1) Flowers were picked by her for the vase.

ACTIVE VOICE	<input type="checkbox"/>
--------------	--------------------------

PASSIVE VOICE	<input checked="" type="checkbox"/>
---------------	-------------------------------------

A2) John will be visiting Durban.

ACTIVE VOICE	<input checked="" type="checkbox"/>
--------------	-------------------------------------

PASSIVE VOICE	<input type="checkbox"/>
---------------	--------------------------

B) Provide a reason for each of the answers you gave above in the spaces provided below.

A1) The sentence begins with the object
(1)

A2) The sentence begins with the subject

 (1)

4.2 Change the following Active Voice sentences to the Passive Voice.

EG. I will visit Durban.
Durban will be visited by me.

a) He mows the lawn. (1)
The lawn is mowed by him

b) I had prepared an Assignment. (1)
An assignment had been prepared
by me

c) They respect us. (1)
We are respected by them

 [5]

APPENDIX C
THIRD TEST - REGULAR VERBS
MARKING MEMORANDUM

QUESTION ONE

Identify the Regular Verb by underlining it within each of the following sentences.

- a) Karen dances very well. (1)
- b) Mrs Suknandan purchases cakes from Bake-O-Rama. (1)
- c) The SRC represents students. (1)
- d) Jabulani works in Spar. (1)
- e) Charles visits the SRC office every day. (1)
- [5]

QUESTION TWO

Identify the Regular Verb (or verb phrase) in each of the following sentences and write it down in the space provided.

- EG. Beauty works as a model. works
- a) Thembe delivers the College newspaper. delivers (1)
- b) June knits very well. knits (1)
- c) Charles will be talking to the students. will be talking (1)
- d) Kule had expected a distinction in Accounting. had expected (1)
- e) Sherwin will be entering the Stannic Relay. will be entering (1)
- [5]

QUESTION THREE

- 3.1 A) Underline the Regular Verb (or verb phrase) in each of the following sentences.

A1) Thembe will wash the car.

A2) June-Rose will be working in Durban.

- B) Identify the Main Verb and Auxiliary Verb in Question A2 above and fill in your answer in the box below.

NO.	MAIN VERB	AUXILIARY VERB
EG. A1	wash	will
A2	<u>working</u>	<u>will be</u>

- C) Explain the above answer.

Working is the main verb because it is the last verb in the phrase and it forms a complete meaning on its own

(1)

- 3.2 A) Indicate whether the regular verb in the following sentence (No.1) is Transitive or Intransitive by placing a cross [X] in the correct box.

EG. John painted a picture.

TRANSITIVE	<input checked="" type="checkbox"/>
------------	-------------------------------------

INTRANSITIVE	<input type="checkbox"/>
--------------	--------------------------

1) They talk.

TRANSITIVE	<input type="checkbox"/>
------------	--------------------------

INTRANSITIVE	<input checked="" type="checkbox"/>
--------------	-------------------------------------

B) Explain the above answer.

(1½)

The verb is intransitive because it
has no object

- 3.3 Identify the tense of the regular verb (or verb phrase) in the space provided next to each sentence.

a) Cynthea had purchased a new cassette player.

Past perfect (½)

b) Gugu is writing her exam.

Present continuous (½)

c) Amina will go jogging tomorrow.

Future continuous (½)

d) Fikile will have passed NSC.

Future perfect (½)

(2)

[5]

QUESTION FOUR

- 4.1 A) Indicate by placing a cross (X) in the box provided whether the following sentences (A1 + A2) are in the Active or Passive Voice.

EG. Vegetables were being picked by them.

ACTIVE VOICE	<input type="checkbox"/>
--------------	--------------------------

PASSIVE VOICE	<input checked="" type="checkbox"/>
---------------	-------------------------------------

A1) Charles will be talking to the students.

ACTIVE VOICE	<input checked="" type="checkbox"/>
--------------	-------------------------------------

PASSIVE VOICE	<input type="checkbox"/>
---------------	--------------------------

A2) The library will be visited by him.

ACTIVE VOICE	<input type="checkbox"/>
--------------	--------------------------

PASSIVE VOICE	<input checked="" type="checkbox"/>
---------------	-------------------------------------

B) Provide a reason for each of the answers that you gave above in the space provided below.

A1) The sentence begins with the subject.

A2) The sentence begins with an object

4.2 Change the following Active Voice sentences to the Passive Voice.

EG. Siyabonga will bake a cake.

A cake will be baked by Siyabonga.

a) Monica is planting carrot seeds.

(1)

Carrot seeds are being planted by Monica

b) Charles had spoken to the students.

(1)

The students had been spoken to Charles

c) They mock us.

(1)

We are mocked by them

[5]

APPENDIX D - ORIENTING INSTRUCTION WORKSHEET

Read the following Paragraphs carefully. Together with your study group, explain what each paragraph means.

PARAGRAPH A

John goomoed a new textbook. He joomed the secretary for money to damaa the textbook. She daabaad his proposal and dinoed the purchase voucher. John kiboed to town and siloid the textbook.

PARAGRAPH B

A person waset xilited of kibiding a compact disc in a music shop. Security guards pimponaed the individual and calapeted the police. However the owner of the store bulioded to gamba charges.

PARAGRAPH C

Tomorrow cipidise the bindide of a Countrywide Awareness Campaign lipide, bunoed at ziping ATM users on how to gipikile becoming victims of ATM Card tricksters. A group of banks bulite kabinge forces to bindide a National Advertising and Media Campaign.

APPENDIX E, - ACTIVE AND PASSIVE VOICE WORKSHEETS

PICK n PAC LTD

93 Helston Road
Allandale
PIETERMARITZBURG
3201

17 May 1996

Mrs S. Govender
13 Victoria Road
PIETERMARITZBURG
3201

Dear Madam

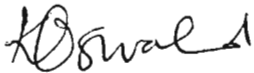
LETTER OF ADJUSTMENT

Your letter of complaint was received by our Company on 16 May 1996. It was with great remorse that we read of the inconvenience that was caused by our lack of delivery of the items ordered by you.

Please be assured that the items ordered will be delivered before the end of the week.

It was also decided to include a substantial discount to make up for the inconvenience suffered by you.

Yours faithfully

A handwritten signature in dark ink, appearing to read 'K. Oswald', with a small flourish at the end.

K. Oswald
Sales Director

APPENDIX E,

67 Bombay Road
Northdale
PIETERMARITZBURG
3201

17 May 1996

Dear John

Thank you for sending me copies of the photographs of our trip to Swaziland. Mum and dad really enjoyed having a look at them and it brought back wonderful memories for me.

I hope that you will decide soon about whether you will be coming with me to the Grahamstown festival in July. Please come, we'll have a great time!

The transport and accomodation will be easy to organise, so all I need is your answer. Don't take too long.

I look forward to hearing from you soon.

Best wishes

Kevin

[illegible]

COMPARISON GROUP

[illegible]

PRETEST AND POST TEST RESULTS

INTERUENTION GROUP

[illegible]

INTERVENTION GROUP

[illegible]