

CHAPTER 6

PRESENTATION AND INTERPRETATION OF RESULTS

6.1 INTRODUCTION

This chapter comprises an analysis and interpretation of the students' test results. In 6.2 background information on the students obtained from Section A in the test is presented.

Paragraph 6.3 is a presentation of the results of both Section B and C, followed by a presentation of the results of Section D of the test. A comparison of the results of Test 1 and Test 2 is also given for all three subjects. Paragraph 6.4 is a discussion of the results of Sections B, C and D.

In paragraph 6.5 the results of Section E of the test are presented, followed by a discussion of the results of both Section A and E, as both these sections concentrate on background details. No direct correlations are made between the background factors and the students' conceptual awareness, because this study is merely aimed at obtaining some information on the students' background.

6.2 PERSONAL INFORMATION DISCLOSED IN SECTION A

This section consists of questions focusing on the background of the 73 participating students (cf. Appendix A). The section is included to obtain a picture of the average Introductory N4 students at Rustenburg College.

TABLE 6.1: AVERAGE AGES OF STUDENTS

Age	17	18	19	20	21	22	23	24	25	26
No. of students	7	13	12	14	12	3	7	2	1	2
Percentage (%)	9.6	17.8	16.4	19.2	16.4	4.1	9.6	2.7	1.4	2.7

Table 6.1 shows that the students' ages range from 17 to 26 years, the average age of students being 20 years. The majority of the students are between the ages of 18 and 21. This indicates that most of the Introductory students have decided to enrol for tertiary study directly after passing Grade 12.

TABLE 6.2: GEOGRAPHICAL BACKGROUND OF STUDENTS			
Area	Urban	Semi-urban	Rural
No. of students	20	25	28
Percentage (%)	27.4	34.2	38.4

Table 6.2 indicates from which geographical background the participating students come. Of the 73 students, 20 have indicated that they live in an urban area, 25 have indicated that they live in a semi-urban area and 28 have said that they come from a rural area.

TABLE 6.3: YEAR OF COMPLETING GRADE 12					
Year	Before 1998	1998	1999	2000	2001
No. of Students	5	4	7	17	40
Percentage (%)	6.8	5.8	9.6	23.3	54.8

Table 6.3 indicates that more than half of the participating students have matriculated in 2001. Only 5 students have indicated that they have matriculated before 1998. This indicates that the majority of students have continued with tertiary study immediately after completing Grade 12.

TABLE 6.4: ENGLISH AS A SUBJECT IN GRADE 12				
Subject	EFL (HG)	EFL (SG)	ESL (HG)	ESL (SG)
No. of students	16	2	47	8
Percentage (%)	21.9	2.7	64.4	11.0

Table 6.4 indicates how many students have matriculated with English as First or Second Language and at which level. The majority of the students who have participated in this study are English Second Language (ESL) students who have passed English on Higher Grade. However, the students who have passed English First Language (EFL) are not native English speakers, even though they have passed it at this level. English is also their second language.

TABLE 6.5: OTHER SUBJECTS PASSED IN GRADE 12								
Subject	Computer Studies		Economics		Business Economics		Accounting	
	HG	SG	HG	SG	HG	SG	HG	SG
No. of students	0	0	8	14	2	27	2	22
Total	0		22		29		24	
Percentage (%)	0		30.1		40.0		32.9	

The students have been asked to indicate whether they have passed Economics, Business Economics, Accounting or Computer Studies in Grade 12. These subjects are included in the survey because it may be assumed that students who have taken these subjects up to Grade 12 level have already been exposed to a variety of basic concepts used in these subjects. Most of the concepts covered in Test 1 and 2 for the subjects Introductory Entrepreneurship and Introductory Computer Practice are such basic concepts. From Table 6.5 it is clear that only a third of the students have indicated that they have had Economics or Accounting as Grade 12 subjects and a mere 40 % have had Business Economics as a subject in Grade 12. None of the students have taken Computer Studies as a subject at Grade 12 level.

TABLE 6.6: SUBJECTS TAUGHT THROUGH ENGLISH AS MEDIUM OF INSTRUCTION			
Subject	Economics	Business Economics	Accounting
No. of students	20	28	22
Percentage (%)	91.0	96.6	100

Table 6.6 indicates which of the subjects that the students have passed in Grade 12 have been taught to them through English as medium of instruction. Most students have received tuition in these subjects through English as medium of instruction.

TABLE 6.7: COURSE ENROLMENTS				
Course	Business Management	Human Resource Management	Management Assistant	Marketing Management
No. of students	21	27	13	13
Percentage (%)	28.8	37.0	17.9	17.9

Table 6.7 indicates that 21 Introductory students are enrolled for the Business Management course. This table also shows that the 73 participating students are equally distributed among the various Business Studies courses presented at Rustenburg College.

TABLE 6.8: MOTHER TONGUE AND CULTURAL GROUP					
Culture & mother tongue	Setswana	Zulu	Southern Sotho	Northern Sotho	Isixhosa
No. of students	62	2	2	2	5
Percentage (%)	84.9	2.7	2.7	2.7	6.8

Table 6.8 indicates that the majority of the students belong to the Setswana group and speak Setswana as their mother tongue. Students have also been asked to indicate to which other languages, besides their mother tongue, they have been exposed in the area where they live. Only 40% of the 73 students have indicated that they are exposed to English in the area where they live. The extent of their exposure to English has not been established.

TABLE 6.9: PREVIOUS ATTENDANCE OF TERTIARY INSTITUTIONS		
Yes/No	Yes	No
No. of students	9	64
Percentage	12.3	87.7

Table 6.9 shows that only 12,3% of the students have previously attended other tertiary institutions. These students have nevertheless been placed on the Introductory N4 level after completing the placement test. This indicates that they do not meet the requirements to enrol directly for an N4 course, in spite of the fact that they have already attended a tertiary institution (cf. 1.2).

6.3 RESULTS OF SECTIONS B AND C

In these two sections the students' conceptual awareness is tested (cf. Appendix A). Their ability to make meaningful sentences with the various concepts is tested in Section B (Test 1) and their ability to define the concepts in their own words is tested in Section C (Test 2).

A high score will be 73, because that is the number of students who have participated in the study. Thus, the closer the total for a particular concept is to 73 the higher the number of students who declare that they have never seen the concept before.

The results for both Section B and C, i.e. for both Tests 1 and 2 will now be presented for each individual subject. The results are presented as totals out of 73 and as percentages for each category (*FULLY UNDERSTOOD*, *PARTLY UNDERSTOOD*, *NOT UNDERSTOOD*, *NOT ANSWERED*, *DISAGREE*).

6.3.1 Introductory Communication

TABLE 6.10: Conceptual awareness in Introductory Communication

CONCEPT	FULLY UNDERSTOOD		PARTLY UNDERSTOOD		NOT UNDERSTOOD		NOT ANSWERED		DISAGREE	
	Total	%	Total	%	Total	%	Total	%	Total	%
Communication	20	27.4	24	32.9	9	12.3	0	0	20	27.4
Time-management	3	4.1	13	17.8	36	49.3	1	1.4	20	27.4
Constructive activities	0	0	3	4.1	57	78.1	1	1.4	12	16.4
Concise	0	0	0	0	67	91.8	4	5.5	2	2.7
Emphasize	3	4.1	11	15.1	46	63.0	2	2.7	11	15.1
Strategy	7	9.6	19	26.0	31	42.5	2	2.7	14	19.2
Memorandum	5	6.8	17	23.3	21	28.8	0	0	30	41.1
Notice	7	9.6	18	24.7	22	30.1	0	0	26	35.6
Minutes	18	24.7	14	19.2	37	50.7	0	0	4	5.5
Conference	35	47.9	25	34.2	9	12.3	0	0	4	5.5
Verbal	4	5.5	9	12.3	36	49.3	4	5.5	20	27.4
Values	2	2.7	10	13.7	42	57.5	0	0	19	26.0

Table 6.10 shows the totals and percentages for the students' awareness of the concepts tested in the subject Introductory Communication.

The concepts *concise* and *constructive* activities are poorly understood by more than 75% of the students. This correlates with Section D where more than 60% of the students claim never to have encountered this concept before (cf. Table 6.17). More than 50% of the students do not understand the concepts *emphasize*, *minutes* and *values*. In addition, less than 10% of the students fully understand the concepts

time-management, strategy and verbal. The concepts *conference* and *communication* are at least partially understood by more than 50% of the students.

6.3.2 Introductory Computer Practice

TABLE 6.11: Conceptual awareness in Introductory Computer Practice

CONCEPT	FULLY UNDERSTOOD		PARTLY UNDERSTOOD		NOT UNDERSTOOD		NOT ANSWERED		DISAGREE	
	Total	%	Total	%	Total	%	Total	%	Total	%
Edit	2	2.7	10	13.7	40	54.8	2	2.7	19	26.0
Insert	10	13.7	23	31.5	23	31.5	0	0	17	23.3
Format	1	1.4	13	17.8	38	52.1	2	2.7	19	26.0
View	2	2.7	16	21.9	35	47.9	2	2.7	18	24.7
File	8	11.0	26	35.6	18	24.7	1	1.4	20	27.4
Toolbar	2	2.7	11	15.1	42	57.5	3	4.1	15	20.5
Icon	0	0	4	5.4	49	67.1	9	12.3	11	15.1
Delete	50	68.5	14	19.2	5	6.8	0	0	4	5.4
Italics	2	2.7	12	16.4	45	61.6	3	4.1	11	15.1
Database	0	0	4	5.4	46	63.0	5	6.8	18	24.7
Mouse	21	28.8	29	39.7	6	8.2	0	0	17	23.3
Stiffy	44	60.3	20	27.4	2	2.7	1	1.4	6	8.2
Virus	34	46.6	24	32.9	6	8.2	2	2.7	7	9.6
Hardware	22	30.1	16	21.9	28	38.4	1	1.4	6	8.2
Software	11	15.1	19	26.0	26	35.6	1	1.4	16	21.9
Spreadsheet	2	2.7	6	8.2	49	67.1	6	8.2	10	13.7
Word processing	1	1.4	3	4.1	38	52.1	2	2.7	29	39.7
Advantage	3	4.1	22	30.1	31	42.5	1	1.4	16	21.9
Disadvantage	0	0	16	21.9	27	36.9	1	1.4	29	39.7
e-mail	8	11.0	22	30.1	17	23.3	2	2.7	24	32.9

Table 6.12 shows the results for the students' awareness of the concepts tested in the subject Introductory Computer Practice. More than 50% of the students understand the concepts *delete* and *stiffy* well as opposed to more than 50% of the students who do not understand the concepts *edit*, *format*, *toolbar*, *icon*, *italics*,

database, spreadsheet and word processing. In addition to this, less than 10% of the students fully understand the concepts *view*, *advantage* and *disadvantage*.

6.3.3 Introductory Entrepreneurship

TABLE 6.12: Conceptual awareness in Introductory Entrepreneurship

CONCEPT	FULLY UNDERSTOOD		PARTLY UNDERSTOOD		NOT UNDERSTOOD		NOT ANSWERED		DISAGREE	
	Total	%	Total	%	Total	%	Total	%	Total	%
Entrepreneur	32	43.9	33	45.2	1	1.4	0	0	7	9.6
Economy	2	2.7	17	23.3	26	35.6	1	1.4	27	37.0
Cash flow	0	0	12	16.4	44	60.3	4	5.4	13	17.8
Capital	23	31.5	24	32.9	13	17.8	2	2.7	11	15.1
Interest	7	9.6	20	27.4	30	41.1	0	0	16	21.9
Corporation	5	6.8	9	12.3	38	52.1	1	1.4	20	27.4
Infrastructure	11	15.1	18	24.7	26	35.6	4	5.4	14	19.2
Balance sheets	4	5.4	11	15.1	35	48.0	1	1.4	22	30.1
VAT	19	26.0	19	26.0	11	15.1	2	2.7	22	30.1
Retailer	14	19.2	15	20.5	28	38.4	3	4.1	13	17.8
Brand	12	16.4	14	19.2	37	50.7	4	5.4	6	8.2
Shoplifting	22	30.1	11	15.1	34	46.6	3	4.1	3	4.1
Insurance	11	15.1	19	26.0	16	21.9	2	2.7	25	34.2
Budget	6	8.2	15	20.5	28	38.4	0	0	24	32.9
Statement	4	5.4	24	32.9	29	39.7	0	0	16	21.9
Security	10	13.7	37	50.7	6	8.2	0	0	20	27.4
Cheque	7	9.6	28	38.4	16	21.9	0	0	22	30.1
Traveller's cheque	7	9.6	12	16.4	31	42.5	4	5.4	19	26.0
Insolvent	2	2.7	11	15.1	47	64.4	6	8.2	7	9.6
Invoice	3	4.1	14	19.2	32	43.9	3	4.1	21	28.8

Table 6.12 shows students' results for awareness of the concepts tested in the subject Introductory Entrepreneurship. The concepts *brand*, *invoice*, *cash flow*, *insolvent* and *corporation* are not understood by more than 50% of the students. The concepts *economy*, *interest*, *balance sheets*, *budget*, *statement*, *cheque* and *traveller's cheque* are fully understood by less than 10% of the students. The

concept *entrepreneur* is the only concept that is fully understood by more than 40% of the students. The concept *security* is at least partially understood by more than 50% of the students.

6.3.4 Comparison between Section B (Test 1) and Section C (Test2)

The study will now compare the students' performance in the two types of questions asked in the survey, namely, *defining a concept* in their own words and *describing a concept by using it in a sentence of their own* so that the meaning becomes clear. The comparison will be done for each subject individually.

The results are presented as percentages that have been calculated as follows: for each concept the correct answers (Y) of all 73 students are added up. This total (ΣY) is divided by the total number of concepts for a specific subject (X) and multiplied by 73 (N). This total is then multiplied by 100 to obtain a percentage (Z). The formula will therefore be as follows:

$$Z = \frac{\Sigma Y}{X \cdot N} \times 100$$

6.3.4.1 Introductory Communication

The percentages obtained by students for Test 1 and Test 2 in the subject Introductory Communication are indicated in Table 6.13.

TABLE 6.13: PERCENTAGES SCORED IN TEST 1 AND TEST 2 IN INTRODUCTORY COMMUNICATION	
T1	T2
37.4	21.7

The students have scored an average of 37.4% in Test 1, in which they have defined the concepts in their own words, and 21,7% in Test 2, in which they have made sentences with the concepts. Their average for Test 2 is 15,8% lower than that of Test 1 in this particular subject.

6.3.4.2 Introductory Computer Practice

The percentages for Test 1 and Test 2 in the subject Introductory Computer Practice are indicated in Table 6.14.

TABLE 6.14: PERCENTAGES SCORED FOR TEST 1 AND TEST 2 IN INTRODUCTORY COMPUTER PRACTICE	
T1	T2
44.2	28.7

The 73 students have scored an average of 28,7% for Test 2 and 44,2% for Test 1 in this particular subject. Their average for Test 1 is 15,47% higher than that of Test 2.

6.3.4.3 Introductory Entrepreneurship

The percentages for Test 1 and Test 2 in the subject Introductory Entrepreneurship are indicated in Table 6.15.

TABLE 6.15: PERCENTAGES SCORED IN TEST 1 AND TEST 2 IN INTRODUCTORY ENTREPRENEURSHIP	
T1	T2
44.1	28.5

The 73 students have scored an average of 44,1% for Test 1 and an average of 28,5% for Test 2. The difference between the two averages is 15,61%.

6.3.4.4 Interpretation of results

The results for all three subjects have been calculated together, and the general comparison between Test 1 and Test 2 is indicated in Table 6.16.

TABLE 6.16: GENERAL COMPARISON OF RESULTS OF TEST 1 AND TEST 2	
T1	T2
42.6	27.0

Students have scored higher percentages for Test 1 in all three subjects. The students' overall average for Test 2 is 15,56% lower than their average for Test 1. Thus it seems that the students' ability to make sentences with the concepts is better than their ability to define the concepts in their own words.

Of the three subjects, students' averages for both Test 1 and Test 2 are the lowest in the subject Introductory Communication. They seem to be more competent in the subjects Computer Practice and Entrepreneurship.

6.4 RESULTS OF SECTION D

This section focuses on general questions about the concepts tested in Test 1 and Test 2 (cf. Appendix A). The purpose of this section is to determine the students' level of previous knowledge of the concepts tested. In order to achieve this purpose the students first have to indicate whether they have encountered the concepts before enrolling at the college. Secondly, they have to indicate whether the concepts also appeared in their mother tongue. Lastly, students have to provide other terms or concepts in the various subjects, apart from the ones that are totally new to them. For the purposes of this study, Section D is referred to as **Test 3 (T3)**.

Tables 6.17 to 6.19 indicate which of the concepts in the three respective subjects have never been encountered by the students before enrolling at the college.

TABLE 6.17: UNFAMILIAR CONCEPTS: INTRODUCTORY COMMUNICATION		
Concept	Number of students who were unfamiliar with the concept	Percentage (%)
Communication	6	8.2
Time-management	45	61.6
Constructive activities	48	65.8
Concise	58	79.5
Emphasize	21	28.8
Strategy	16	21.9
Memorandum	1	1.4
Notice	5	6.8
Minutes	4	5.5
Conference	5	6.8
Verbal	28	38.4
Values	2	2.7

More than 60% of the students have indicated that they have never encountered the concepts *time-management*, *constructive activities* and *concise* before enrolling at the college. The concepts *emphasize* and *verbal* are unfamiliar to more than 20% of the students. These concepts are not understood by more than 45% of all the students (cf. Table 6.10).

**TABLE 6.18: UNFAMILIAR CONCEPTS: INTRODUCTORY
COMPUTER PRACTICE**

Concept	Number of students indicating that they had never seen the concept before	Percentage (%)
Edit	23	31.5
Insert	6	8.2
Format	20	27.4
View	5	6.8
File	3	4.1
Toolbar	21	28.8
Icon	40	54.8
Delete	2	2.7
Italics	32	43.8
Database	31	42.5
Mouse	2	2.7
Stiffy	5	6.8
Virus	4	5.5
Hardware	11	15.1
Spreadsheet	29	39.7
Word processing	13	17.8
Advantage	7	9.6
Disadvantage	8	11.0
e-mail	13	17.8

The concepts that students are the most unfamiliar with in the subject Introductory Computer Practice are *icon*, *italics*, *database* and *spreadsheet*. More than 35% of

the students are unfamiliar with these concepts. More than 60% of the students do not understand these concepts either (cf. Table 6.11).

TABLE 6.19 UNFAMILIAR CONCEPTS: INTRODUCTORY ENTREPRENEURSHIP		
Concept	Number of students indicating that they had never seen the concept before	Percentage (%)
Entrepreneur	3	4.1
Economy	9	12.3
Cash flow	29	39.7
Capital	2	2.7
Interest	2	2.7
Balance sheets	20	27.4
VAT	12	16.4
Retailer	11	15.1
Brand	25	34.2
Shoplifting	27	37.0
Budget	2	2.7
Insurance	3	4.1
Security	4	5.5
Cheque	7	9.6
Traveller's cheque	40	54.8
Invoice	25	34.2
Statement	9	12.3
Insolvent	32	43.8
Corporation	13	17.8
Infrastructure	14	19.1

In the subject Introductory Entrepreneurship more than 35% of the students are unfamiliar with the concepts *traveller's cheque*, *insolvent*, *cash flow*, *shoplifting*, *brand* and *invoice*.

The question in which students have indicated which of the concepts asked in the tests also appear in their mother tongue has not been answered well at all. Students' answers are either incomplete or highly inconsistent. They do not seem to agree on which concepts appear in their mother tongue and which ones not. This tendency has been detected in the answers of all the language groups involved. Because of this inconsistency, no reliable conclusions can be drawn from this question. Therefore, this question is declared invalid by the researcher.

Finally, students have indicated if there are any other concepts in the three subjects, apart from those asked in Tests 1 and 2, with which they are unfamiliar. The concepts that have been mentioned are listed in Table 6.20.

TABLE 6.20: OTHER UNFAMILIAR CONCEPTS	
SUBJECT	CONCEPT
Introductory Communication	<i>Vivacious</i>
	<i>Integration</i>
	<i>Anxious</i>
	<i>Appropriate</i>
	<i>Inappropriate</i>
Introductory Computer Practice	<i>Shift</i>
	<i>Compact</i>
Introductory Entrepreneurship	<i>Collaboration</i>
	<i>Unique selling proposition</i>
	<i>Liquidity</i>
	<i>Divisor</i>

Only five students have answered this question correctly. Most students have either indicated that they could not think of any other unfamiliar concepts or they misinterpreted the question and listed some of the concepts already asked in the tests.

6.5 DISCUSSION OF RESULTS

6.5.1 Results of Section B (Test 1) and Section C (Test 2)

The students' results for both tests will now be discussed for each individual subject. Problems that students have with the concepts as well as possible reasons for these will be addressed.

6.5.1.1 Introductory Communication

A common problem seem to be students' interpretation of the concepts within the specific context of the subject. Concepts such as *notice*, *minutes*, *memorandum* and *values* are understood in general but not when related to the subject; for example, *minutes* is often interpreted as an indication of time instead of being described as a document reflecting the decisions made at a meeting. *Notice* is interpreted as referring to someone actually seeing or taking note of something instead of referring to a document giving information on something. *Values* is often interpreted as meaning *price*, whereas it actually refers to principles that a person adheres to in life.

Another problem seems to be students' inability to put their thoughts into words so that the meaning of the concepts becomes clear. Students often seem to have a vague idea of what the concept means, but they lack the necessary language skills and vocabulary to write down the meaning of the concept properly. In such cases markers have been instructed to mark a concept as being only partly understood; for example, the concept *communication* has not always been made clear in the

definitions given by the students in Test 2. Definitions like “communicating with other people” or “attending a communication class” fail to fully clarify the concept *communication*. When the concept *conference* is defined as “people talking to each other about certain things” it conveys the idea of a meeting, but lacks too much detail to be considered as fully understood.

Another problem that occurs is the literal interpretation of concepts, for example, *time management* is often literally interpreted as meaning *time used by manager*, whereas it actually refers to the efficient planning and control of one’s time. The phrase *constructive activities* is often interpreted as meaning *the activity of building or constructing something* instead of referring to positive activities or activities that do not waste time, but that are meaningful.

The fairly high scores in disagreement between markers for the concepts *memorandum* and *notice* may be attributed to the markers’ individual interpretation of the sentences students have made with these concepts. The concept *memorandum* has been used in sentences such as “I will read this memorandum before continuing with the meeting” or “The workers have received a memorandum”. Within the context of the subject Introductory Communication, *memorandum* refers to a document distributed within an organisation to all employees. The above sentences do not reflect this meaning fully, yet they do acknowledge that a memorandum is a document received by people in an organisation. One of the markers may have considered such sentences as correct, whereas another marker may have considered the same sentences as vague and too general to be marked as correct.

The same applies to the concept *notice*, which has been used in sentences such as “She gave us notice about playing at the College” and “Mary gave Kabelc the last notice”. The meaning of *notice* within the context of the subject Introductory Communication refers to an announcement of important information. Sentences

like the ones mentioned above imply that the student realizes that a *notice* may include a warning of some kind.

The concept *communication* is often used in sentences such as “I attend communication classes at the College” or “People like to communicate with other people” or “Communication is important”. The concept *verbal* is used in sentences such as “He has been given the verbal notice” and “Many children are abused verbal”. The concept *time-management* is used in sentences such as “Time-management is good for the company”, “Our manager is always late, he hasn’t done time-management” and “How to manage your time”. Sentences like these may have reflected the meaning of the concepts clearly to one of the markers, but not to another marker.

6.5.1.2 Introductory Computer Practice

The concepts for this subject have generally been better understood by the students than those for Introductory Communication. A possible reason for this may be that students have completed the tests in February, approximately one month after classes have started, and some of the concepts may already have been explained to them by the lecturer by that time. However, despite this possible advantage, students’ scores are not exceptionally high.

Students often struggle to produce good sentences that reveal the meaning of the concepts clearly. This is especially true for the concepts *hardware* and *software*. The concept *hardware* is often simply used in a sentence such as “ My mother bought me computer hardware” and “ Hardware can be seen”. The concept *software* is used in sentences such as “Software cannot be seen” and “I bought software for my computer”. Sentences such as these are too vague to be considered meaningful.

Definitions, on the other hand, are often easily supplied, probably because these definitions have already been supplied by the lecturer in class and students know them by heart. Definitions of concepts that have probably been discussed, learned and memorized are the following: *Hardware* is defined as “the touchable part of a computer”; software is defined as “instructions that tell the computer what you want it to do”; *file* is defined as “a document that is created to save information in” and *insert* is defined as “to add something to the text.”

The concepts *toolbar*, *icon* and *spreadsheet* are not understood by more than 55% of the students (cf. Table 6.11). The poor comprehension of these concepts may partly be attributed to literal interpretations. Many students do not seem to be familiar with these concepts within the context of the subject. The concept *toolbar* is interpreted as meaning “equipment used to build something” and not as referring to the “little pictures on the computer screen that perform certain functions when being clicked on”. The concept *icon* is defined as “a very important person like Madiba” and not as “small pictures on the computer screen”. The concept *spreadsheet* is defined as “the paper that is printed on”, whereas it refers to “the manipulation of numbers”.

An interesting observation is students’ understanding of the concept *e-mail*. This concept is confused with the concept *faxing*. Students seem to think that these two concepts are one and the same thing. They fail to link e-mail with a computer or to the Internet.

Students understand the concepts *delete*, *mouse*, *stiffy* and *hardware* well. Practical experience with concepts such as these in the Computer Practice classroom may have changed abstract concepts into reality, making it easier for the students to understand them.

6.5.1.3 Introductory Entrepreneurship

Students' understanding of concepts in this subject seem to be limited. Students' definitions and sentences explain the meaning of concepts such as *brand*, *statement* and *capital* in a general sense, but not in a business context. The concept *brand* is connected to the adjective *new* and not interpreted as the "name of a product". The concept *traveller's cheque* is simply defined by students as "a cheque used by a traveller". The concept *statement* is related to things being said by someone and not to a document indicating an amount that is owed.

Literal interpretations of concepts such as *invoice*, *interest*, *cash flow*, *shoplifting* and *traveller's cheque* are common. *Shoplifting* is defined as *a lift in a shop* or as *giving a shop a makeover* instead of as stealing from a shop. *Cash flow* is simply defined as *the flow of cash*, and not as money flowing in and out of a business. The concept *invoice* is described as the voice from within oneself or it is confused with the concept *receipt*. The concept *interest* is described as showing an interest in something and not as money added to a financial investment after a period of time. When these concepts have been interpreted literally they were marked as incorrect by the markers and tabled as *NOT UNDERSTOOD*.

The majority of the students are unfamiliar with the concept *insolvent*. They fail to understand that this concept is closely related to the concept *bankruptcy*. Less than 3% of the students fully understand this concept. More than 40% of the students have indicated that they have never encountered this concept before. Only 15% of the students understand this concept partially (cf. Table 6.12).

Students also find some concepts confusing; for example, *interest* is confused with the concept *profit*, and *corporation* is interpreted as meaning *co-operation* instead of referring to a company or enterprise. *Invoice* is interpreted as meaning *receipt*, and *retailer* is confused with the concept *manufacturer*. These misinterpretations

may explain the fact that less than 20% of the students fully understand these concepts.

The concept *security* is partly understood by more than 50% of the students (cf. Table 6.12). Students seem to have a limited understanding of this concept within the context of the subject. They refer to *security* as *something or someone that protects a business* or as *something that provides surety*. These definitions are not wrong, yet they are incomplete and do not reflect total understanding of the concept within the corporate world. This explains the fairly high score of 50% in the *PARTLY UNDERSTOOD* column for this concept. (cf. Table 6.12).

6.5.2 Results of Section D (Test 3)

In the subject Introductory Communication more than 25% of the students have indicated that they have never encountered the concepts *time-management*, *constructive activities*, *concise*, *emphasize* and *verbal* before enrolling at the college (cf. Table 6.17).

In the subject Introductory Computer Practice almost 40% of the students have indicated that they are unfamiliar with the concepts *icon*, *italics*, *database* and *spreadsheet*.

Almost 35% of the students have indicated that they are unfamiliar with the concepts *traveller's cheque*, *insolvent*, *cash*, *shoplifting*, *brand* and *invoice* (cf. Table 6.19).

There may be various reasons for this. First it seems that not having encountered a concept before may impede the comprehension of that particular concept. Another possible explanation for the high percentage of students who do not understand the above-mentioned concepts may be the abstract nature of these concepts. None of the concepts mentioned above represents concrete objects. This may make it more

difficult for students to memorize and successfully recall the meaning of these concepts even though the lecturer may have explained them before they wrote the test.

6.5.3 Conclusion

From the results it is clear that students have scored higher in Test 1, where they have made sentences with the concepts, than in Test 2, where they have defined the concepts in their own words. This tendency is evident in all three subject fields (cf. Tables 6.13 – 6.16).

There may be various reasons for this. Students may have guessed the meanings of the concepts correctly. In doing so they may have constructed a sentence that is correct according to the markers. The ability to define a concept requires specific and intensive subject knowledge. The markers' interpretations of the students' sentences in Test 1 may have been influenced by their subjective interpretation. The marking of the sentences is more subjective than the marking of definitions. A sentence such as *Communication is important in life* may have been marked as correct by one marker, whereas another marker may have required a clearer reflection of the meaning of the concept in the sentence. Thus, the assumption is that variation in marker assessment may have influenced the results.

It also seems as if some of the definitions that are given by the students in Test 2 are the ones provided by the lecturer teaching the specific subject, because students give the exact same definitions for certain concepts. Some examples are:

Hardware is the touchable part of a computer

Software is the instructions that tell the computer what it should do

Conference is a meeting

Insert is to add something to a text

File is a document created to store information

Delete means to erase

Stiffy is a disk used to save information on

An entrepreneur is a person who starts his own business

It seems as if the students have memorized these definitions. Whether this means that they actually know the meaning of the concept is unclear. They may have memorized these definitions without actually comprehending the essence of the concept. This tendency is especially true for students whose language proficiency is not good (cf. 2.2). Schmeck (1988: 97) calls this tendency a surface approach to learning, where only bits and pieces of information are memorized through repetition. Sufficient language proficiency remains a prerequisite for conceptual comprehension (cf. 2.2).

Students have difficulty in all three subjects to define and explain certain concepts within the context of the specific subject. Some concepts are only explained in general terms and some are interpreted literally. This tendency reflects these students' inability to fully grasp the meaning of subject-specific concepts.

Of the three subjects, students' averages for both Test 1 and Test 2 are the lowest in the subject Introductory Communication. A possible reason for this may be that a few of the concepts related to Communication requires abstract interpretation; for example, *values, concise, strategy, emphasize, time-management* and *verbal*. Most concepts in the subjects Introductory Entrepreneurship and Computer Practice describe concrete objects or things that students can relate to, for example, *edit, file, view, mouse, stiffy, virus, hardware, software, e-mail, entrepreneur, corporation, infrastructure, balance sheet, VAT, retailer, brand, shoplifting, budget, security, cheque, invoice* and *statement*.

6.6 INFORMATION OBTAINED FROM SECTION E

Section E focuses on some background factors that relate to the students' access and exposure to English reading material at home, electronic media such as

television, radio and Internet, electricity and spoken English. Students have also indicated their main reason for taking a specific course at the college. The last question has been asked to get an idea of the main motivating factor that has influenced the disadvantaged ESL student to choose a specific study career.

As far as access to electricity is concerned, 99% of all participating students have indicated that they have electricity at home. The majority have indicated that they have had electricity since 1990.

TABLE 6.21: ACCESS TO ENGLISH READING MATERIAL AT HOME		
	Students that have access to English reading material at home	Students who do not have access to English reading material at home
No. of students	61	12
Percentage	83.6	16.4

Table 6.21 indicates how many of the participating students claim to have access to English reading material at home. 83% of the students have access to English reading material at home. This represents more than two thirds of the group who have written the tests. From the study it is not clear to what type of English reading material they are exposed or whether the reading material is related to the subjects that are tested.

TABLE 6.22: ACCESS TO ELECTRONIC MEDIA					
	Television	Radio	Internet	Television and radio	Television, radio and Internet
No. of students	16	3	1	45	2
Percentage (%)	22.0	4.1	1.3	61.6	2.7

Table 6.22 indicates how many of the participating students have indicated that they have access to electronic media, namely television, radio and Internet.

The majority of students have reported that they have access to both television and radio. Only 2.7% of the students have access to radio, television and the Internet.

TABLE 6.23: EXPOSURE TO SPOKEN ENGLISH						
	Parents	Secondary school teachers	College lecturers	Friends	Relatives	Other
No. of students	16	27	73	26	9	8
Percentage (%)	22.0	37.0	100	35.6	12.3	11.0

Students' exposure to spoken English is shown in Table 6.23. The students have indicated to which groups of people they speak **only** English.

From the table it is clear that all the students speak only English to their college lecturers. This is so because English is the language of instruction. 37% of the 73 students have indicated that they have spoken only English to their secondary school teachers. The students have specified that the people implied under **Other** include boyfriends or girlfriends, fiancés/fiancées and the business sector.

TABLE 6.24: MOTIVATING FACTORS FOR CHOOSING A SPECIFIC COURSE					
	Many job opportunities	It is my main interest	Influenced by friends & parents	Influenced by the media	Other reasons
No. of students	33	22	5	8	5
Percentage (%)	45.2	30.1	6.8	11.0	6.8

Table 6.24 gives an indication of the factors that have influenced students to choose a specific course at the college. Students have only been allowed to choose one option, i.e. the one that they regard as the most important reason for choosing the course they have. The majority of students seem to believe that getting a job after completing their studies is the most important reason for choosing a specific course. The second highest percentage represents those students who have chosen a specific course because it is their main interest.

Motivation as a personal factor that may influence conceptual awareness has been discussed in Chapter four (cf. 4.3.5). Cornoldi and Oakhill (1996: 302) state that if a student experiences a task or the learning process as meaningful, he or she will be able to cope with it in a motivated, autonomous way. This may probably also apply to the students' motivation for selecting a specific course to study. If students believe that studying a specific course will reward them with a job opportunity they may be more inclined to choose that specific course.

37% of the 73 students have chosen Human Resource Management, making it the most popular career choice. 30% of the students have enrolled for Business Management and 17,8% have each enrolled for Management Assistant and Marketing Management.

6.7 SOME ADDITIONAL FINDINGS

Only a few background factors that seem to play a role in the students' conceptual awareness are discussed here. As it is not the intention of this study to draw direct correlations between the students' conceptual comprehension and these background factors, they will only be referred to and not be discussed in detail.

The deductions that are made about the background factors are based on the students' results in Tests 1 and 2. A specific procedure has been followed when drawing up the tables and a specific formula has been used to calculate the percentages that are shown in the various tables. This formula is now briefly outlined.

The final averages that are presented in Tables 6.26 to 6.36 have been obtained by using the following formula for each individual subject:

$$Z = \frac{\sum Y}{X \cdot N} \times 100$$

$\sum Y$ represents the sum of the correct answers for each concept and $N \cdot Y$ represents that number of students (X) multiplied by the number of concepts for each subject (N). The two totals are divided and then multiplied by 100 to obtain a percentage (Z) that will be indicative of how a specific group of students did in each individual subject

6.7.1 Geographical location

Table 6.25 shows the percentages obtained by the students from the various geographical areas for Test 1 and Test 2 respectively in all three subjects:

TABLE 6.25: GEOGRAPHICAL LOCATION

Subject	Urban		Semi-urban		Rural	
	T1	T2	T1	T2	T1	T2
Introductory Communication	34.6	21,3	45.7	33,3	31.8	17,3
Introductory Computer Practice	41.5	25,2	51.8	34,7	39.5	24,3
Introductory Entrepreneurship	42.8	28,8	56.0	33,8	35.9	23,6

The results for each test (Test 1 and Test 2) are shown separately for each subject. From the above-mentioned data it is clear that students from rural areas score lower percentages for both tests in all three subjects than the other two groups. The fact that these students live in more remote areas and possibly have less contact with English-speaking people, English reading material and electronic media may have played a role in their interpretation of the concepts (cf. 4.4).

Only 9 of the 28 students from rural areas have indicated that they are exposed to English in the area where they live.

6.7.2 Other subjects passed in Grade 12

The subjects Business Economics, Economics, Accounting and Computer Studies are considered because these subjects are relevant to the subjects Introductory Computer Practice and Introductory Entrepreneurship. Students who have passed these subjects in Grade 12 are supposed to have background knowledge on most of the concepts of the subjects Introductory Computer Practice and Introductory Entrepreneurship that have been tested in T1 and T2.

TABLE 6.26: OTHER GRADE 12 SUBJECTS				
Grade 12 Subject	Business Economics	Economics	Accounting	Computer Studies
No. of students	29	22	22	0
Percentage (%)	39.7	30.1	30.1	0.0

Table 6.26 indicates how many of the 73 students have passed one or more of the relevant subjects in Grade 12.

Two groups have been identified, namely those who have passed the relevant subjects mentioned above in Grade 12 and those who have not taken these subjects up to Grade 12. No students have taken Computer Studies as a Grade 12 subject.

TABLE 6.27: OTHER SUBJECTS PASSED IN GRADE 12				
Subject	Students who have not taken Business Economics, Economics and/or Accounting up to Grade 12		Students who have taken Business Economics, Economics and/or Accounting up to Grade 12	
	T1	T2	T1	T2
Introductory Communication	34.6	22.7	40.7	25.3
Introductory Computer Practice	43.3	28.1	45.5	29.4
Introductory Entrepreneurship	39.1	23.6	50.2	34.4

Table 6.27 shows the percentages obtained by two groups for T1 and T2 in each of the subjects.

In all three subjects the groups who have taken the relevant subjects up to Grade 12 have scored higher percentages than the ones who have not taken the subjects up to Grade 12. The highest percentage of 50,2% is scored in the subject Introductory Entrepreneurship by the group who have passed the relevant subjects - Business Economics, Economics and Accounting are all relevant to the subject Entrepreneurship. The concepts of Entrepreneurship also form part of the syllabus of the other three subjects. Pre-existing knowledge and concepts regarding a subject matter provide the students with a basis for comparing new concepts with familiar concepts. The experience they have with the concepts before enables them to label events, actions and principles in that domain (cf. Kokong, 1991: 11, 21 & 2.6). Thus these students may have had an advantage over the other group when answering the questions on Entrepreneurship because their background in Business Economics, Economics and Accounting has provided them with knowledge on at least some of the basic concepts in Entrepreneurship.

6.7.3 Previous attendance of tertiary institutions

TABLE 6.28				
PREVIOUS ATTENDANCE OF TERTIARY INSTITUTIONS				
Subjects	Students who attended other tertiary institutions		Students who did not previously attend tertiary institutions	
	T1	T2	T1	T2
Introductory Communication	46.3	25.0	36.1	23.8
Introductory Computer Practice	50.6	36.5	43.4	27.6
Introductory Entrepreneurship	40.6	27.2	41.3	27.9

The results of students who have previously attended other tertiary institutions are compared to those who have not in Table 6.28. The results are presented as percentages for the three individual subjects in both tests. From the table it is clear that the groups who have previously attended tertiary institutions score higher in both tests in two of the three subjects than those who have not attended other tertiary institutions.

6.7.4 Access to English reading material at home

TABLE 6.29: ACCESS TO ENGLISH READING MATERIAL AT HOME				
Subject	YES		NO	
	T1	T2	T1	T2
Introductory Communication	38.4	22,3	27.4	14,3
Introductory Computer Practice	45.2	29,3	27.9	22,4
Introductory Entrepreneurship	43.9	28,2	37.9	27,1

Table 6.29 indicates what role access to English reading material may have played in the students' conceptual comprehension.

The students' tests have been divided into two groups: those who have indicated that they have access to English reading material at home have been grouped under YES and those who have indicated that they do not have access to English reading material at home have been grouped under NO. In the table above the results for each group are presented as percentages. The various percentages that have been scored by each group in each individual subject for each test are given.

From the results presented it seems clear that those students who claim to have access to English reading material at home (the YES group) have done better in

both tests than those who claim not to have access to English reading material at home (the *NO* group). The percentages scored by the two respective groups in the two tests are not very high for any of the subjects concerned. The highest percentage is 45.2% scored in Test 1 for the subject Introductory Computer Practice by the YES group. The highest percentages for both tests in all three subjects are scored by the YES group.

6.7.5 Access to electronic media

TABLE 6.30: ACCESS TO ELECTRONIC MEDIA										
Subject	Television		Radio		TV and Radio		Internet		TV, Radio and Internet	
	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Introductory Communication	34.9	19,8	38.9	33,3	38.0	21,3	33.3	50,0	41.7	29,2
Introductory Computer Practice	39.4	23,2	30.0	27,0	45.1	30,1	75.0	38,1	47.5	42,9
Introductory Entrepreneurship	41.6	23,1	33.3	18,3	44.6	29,9	60.0	45,0	50.0	37,5

Table 6.30 indicates what role access to electronic media at home may have played in the students' conceptual comprehension ability.

Of the 73 students, 67 have indicated that they have access to electronic media at home. These students have scored higher averages for Test 1 in all three subjects. The only exception is for Introductory Communication where the one student who claims to have access to the Internet has done better in Test 2 than in Test 1. This exception, however, does not really seem significant, because it is only true for one out of 73 students. The same student has scored 75% for Test 1 in Introductory Computer Practice. There is no indication whether this particular student has had

additional training in computers or not. This student is also not one of the students who have indicated that they have already attended other tertiary institutions. Although the average is not as high as the one previously mentioned, it is also interesting to note that the second highest percentage for Test 1 in Introductory Computer Practice is obtained by those students who have access to television, radio and the Internet at home. These students have also scored the highest percentage for Test 2 in Introductory Computer Practice.

6.8 CONCLUSION

After carefully scrutinizing all the data obtained from the survey the following general deductions regarding the study may be made:

- The fairly low averages obtained by the students in the three subjects throughout the study indicates that their conceptual awareness in the three subjects concerned is not very high.
- Many concepts have not been interpreted within the context of a specific subject.
- Students seem to relate certain concepts to concepts that have not been asked. They tend to interpret the meaning of a concept against their own frame of reference.
- Students seem to be better at constructing sentences than at defining them in their own words. This tendency is indicated by the constant higher percentages obtained for Test 1. However, the lecturers' interpretation of the sentences when marking may also have influenced the results.
- The background factors that have been considered in this chapter give a selective picture of the background of the previously disadvantaged college

student. It is not the intention of this study to draw direct correlations between background factors and the students' conceptual awareness. However, it is possible that, because of this background, students have interpreted the concepts in a specific way.

The biggest problem that emerges from this study is the overall low percentages scored by students. Only in exceptional cases are the averages above 50%. In general, the scores range between 13% and 48%. This indicates that students' general conceptual awareness regarding the subject fields covered in the study is inadequate for an Outcomes-Based Educational approach to learning where students have to work fairly independently and rely on existing conceptual knowledge to perform tasks.

The study has also revealed that there are gaps in students' basic conceptual awareness of the three subjects tested. Because of these gaps these students may not be prepared for tertiary study which demands a certain level of conceptual knowledge from them.

Lecturers should be aware of these gaps because ignorance on the part of the lecturer may impede the learning process even further. Lecturers need to be familiar with strategies that can be implemented to improve their students' conceptual awareness.

In chapter seven practical strategies to improve the poor conceptual awareness of students will be suggested.

CHAPTER SEVEN

STRATEGIES FOR IMPROVING THE CONCEPTUAL AWARENESS OF THE ESL COLLEGE STUDENT

7.1 INTRODUCTION

When planning, preparing or deciding on methods or strategies to be implemented at a college to improve the conceptual awareness of the disadvantaged ESL student, the student should be considered in his or her totality. Students cannot be separated from their backgrounds. Lecturers need to be sensitive to social distinctions and they have to be open to personal needs, learning purposes and learning styles of individuals (Edge, 1993: 10). Bransford, Brown and Cocking (1999) point out that learner-centered environments include teachers who are aware that learners construct their own meanings, beginning with the beliefs, understandings, and the cultural practices that they bring into the classroom. Accomplished teachers respect and understand students' prior experiences, assuming that these can serve as a foundation on which bridges to new understandings can be built.

Students should not merely become passive recipients of knowledge, unable to be creative or to take initiative in the learning process. They should be encouraged to become actively involved in the learning process. Students must feel that their activities are purposeful. They need just enough structure so that they feel supported and just enough freedom so that they have room for self-development. Before discussing possible strategies to improve conceptual awareness, the roles of both teacher and student in strategy-based instruction will be considered in general. The general principles that underlie the implementation of learning strategies will also be referred to.

7.2 THE ROLE OF LECTURER AND STUDENT IN STRATEGY-BASED INSTRUCTION

Cohen (1999: 65) points out that language learning will be facilitated if students become aware of the range of possible strategies that they can consciously select during language learning and language use. He proposes that language lecturers should provide strategy-based instruction to students as part of the Second Language curriculum.

Cohen (1999: 68) defines language learning strategies as the conscious thoughts and behaviours used by students with the explicit goal of improving their knowledge and understanding of the target language. This includes cognitive strategies for memorizing and manipulating target language structures, metacognitive strategies for managing and supervising their strategy use, affective strategies for gauging their emotional reactions learning and social strategies for enhancing learning such as co-operating with other learners and seeking opportunities to interact with L1 speakers.

Oxford (1990) defines L2 learning strategies as specific actions, behaviours, steps or techniques that students use, often consciously, to improve their progress in apprehending, internalizing and using the Second Language. Oxford (1994) also points out that research has repeatedly shown that the conscious, tailored use of such strategies is related to language achievement and proficiency. Language proficiency supports and promotes conceptual comprehension (cf. 2.2).

Language use strategies focus primarily on helping the students to utilize the language that they have already learned (Cohen, 1999: 68). It includes strategies for retrieving information about language already stored in the long-term memory, strategies for rehearsing target language structures and strategies for communicating in the target language, despite gaps in target language knowledge.

Oxford (1994) points out that cognitive (e.g. translating, analysing) and metacognitive (e.g. planning, organising) strategies are often used together, supporting each other. She also mentions that certain strategies or clusters of strategies are often linked to particular language skills or tasks, e.g. Second Language writing benefits from the learning strategies of planning, self-monitoring, deduction and substitution, and Second Language speaking demands strategies such as risk-taking, paraphrasing, self-monitoring and self-evaluation.

However, merely knowing about these strategies is not enough. Students must know how to use them successfully. The emphasis is on “how to learn”, rather than on “what to learn”.

The teacher’s role shifts from that of being exclusively the manager, controller and instructor to that of being facilitator of learning who helps students to become more independent and more responsible for their own learning. Lecturers and students become partners in the learning process (Cohen, 1999: 97).

By creating a supportive climate in the class lecturers will encourage students to verbalize their reactions to unfamiliar concepts. Lambani (2001: 57) points out that one important role of the lecturer is to engage students in intellectual pursuits through the provision of high quality educational settings. If the classroom context, social arrangement and tasks set by the lecturer are challenging enough to encourage inquisitiveness with their students, the teaching and learning situation can contribute towards improvement in students’ conceptual comprehension.

To enable students to use learning strategies optimally, the lecturer must realise that there are certain factors that will influence the choice of learning strategies. These factors will now be briefly discussed.

7.3 FACTORS THAT INFLUENCE THE CHOICE OF LEARNING STRATEGIES

7.3.1 Students' needs

Before lecturers can engage in strategy-based instruction, it is essential that the students' needs are determined first. Lecturers need to assess students' current and intended levels of proficiency, their experience with learning other languages, their learning style preferences and personal characteristics, their beliefs and attitudes about language learning and their expectations regarding the role of lecturer and themselves (Oxford, 1994; Cohen, 1999: 89).

Individual students have individual needs. The communicative approach followed in English classrooms accommodates students' differing language needs, because it is less teacher-centered and more interactive. Tarone and Yule (1989: 20) state that because of this approach, the domain of language teaching has been broadened. The lecturer does not control the entire learning process in the class anymore, but the students, themselves, share this responsibility. They are encouraged to learn how to use a language in a variety of instructional programmes. Providing students with a wide range of learning strategies to be used throughout the language learning process can help them improve both their learning, language and comprehension skills (Cohen, 1999: 66).

7.3.2 Time allocated to the teaching of strategies

The amount of time that will be allocated to the training programme must also be considered. Issues that must be considered are whether the programme consists of short-term intervention or of extensive strategy training. Oxford (1994: 3) suggests that training should be integrated into regular Second Language activities over a long period of time, rather than be taught as separate short intervention.

The time aspect will be affected by whether the training is embedded in the course content or whether it is provided as a separate entity.

7.3.3 Characteristics of students

The strategies that are selected to help students improve their learning of concepts must be appropriate to characteristics such as learning style preference, personality, cultural and educational background, age, gender, career orientation, previous language studies and levels of motivation.

As far as motivation is concerned, Oxford (1994) states that more motivated students tend to use more strategies than less motivated students (cf. 4.3.5). The particular reason for studying the language (especially as related to career field) is important in the choice of strategies.

The types of tasks that must be performed and proficiency goals must also be considered (Oxford, 1994; Cohen, 1999: 90). Kostelnik (1993: 73 – 77) points out that the teacher has to view students within the context of their families, culture, communities, past experience and current circumstances to create individually appropriate learning contexts. He stresses that students' knowledge should be considered even more carefully if they are from a deprived background.

7.3.4 Focus of the instruction

The primary goal of strategy instruction is to encourage students to use strategies on their own. Therefore it may be useful to provide them with a wide range of strategies and then to focus extensively on those which the students themselves choose (Cohen, 1999: 91).

The focus of the instruction can be either specific, i.e. focusing only on oral presentation or reading skills, or an integrated skills approach can be followed

where the focus is on teaching more than one skill at a time. Oxford (1994) suggests that strategy training should not be solely tied to the class at hand, but should provide strategies that are transferable to future language tasks beyond a given class. This approach basically favours cross-curriculum teaching where teachers from various subject fields work together to improve students' language proficiency and conceptual comprehension skills.

7.3.5 The type of learning tasks

A factor that needs to be considered regarding the preparation of material and activities is whether the students will be actively involved in the collection and development of material or whether the lecturer will make all the decisions regarding learning tasks. Cohen (1999: 95) states that if the focus of instruction is the students, then student input is essential to the successful evaluation and revision of the training.

Oxford (1990: 209) suggests that whatever the types of learning tasks that are included in the curriculum, they should be interesting, varied and meaningful and should not just deal with intellectual aspects of language learning but also with the affective side, i.e. motivation, anxiety and interests. The Second Language student is not merely a cognitive and metacognitive machine, but a whole person. Thus, students should be helped to develop affective and social strategies as well as intellectually related strategies based on their individual learning styles.

Although many lecturers are already using a wide variety of strategy-friendly activities in class, an awareness of some or many of those strategies on the part of the students is missing. Students must be made aware of the strategies that they employ to learn concepts, because the more aware they are that they are using meaningful strategies to improve their conceptual comprehension skills, the more likely they may be to use them spontaneously in other contexts as well (Cohen, 1999: 93).

Making students aware of strategies may be as simple as explaining the purpose of a learning activity or calling attention to how the lecturer has organised the course material. By telling students that by brainstorming before a specific activity, they are actually activating their background knowledge, they are made aware of a strategy they can employ to link prior knowledge to new knowledge.

All of the aspects which have been discussed must be considered by the College lecturer if a suitable approach to improving conceptual comprehension is chosen. Suitable strategies which may be applied by lecturers at a College will now be discussed. This discussion will focus on the practical implementation of the strategies.

7.4 STRATEGIES FOR IMPROVING CONCEPTUAL AWARENESS

It is clear that lecturers should become aware of the central role of concepts in all learning at the college. The study has already pointed out that multiple exposure to concepts or word meanings leads to effective vocabulary acquisition (cf. 3.4.2 & 4.4). In this regard, cross-curriculum teaching can be a very useful strategy because it implies that students will necessarily be exposed to a particular concept more than once.

7.4.1 Cross-curriculum teaching

Cross-curriculum teaching implies that lecturers from various subjects should work together and explain concepts and knowledge from different subject fields to lead students to understanding and sensible application of these concepts. The Communication lecturer should not only focus on developing language and communication skills, but should also teach concepts from the subjects Entrepreneurship and Computer Practice. Basic concepts from the Entrepreneurship field such as *budget*, *cheque*, *statement*, *invoice* and *balance sheet* can be taught by the Communication lecturer by including these in texts for

comprehension or by allowing their students to use these for written communication purposes.

Another example of cross-curriculum teaching in the Communication classroom is to use graphs and diagrams from the business section in a newspaper to explain concepts such as *interest*, *economy* and *capital*. In this way students can be exposed to the interpretation of graphic material and they learn to understand these by exposure to concepts from the Entrepreneurship field.

Lecturers responsible for Entrepreneurship and Computer Practice training should in turn incorporate communicative concepts into their subjects. When lecturers explain sound financial management to avoid insolvency in the Entrepreneurship class, references to and explanation of communication concepts such as *time management*, *strategy* and *constructive activities* can serve to strengthen the students' understanding of these concepts. Computer Practice lecturers could use texts such as memorandums, notices and minutes from the Communication field when teaching basic computer skills. In the process students get the opportunity to work directly with these forms of written communication and they learn what these documents should look like once they have been printed on a computer.

Through multiple exposure like this, students are likely to develop an understanding of various concepts from different subject fields.

By adopting a teaching style that encourages students to ask questions, initiate discussions and reflect afterwards on what they have accomplished, the lecturer responsible for the subject can help students comprehend concepts in a variety of subjects. Verma and Pumfrey (1994: 59) state that lecturers should help students to become increasingly able to understand and use economic and technological terminology in order to prepare them for their future roles as producers, consumers and citizens.

The groups of students must, however, be organised in such a way that the optimum learning environment is created; one where individual students get the opportunity to communicate and test their ideas. Ample opportunity ought to be provided for the sharing of ideas and knowledge (e.g. group work).

Much emphasis should be placed on the development of conceptual comprehension, because students need conceptual knowledge for the successful completion of specific tasks. Task-based materials might encourage an awareness among students that conceptual awareness is a necessary instrument for achieving their goals, because it facilitates comprehension of texts and instructions in the classroom. Therefore, the concepts should be presented and explained as practically and as realistically as possible by using problem-solving sessions, simulated planning sessions and meetings. These teaching methods can be applied with great success in the Communication class and in the Entrepreneurship class. By allowing students to experience concepts such as *time-management, strategy, conference, budget, insurance, brand and retailer* in simulated real-life situations in class their comprehension of these concepts can be improved.

A constraining factor may be the fact that lecturers are required to have subject-specific knowledge in various subject fields. However, if the content is not too complex and a persistent effort is made to find practical and creative solutions to address the lack of conceptual awareness among ESL students, no restriction should be too great to overcome.

The importance of background knowledge in conceptual comprehension has been stressed a number of times in this study (cf. 2.3; 2.6, 2.6.1, 3.3; 3.4.1 & 4.3.2). Bransford et al. (1999) state that effective teaching supports positive transfer by actively identifying the relevant knowledge and strengths that the student brings to the learning situation and by building on them.

7.4.2 Strategies based on constructivism

Bruner (1990) points out that the student selects and transforms information and makes decisions by relying on cognitive structures. In this way they provide meaning to experiences and “go beyond the information given in class”. Strategies that can be applied in the classroom to improve conceptual awareness and that are based on the constructivist theory devised by Bruner will now be briefly discussed.

Bruner (1990) maintains that as far as instruction is concerned, the lecturer should try and encourage students to discover concepts by themselves. The lecturer and student should engage in an active dialogue. The lecturer should present the new concepts in such a way that they match the student’s current state of understanding. Students should be encouraged to use active techniques, such as experiments and real-world problem-solving, to create more knowledge. They should be encouraged to talk about what they are doing and how their understanding is changing.

In the Communication class these strategies can be practically implemented to teach the concept *conference*; for example, before teaching the concept, the lecturer should determine the students’ level of pre-existing knowledge regarding the concept *conference* by asking questions such as *Have you ever attended a meeting?*, *What was the topic of discussion and how long did the meeting take?*, *What procedures were followed in the meeting?*. Once students have answered these questions the lecturer will have a fairly good idea of whether the students will be able to link the new concept (*conference*) to an existing one (*meeting*). Now the lecturer can engage in an explanation of how a conference differs from an ordinary meeting by concentrating on aspects such as length of activity, topic of discussion and participants. Once the lecturer is satisfied that enough theoretical background has been given on the new concept the students can be instructed to organise a simulated conference on their own. The students should

be guided in this regard and clear instructions must be given by the lecturer. While the actual planning of the simulated conference takes place in class, the lecturer can encourage the students to engage in dialogue with him and with each other, allow them to use their initiative and ask questions to steer them in the right direction. It is essential that feedback from the lecturer is given during the planning and conducting of the activity as well as afterwards to determine whether comprehension of the new concept has been successfully established.

Two other strategies that can also be applied to teach conceptual knowledge are the rule-example strategy and the example-rule strategy. These two will now be briefly discussed.

7.4.3 Rule-example strategy

Concepts are mental abstractions that categorize sets of objects, events or ideas. They contain certain characteristics. If these characteristics are concrete and observable, concept learning is simplified (College of Education, 1999). In using the rule-example strategy, the concept is defined first, then linked to a subordinate concept and lastly the essential attributes of the concept are identified. Afterwards the terms used in the definition are clarified by the lecturer, who provides both examples and non-examples. An example from each subject field covered in this study will be given to show the practical application of this strategy.

In the Communication class the concept *communication* can be explained by defining it as a two-way process that involves a sender, a message, receiver and feedback. When identifying the essential attributes of the concept it can be linked to words such as *speaking, talking, writing, and listening*. The lecturer will have to explain the terms *sender, receiver, feedback* and *two-way process*. This can be done by linking them to the example of sending or writing a letter to someone.

The concept of *e-mail* can be explained by defining it as mail being sent via a computer. Students may experience difficulty understanding how the process works, especially if they are not very familiar with a computer. In order to clarify the concept it can be linked to concepts such as *letter*, *sms* or *facsimile*. By explaining the concept *electronic* and comparing it to letters sent by ordinary mail the concept of *e-mail* can be taught to students. If Internet facilities are available in the class, students can be shown how e-mail is sent.

In the Entrepreneurship class the concept *retailer* can be explained by means of the rule-example strategy. The concept can be defined as a company or a person that sells goods directly to the public. To clarify the concept further it can be linked to words such as *small business*, *shop*, or *outlet*. The name of a well-known business that sells directly to public in town can be used as a practical example of a retailer. The lecturer must make sure that students can identify with the example provided.

By applying the rule-example strategy the two-fold goal of learning a concept has been fulfilled, namely acquiring the concept and relating it to other concepts.

7.4.4 Example-rule strategy

The example-rule strategy follows the opposite procedure from that of the rule-example strategy. The concept is explained by starting with references to examples which will lead to the definition of the concept. The same examples that were used to explain the rule-example strategy can also be applied to this strategy. The process just has to be reversed.

This strategy promotes higher-order thinking skills such as deduction, problem-solving and decision-making (College of Education, 1999).

7.4.5 Concept mapping

Another strategy for teaching concepts is concept mapping, in which the relationship among concepts is represented visually. The relationships among concepts can be based on principles, generalisations or academic rules. The visual examples that are used to explain the concept must include all the information and characteristics that learners require in order to understand the concept. The most essential characteristics of the concept must be linked to the example that is used. If the concept is totally new to the students it can be linked to related concepts (College of Education, 1999).

In the Entrepreneurship class the concepts *cheque* and *traveller's cheque* can be visually explained by taking a cheque book and comparing it to actual money. The lecturer can then stress the fact that both cash and a cheque can be used when something is bought, although a cheque may be safer than cash.

In the Computer Practice classroom the concept *italics* can also be explained by means of concept mapping. Printed examples of italics can be shown to the students. The lecturer can point out that this format can be used in printing if the writer wants to stress something or when a quotation is used. The lecturer can then explain that printing a word in italics makes it look different from ordinary printing. Words that are printed in an ordinary fashion do not attract attention, whereas words that are printed in italics are meant to look different for a specific reason.

The concept *notice* in the Communication class can be explained to students by showing them actual notice boards with notices on the premises and by discussing the purposes of the various notices.

Closely related to concept mapping is the strategy of authentic learning, as the latter involves real-world problems and projects that are relevant to the student. This strategy will now be briefly discussed.

7.4.6 Authentic learning

Authentic learning allows students to explore, discover, discuss and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant and interesting to the student (Visible Knowledge Project, 2002).

It implies several things, e.g. that learning be centered around authentic tasks, that learning be guided with lecturer scaffolding, that students be engaged in exploration and inquiry, that students have opportunities for social discourse, and that ample resources be available to students as they pursue meaningful problems.

In the Computer Practice classroom this strategy can be successfully applied if each student has access to a computer; for example, an entire range of concepts, such as *edit*, *insert*, *format*, *view*, *file*, *toolbar*, *icon*, *delete* and *italics* can be taught by authentic learning. These concepts can be shown to students on the computer screen by pointing out the icons that represent each of these functions. Students can then be allowed to work hands-on with these concepts by experimenting with the various functions on the screen.

Advocates of authentic learning believe that exploration of, inquiry into and exposure to authentic tasks support natural learning, and many of these ideals are based in theory and research on learning and cognition (Visible Knowledge Project, 2002).

7.4.7 Inquiry-based learning

Effective inquiry is more than simply asking questions. A complex process is involved when students attempt to convert information and data into useful knowledge. Useful application of inquiry-based learning involves several factors, namely a context for questions, a framework for questions, a focus for questions, and different levels of questions. Well-designed inquiry-based learning produces knowledge formation that can be widely applied (Visible Knowledge Project, 2002).

The inquiry approach focuses on using and learning concepts as a means to develop information-processing and problem-solving skills. It is student centred, with the lecturer acting as facilitator of learning. The emphasis is on “how we come to know” rather than on “what we know”. Students are involved in the construction of knowledge through active involvement. The more interested and engaged students are by the subject, the easier it will be for them to construct an in-depth knowledge of it. Learning becomes almost effortless when something fascinates students and reflects their interests and goals (Visible Knowledge Project, 2002).

In practice, the lecturer can establish a context for inquiry by creating an atmosphere of openness and stimulation in the classroom. An effective way of achieving this is to make use of ice breakers, warm-up activities and brainteasers. Activities like these will allow students to relax and to realise that learning can be fun. The lecturer must make sure that he or she has a range of different questions at hand to ask students on a specific topic. Questions must vary in length and difficulty and various types of questions must be asked. The lecturer must also have an aim or goal in mind that he wants to achieve with the questions.

The above-mentioned aspects can be applied in the Entrepreneurship class as follows:

If the lecturer wants to explain the concept *insolvent* to the students, a context for questions can be established by playing a game of Snap with a deck of cards. Students can be divided into pairs and after the lecturer has briefly explained how the game works, they can engage in playing the game. After a few games have been played, the lecturer can establish a framework for questions by asking questions such as *Why do you think did you win/lose the game?*, *Was it easy to spot similar cards when the game was played at a fast pace?*. When the students answer these questions, the lecturer must guide them towards understanding the concepts of missed opportunities and quick thinking. The game of cards can now directly be related to money. The lecturer can ask the students what would have happened if the cards had been money – the winners would have been rich and the losers would have been poor. Finally, the lecturer can use this background to explain what would happen to a company if it lost all its money. In this way the students can be guided towards understanding the concept *insolvent*. Once students understand the basic idea of *insolvency*, the lecturer can explain the finer details to them.

7.4.8 Analogies

A strategy that is closely related to constructivism (cf. 7.3.2) because of its emphasis on building on existing background knowledge, is analogy.

Analogies are employed to help students form the mental connections between familiar and new information. An analogy consists of a comparison and a contrast, for example, when explaining racquetball the game can be compared to tennis in the sense that a ball is hit with a paddle-like instrument. The contrast comes in when explaining that in tennis, the ball is hit over a net by two players, but in racquetball, both players hit the ball against a wall.

Concepts such as *word processing* and *spreadsheet* can be explained by the Computer Practice lecturer. A word processing program (e.g. MS Word) and a

spreadsheet (e.g. Excel) can be compared by pointing out that both are computer software that can help the student to manipulate, construct and create a text. They can be contrasted by explaining that the *word processing* program deals with written texts that can be adapted and manipulated until they suit the student's needs, whereas a *spreadsheet* involves numbers and formulae that can be manipulated to create tables and graphs.

Analogies are only effective if the lecturer is aware of some aspect of the student's schemata that is similar to the new concept (Rude & Oehlkers, 1984: 227). Very often lecturers are unable to use analogies effectively because they know too little about the students' backgrounds. When explaining concepts such as the ones mentioned in the previous paragraph, the Computer Practice teacher must be familiar with the students' level of computer-based knowledge. It must be kept in mind that most of these students have never worked on a computer before. Content knowledge alone is not enough when attempting to develop conceptual awareness.

7.4.9 Context-based strategies

When students read passages from their textbooks, they often do not know the meanings of all the words in the passages. They should be taught to guess the meanings of unfamiliar concepts by using the context and clues surrounding the words. Du Plooy (1995: 33) suggests that students should be trained to employ guessing strategies rather than dictionaries when they encounter unfamiliar words. Nagy (1989: 39) supports this view by stating that having students look up words in a dictionary is not especially effective at producing in-depth word knowledge. Students also tend to find it rather boring. However, the ability to use a dictionary properly is an important skill and should not be neglected by lecturers. Stoller and Grabe (1993: 38) state that providing students with simple definitions, synonyms, associations and glosses has a place in vocabulary teaching, particularly for low-frequency and less important words. Such exposure in L1

and L2 settings may provide a basis for more accurate and lasting knowledge when those concepts are later encountered in a series of contextual exposures (cf. Beck, et al., 1987; Carter, 1987; Nagy & Herman, 1987; Pressley et al., 1987).

Nagy (1989: 39) states that the lecturer should model for students how knowledge of contexts and word parts can help them deal with unfamiliar concepts that they encounter while reading. When encountering a concept such as *statement* in an Entrepreneurship text, the lecturer should first make sure that students realise that this concept differs from the meaning of the same concept in a Communication context. Before explaining the concept *statement* the lecturer can refer to how customers can be informed by a business about how much they owe. Explaining that the first part of the concept, namely *state*, refers to “outlining details” can help students to understand the entire concept better.

Nation and Coady (1988) and Nation (1990) argue that the primary strategy for dealing with low-frequency vocabulary should be to teach students how to guess words in context. Another possibility proposed by them is to use word part analysis. Finally, they also suggest that students look up the word in a dictionary and gloss it in the text or their notes. It is the lecturer’s responsibility to give students ample opportunity for guided practice in these strategies with realistic examples. To achieve a complete understanding of the concept *entrepreneur*, clue words and phrases such as *business*, *opportunity*, *risks*, *customer needs* and *profit* need to be discussed by the Entrepreneurship lecturer. If the student understands these concepts and is able to link them to the concept *entrepreneur*, then the limited view of an entrepreneur being someone who owns his own business will be eliminated.

Huckin and Bloch (1993: 172) state that clue-words seem to serve as a link between the target word, on the one hand, and various levels of representation, including syntax, text schemata, text representation, permanent memory, and word knowledge, on the other. Lecturers must also be aware that context can

sometimes give partial, misleading clues to the meaning of a new word. Thus, clear guidance on the part of the lecturer is necessary when employing this strategy.

7.4.10 Textbooks

Textbooks represent an economical means of conveying information, because they are less costly and time-consuming than many real-life experiences, experiments and audio-visual aids. Therefore, the choice of college textbooks is important. Books should contain terminology that is not too advanced and provide explanations that are not beyond their grasp. Very often, textbooks are written from a Western cultural perspective, and use examples that may be culture-strange to Black ESL students. Lecturers must therefore be able to adapt the learning material so that it makes sense to students who come from a disadvantaged background.

Rude and Oehlkers (1984: 226) point out that students whose comprehension skills are reasonably well-developed and who can relate to the author's vocabulary are inclined to learn from a text. If the lecturer guides the reading process carefully, asks appropriate questions and provides brief explanations, students are likely to understand the author's message and gain new conceptual knowledge.

Textbooks can be very helpful if students possess only limited background knowledge. However, if too great a disparity exists between the reader's schemata and the schemata that the writer has anticipated, reading alone may be insufficient. Guided reading and brief explanations may not be able to breach the gap. In such a situation, students may need considerable instruction and preparation before reading the text. However, students' backgrounds or schemata differ, and not all students will require the same instruction. Some students who

attended urban schools may be more familiar with certain concepts used in the textbook than their rural counterparts who attended rural or farm schools.

The lecturer should therefore approximate the students' level of understanding by asking questions and by recording their responses before indulging in textbook-bound instruction. Experience with a concept is a necessary condition to learning it, and students must be helped to examine their experiences through observation and language. Lecturers need to talk to students about their experiences. Concepts can be learned in a variety of ways, but the most general strategy is to try and relate the new concept to one which the student already knows in order to build on the experience (cf. 7.4.2).

In conceptual comprehension, important skills include reading for detail, making inferences (e.g. main idea, purpose setting, critical reading, creative reading and general inferencing) and using the context to determine the meaning of words. These skills cannot function without sufficient schemata or background knowledge (cf. 2.4). Lecturers must see to it that students acquire the appropriate vocabulary and concepts before, during and after the reading sessions. Comprehension requires students to ask appropriate questions. This relies on adequate background or prior knowledge. Huckin et al. (1993: 128) state that vocabulary learning from reading should be seen as a long-term process in which the reader moves through multiple encounters with a word towards more precise understanding of the concept that the specific word represents. If instruction and the learning process comply with these conditions, students should be able to comprehend texts presented to them and in the process extend their conceptual knowledge.

7.4.11 Instructional strategies proposed by CREDE

In chapter two, extensive reference was made to CREDE and their research regarding at-risk students (cf. 2.8). As part of their sheltered education projects, a

research and development programme was carried out in transitional bilingual education (TBE) programmes at five elementary schools in the Los Angeles area. The aim of this was to promote a successful transition of students whose English proficiency is limited to mainstream English instruction. In order to attain this goal, the researchers collaborated with teachers and project advisors to develop, implement and describe instructional strategies that would significantly improve the chances of these students to make a successful transition (CREDE, 1999). Because of the relevance of this research project to this study, the proposed strategies will now be briefly discussed.

CREDE has devised a language arts model as part of the transition programme. The model is divided into three main categories, namely, literature studies, skill building and other supporting components. Part of this model can be applied in Communication to help students to improve their English language proficiency and conceptual awareness. Literary texts do not form part of the Communication syllabus as such, but the Communication lecturer can also use non-literary reading material to help students to improve their conceptual awareness. For the purposes of this study, the focus will be on supporting components of CREDE's model, as these components emphasize the importance of reading as a means to improve conceptual awareness and overall English language proficiency.

The components that will be discussed include building students' background knowledge, drawing on their personal experience, promoting extended discourse through writing and discussion and assisting students in rereading critical portions of the text.

Practical examples will be provided to explain how these strategies can be implemented at a College by the Communication lecturer.

7.4.11.1 Other supporting components

Teacher ‘readalouds’ expose students to the language of expert writers and the fluency of an expert reader. It also engages them in reading material that they may not yet be able to read on their own. When reading for pleasure, students choose their own books and stories, keep records of their reading and complete short assignments, such as summaries, synopses, oral presentations and drawings (CREDE, 1999).

However, in the context of a college, the reading material used for teacher ‘readalouds’ and pleasure reading need not only be literature. Texts from relevant subject-related magazines, newspaper articles and even passages from the textbook can serve the same purpose. Taking an article on *shoplifting* from a magazine, a newspaper article on the condition of South Africa’s *economy* or even an article on *Entrepreneurship* from a magazine such as *Career Success*, can all serve to explain concepts.

A combination of instructional strategies is used by teachers in the transition programme to help students improve their English language skills and master the academic content of the literature. Four strategies that have proved fundamental to the success of literature study with these students are briefly discussed below. It must be kept in mind though, that these strategies can also be applied to the non-fictional types of text mentioned in the previous paragraph.

7.4.11.2 Building students’ background knowledge

Building students’ background knowledge enables students to better comprehend the vocabulary, concepts, content and themes of the story (CREDE, 1999). Background knowledge can be built by assigning supplementary reading and group presentations on specific aspects, themes or concepts. Even video footage can be used to elaborate on a concept or theme. Recording relevant footage from

actuality TV programmes such as *Special Assignment* or *Carte Blanche* and discussing it with students before reading an article on the same topic can help them visualize otherwise abstract concepts such as *advantage* and *disadvantage*.

7.4.11.3 Drawing on students' personal experience

By relating parts of a text to students' personal experiences, students can connect more directly with the content and themes; for example, if they experience what the people in the newspaper or magazine article are experiencing, they may be motivated to continue reading.

Another example is to ask students whether they have ever worked with a fax machine or whether they have ever written and posted a letter to someone. Against this background the concept of e-mail can then be explained (cf. 7.4.2. & 7.4.4).

7.4.11.4 Promoting extended discourse through writing and discussion

The instructional conversation referred to in chapter two (cf. 2.8.5) can be used to grasp the students' communicative intent and to meet students' emerging understanding of the text. Students can also complete a variety of written assignments, for example, elaborating on an aspect of a text, for example discussing what motivates a specific person to act in a specific way to teach the concept *values*, or by discussing a politician's plan of action outlined in a newspaper during an election to achieve a goal to teach the concept *strategy*. Students can share their ideas with each other in small groups, which, in turn, will prompt further discussion, giving the students more language practice and helping them to generate more ideas.

7.4.11.5 Assisting students in re-reading critical portions of the text

When students encounter challenging parts in a text, they may need reading assistance from the lecturer or teacher. Lecturers can guide students by breaking the specific passage down into several key events, making it easier to understand. They can also help students to recount what has been said or what has happened in a story up to a cognitively challenging point (CREDE, 1999).

7.5 CONCLUSION

This chapter has focused on the general principles that need to be considered by lecturers when strategies to improve conceptual awareness among disadvantaged ESL students are implemented at a college. Practical examples have been supplied to explain how each suggested strategy can be applied at college level.

The strategies that have been discussed in this chapter include cross-curriculum teaching, rule-example and example-rule strategies, concept mapping, strategies based on constructivism, inquiry-based learning and authentic learning strategies. Some instructional strategies proposed by CREDE have also been discussed.

This chapter also focused on the role played by both teacher and student in the classroom when these strategies are applied as well as on the importance of linking new knowledge to existing background knowledge (schemata).

It is clear that improving the conceptual awareness of disadvantaged ESL college students will be time-consuming. Although the college lecturer should attempt to make learning effective by applying the above-mentioned strategies, it also remains the students' responsibility to expand their vocabularies on their own. If they are taught how to arrive at the meaning of a new word from the context in which it is used, how to use a dictionary properly and are exposed to new

concepts more than once in various subjects, students' conceptual awareness is likely to improve

CHAPTER EIGHT

CONCLUSION AND RECOMMENDATIONS FOR FURTHER RESEARCH

8.1 INTRODUCTION

To accomplish the aim of this study, a survey of the relevant study was done and empirical research was conducted. The literature study focused on the connection between language and learning, the importance of concepts in learning and the factors that influence conceptual awareness. The most important findings of the empirical study are presented in chapter seven. In conclusion to this study, relevant findings are summarized and recommendations for further study are made.

8.2 AIMS OF THE STUDY

The main aims of this study are to establish the role that concepts play in learning, and whether disadvantaged ESL students are able to define and make sentences with the central concepts of their academic texts. It is also an aim to suggest strategies to improve the conceptual awareness of the disadvantaged ESL students.

8.3 FINDINGS OF THE STUDY

8.3.1 Findings based on the literature study

One of the most important findings of the literature study is the role played by background knowledge. Schemata or background knowledge provides a sound basis for text interpretation (cf. 2.6). New concepts are compared to existing conceptual knowledge and are then fitted into the student's syntactic, cultural, linguistic and historical framework. If the student manages to make a link

between new and pre-existing knowledge, effective conceptual acquisition is attained (cf. 2.6.1). Multiple exposure to word meaning, experience with and explanations of concepts through language allow concepts to become familiar to the student (cf. 4.4).

Students' background knowledge is culture-specific and new concepts must be linked to their existing cultural experience if they are to be grasped fully. Students find it easier to relate to texts that are based on their own cultural experiences. If there is no knowledge database to link the new information to, the student will fail to incorporate new concepts into a personal framework (cf. 2.6.1 & 4.4).

Another important finding is the role played by the student's mother tongue (L1). Concept formation is dependent on the development of the student's mother tongue or first language. Well-established concepts in the L1 form a sound basis for acquisition of new information in the second language (L2) (cf. 3.4.3). At tertiary level, disadvantaged ESL students are often confronted with scientific, commercial and technological concepts which do not exist in their mother tongue. African languages and English show little resemblance regarding visual and orthographic characteristics. However, if the disadvantaged student's English language proficiency is adequate, he will have better control over word recognition and his chances of generating knowledge from prescribed texts will be better (cf. 2.2).

The study also emphasized the importance of contextual factors such as socio-economic deprivation, educational background, exposure to English reading material and electronic media as well as exposure to spoken English and English as medium of instruction at secondary schools. Personal factors such as background knowledge, language proficiency, cultural orientation, age and motivation were also considered. All of these factors may negatively influence conceptual awareness.

Because academic success is largely measured by proficiency in cognitive skills, reading skills and conceptual knowledge, these aspects must be taken into consideration when deciding on strategies to improve the conceptual awareness of students. Cognitive skills which must be developed include selection of information, association of this information with other data, elaboration of the new information in thought, storage of the new information in memory and retrieval of relevant information (cf. 2.3). Reading skills that must be developed include scanning, selective reading, questioning and evaluating the validity of what was read and monitoring comprehension by integrating background knowledge into the text in order to make sense of it. However, this study is only concerned with conceptual knowledge and therefore the strategies that were identified focused on the improvement of conceptual comprehension. Conceptual knowledge can be developed by determining the student's previous experience with the concept, examining his experience with it and by connecting the new concepts to previously existing concepts. Students must also be made aware that words have different meanings in different contexts (cf. 3.4.2).

8.3.2 Findings of the empirical study

It seems that the conceptual awareness of the Introductory students at Rustenburg College is limited if the low scores obtained for both tests in all three subjects are considered. A lack of conceptual knowledge within the context of a specific subject was a major problem. Another problem that surfaced was students' inability to define concepts in their own words. Students tended to interpret concepts against their own frame of reference, regardless of the context in which it appeared. Concepts that related to practical hands-on experience were generally better understood than the more abstract concepts.

In order to address these problems, certain strategies that could be implemented by the College lecturer were suggested.

8.4 GUIDELINES TO IMPROVE CONCEPTUAL AWARENESS

As indicated above, it was found that the conceptual awareness of the disadvantaged ESL students at Rustenburg College is insufficient, but that lecturers could implement certain strategies in an attempt to address the problem.

Cross-curriculum teaching, which implies that teachers from different subjects work together and integrate concepts and knowledge from various subject fields, may lead students to an understanding and sensible application of these concepts (cf. 7.4.1).

Because schemata or background knowledge is an inseparable part of developing sound conceptual awareness, college lecturers should be aware of the level of background knowledge that their students possess before simply assuming that they know the meaning of a concept. Strategies based on constructivism encourage students to engage in active experimenting with concepts so that new knowledge is added to existing knowledge. These strategies acknowledge the student as an individual with specific needs, knowledge and strengths which need to be developed (cf. 7.4.2). Closely related to these strategies is the use of analogies, i.e. comparison and contrast, to allow students to make mental connections between existing and new knowledge (cf. 7.4.9).

Other strategies which have also been suggested to improve the disadvantaged ESL student's conceptual awareness were the rule-example and example-rule strategies, concept mapping (which emphasizes the importance of visual elements), authentic learning (which focuses on experimenting with real-world problems) and inquiry-based learning which is learner-centred (cf. 7.4.2 – 7.4.7).

Instructional strategies proposed by CREDE (1999), which could also be implemented at a College have also been considered (cf. 7.4.11).

Students should also be taught reading strategies such as guessing the meaning of concepts from context to help them improve their conceptual awareness (cf. 7.4.11). The role of textbook books and reading has been highlighted to stress the importance of these in the learning process (cf. 7.4.10).

Finally, a few possibilities for further research have emerged from the study. They are mentioned below.

8.5 RECOMMENDATIONS FOR FURTHER RESEARCH

A problem area that needs to be investigated is the direct correlation between the disadvantaged ESL student's limited level of conceptual knowledge and background factors that can influence their conceptual comprehension. The students who have taken part in this study have all passed English, either as First or as Second Language in Grade 12. The majority have passed subjects such as Business Economics, Economics and Accounting. Most of them have been exposed to English reading material and spoken English and they have access to electronic media such as television, radio and the Internet. Yet, they experience difficulty with concepts in various subject-fields and their conceptual knowledge proves to be limited.

The college lecturer's teaching methods, styles and strategies on the learning of concepts in the classroom and how these affect the academic achievement of the disadvantaged ESL student is also worth investigating. The success of the implementation of strategies such as the ones proposed in this study should be investigated.

8.6 CONCLUSION

All potential tertiary students should be equipped to deal successfully with their studies. The ultimate solution may lie in adopting the mother tongue (L1) as

medium of instruction in secondary and tertiary education. Research in countries such as Quebec, the Netherlands, Belgium and Germany has indicated that mother tongue instruction sustained over a very long period is much more successful than second language instruction (Mondstuk, 2002: 4). Research has also shown that mother tongue tuition is essential up to the point where the child's conceptual knowledge is firmly established (Mondstuk, 2002: 4). Changing to English as medium of instruction in Grade 5 may be far too early. In the mean time, the use of English as medium of instruction should be supplemented by a conscious effort to improve students' awareness and knowledge of concepts that play a central role in their academic success.

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APPENDIX A

A SURVEY OF CROSS-CURRICULAR CONCEPTUAL AWARENESS

Dear Student

THANK YOU FOR PARTICIPATING IN THIS SURVEY AND ASSISTING US WITH THIS RESEARCH. PLEASE ANSWER ALL QUESTIONS.

Before you start please keep the following in mind:

PLEASE BE HONEST WHEN WRITING DOWN YOUR ANSWERS

- You stay anonymous. Please do not fill in your name anywhere.
- Do not skip any questions.
- Please note that **no dictionaries** may be used to answer any of the questions.
- Please write legibly and neatly and follow all instructions closely.

Yours sincerely

Ms M Viljoen

SECTION A PERSONAL INFORMATION

Make a cross in the appropriate block or give a short answer in the space provided.

EXAMPLE			
QUESTION 1			
How old are you? (In complete years)	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 30px; text-align: center;">3</td> <td style="width: 30px; text-align: center;">5</td> </tr> </table>	3	5
3	5		

1. How old are you? (In complete years)

--	--

2. Which high school did you attend?

3. Where is the school situated?

Urban area	
Semi-urban area	
Rural area	

4. In which year did you matriculate?

5. What symbol or mark did you get for English in Grade 12?

6. Which of the following subjects did you pass in Grade 12? Also indicate whether you took the subjects on Higher Grade or Standard Grade. Please mark your choices with an **X**.

SUBJECT	MARK WITH X	HG	SG
English First Language			
English Second Language			
Economics			
Business Economics			
Accounting			
Computer Studies			

7. Which of these subjects you have marked in **Question 6** were taught to you through English as medium of instruction? Mark your choices with an **X**.

SUBJECT	MARK WITH X
English First Language	
English Second Language	
Economics	
Business Economics	
Accounting	
Computer Studies	

8. Please indicate the course that you are doing at the College now:

COURSE	
Human Resource Management	
Management Assistant	
Marketing Management	
Business Management	

9. To which cultural group do you belong?

CULTURAL GROUP	
Setswana	
Zulu	
Afrikaans	
English	
Northern Sotho	
Southern Sotho	
Xhosa	
Other (Specify)	

10. What is your mother tongue? (Only mark one option)

Afrikaans	
English	
Ndebele	
Northern Sotho	
Southern Sotho	
Swati	
Tsonga	
Setswana	
Venda	
Xhosa	
Venda	
Other (Specify)	

11. Which other language (apart from your mother tongue) is mostly spoken in the area where you live?

12. Have you attended any other tertiary institution besides Rustenburg College?

yes	no
-----	----

13. If your answer is **YES** in question 8, please specify the name of the institution.

SECTION B
CONCEPTUAL AWARENESS

INSTRUCTIONS:

Carefully read the following questions before attempting to answer them.

Answer only what is required.

All questions are compulsory.

Do not leave any of the questions out. Try to answer all of them.

Thank you for your participation.

QUESTION 1
INTRODUCTORY COMMUNICATION

1.1 USE THE FOLLOWING WORDS OR PHRASES IN SENTENCES OF YOUR OWN SO THAT THE MEANING BECOMES CLEAR:

1.1.1 Communication

1.1.2 time-management

1.1.3 constructive activities

1.1.4 concise

1.1.5 emphasize

1.1.6 strategy

1.1.7 memorandum

1.1.8 notice

1.1.9 minutes

1.1.10 conference

1.1.11 verbal

1.1.12 values

QUESTION 2
INTRODUCTORY COMPUTER PRACTICE

2. USE THE FOLLOWING WORDS OR PHRASES IN SENTENCES OF YOUR OWN SO THAT THE MEANING BECOMES CLEAR. PLEASE NOTE THAT THE WORDS MUST BE INTERPRETED WITHIN THE RIGHT CONTEXT.

2.1 Edit

2.2 Insert

2.3 Format

2.4 View

2.5 File

2.6 Toolbar

2.7 Icon

2.8 Delete

2.9 Italics

2.10 Database

2.11 Mouse

2.12 Stiffy

2.13 Virus

2.14 Hardware

2.15 Software

2.16 Spreadsheet

2.17 Word Processing

2.18 Advantage

2.19 Disadvantage

2.20 E-mail

QUESTION 3
INTRODUCTORY ENTREPRENEURSHIP

- 3 USE THE FOLLOWING WORDS OR PHRASES IN SENTENCES OF YOUR OWN SO THAT THE MEANING BECOMES CLEAR. PLEASE REMEMBER THAT THE WORDS MUST BE USED WITHIN THE CONTEXT OF THE SUBJECT *ENTREPRENEURSHIP*.**

3.1 Entrepreneur

3.2 Economy

3.3 Cash flow

3.4 Capital

3.5 Interest

3.6 Corporation

3.7 Infrastructure

3.8 Balance sheet

3.9 VAT

3.10 Retailer

3.11 Brand

3.12 Shoplifting

3.13 Budget

3.14 Insurance

3.15 Security

3.16 Cheque

3.17 Traveller's cheque

3.18 Invoice

3.19 Statement

3.20 Insolvent

SECTION C
CONCEPTUAL AWARENESS

QUESTION 1
INTRODUCTORY COMMUNICATION

1. EXPLAIN THE MEANING OF THE FOLLOWING TERMS IN YOUR OWN WORDS:

1.1 Notice

1.2 Strategy

1.3 Conference

1.4 Communication

1.5 Emphasize

1.6 Concise

1.7 Memorandum

1.8 Time-management

1.9 Verbal

1.10 Constructive Activities

1.11 Values

1.12 Minutes

QUESTION 2
INTRODUCTORY COMPUTER PRACTICE

2. **EXPLAIN THE MEANING OF THE FOLLOWING WORDS WITHIN THE CONTEXT OF THE SUBJECT *COMPUTER PRACTICE*. USE YOUR OWN WORDS.**

2.1 Stiffy

2.2 Icon

2.3 Edit

2.4 Toolbar

2.5 Virus

2.6 Hardware

2.7 Insert

2.8 File

2.9 Delete

2.10 Mouse

2.11 Advantage

2.12 Software

2.13 Format

2.14 Italics

2.15 Disadvantage

2.16 View

2.17 Database

2.18 E-mail

2.19 Word Processing

2.20 Spreadsheet

QUESTION 3
INTRODUCTORY ENTREPRENEURSHIP

- 3. EXPLAIN THE MEANING OF THE FOLLOWING WORDS WITHIN THE CONTEXT OF THE SUBJECT *ENTREPRENEURSHIP*. USE YOUR OWN WORDS.**

3.1 Insolvent

3.2 Infrastructure

3.3 Retailer

3.4 Traveller's cheque

3.5 Cash flow

3.6 Economy

3.7 Balance sheet

3.8 Capital

3.9 Corporation

3.10 Shoplifting

3.11 Insurance

3.12 Cheque

3.13 Entrepreneur

3.14 Interest

3.15 VAT

3.16 Brand

3.17 Budget

3.18 Security

3.19 Statement

3.20 Invoice

SECTION D GENERAL QUESTIONS

1. Which of the terms listed below have you never heard of before? Indicate your choices by means of an X.

INTRODUCTORY COMMUNICATION	
Communication	
Time-management	
Constructive activities	
Concise	
Emphasize	
Strategy	
Memorandum	
Notice	
Verbal	
Values	
Conference	
Minutes	
INTRODUCTORY COMPUTER PRACTICE	
Edit	
Insert	
Format	
View	

File	
Toolbar	
Icon	
Delete	
Italics	
Database	
Mouse	
Stiffy	
Virus	
Advantage	
Disadvantage	
Spreadsheet	
Input device	
Word processing	
e-mail	
Software	
Hardware	
INTRODUCTORY ENTREPRENEURSHIP	
Entrepreneur	
Economy	
Insolvent	
Capital	
Interest	
Corporation	
Infrastructure	
Cash flow	
VAT	
Retailer	
Brand	
Shoplifting	
Budget	
Insurance	
Security	
Cheque	
Traveller's cheque	
Invoice	
Statement	
Balance sheet	

2. Do any of these words exist in your mother tongue?

Yes	No
-----	----

If your answer is **YES** indicate which of them you have words for in your mother tongue by ticking them off with an **X**.

INTRODUCTORY COMMUNICATION	
Communication	
Time-management	
Constructive activities	
Concise	
Emphasize	
Strategy	
Memorandum	
Notice	
Verbal	
Values	
Conference	
Minutes	
INTRODUCTORY COMPUTER PRACTICE	
Edit	
Insert	
Format	
View	
File	
Toolbar	
Icon	
Delete	
Italics	
Database	
Mouse	
Stiffy	
Virus	
Advantage	
Disadvantage	
Spreadsheet	
Input device	
Word processing	
e-mail	
Software	
Hardware	
INTRODUCTORY ENTREPRENEURSHIP	
Entrepreneur	
Economy	
Insolvent	
Capital	
Interest	
Corporation	
Infrastructure	
Cash flow	

VAT	
Retailer	
Brand	
Balance sheet	
Budget	
Insurance	
Security	
Cheque	
Traveller's cheque	
Invoice	
Statement	
Shoplifting	

3. Can you provide any other words or terms (apart from the ones mentioned above) from any of three the subjects, that are **totally new** to you?

Yes	No
-----	----

If your answer is **YES** write down the terms or words which you have never heard of before:

SECTION E BACKGROUND DETAILS

PLEASE ANSWER THE FOLLOWING QUESTIONS HONESTLY:

1. Do you have / Have you had any electricity at home?

Yes	No
-----	----

If your answer was **YES** in question 1, please state since when you have had electricity.

2. Do you have/ Have you had access to **English** books, magazines and newspapers at home?

Yes	No
-----	----

3. To which of the following electronic media do you have/ have you had access at home?

Indicate your options with an **X**.

Television	
Radio	
Internet	

4. To which of the following groups of people do/did you communicate in **ENGLISH** only? Indicate your options with an **X**.

Parents	
Secondary School Teachers	
College Lecturers	
Friends	
Relatives	
Other (specify)	

5. Why did you decide to take the course that you are now studying at the College? Tick **only the reason**, that you consider to be the **most important**.

Many job opportunities	
It is my main interest	
I was influenced by my friends and/or parents	
I was influenced by media, e.g, TV, radio, newspapers and magazines	
Other reason (specify)	

THANK YOU FOR YOUR TIME

APPENDIX B

MARKSHEET

QUESTION 1 & 2: INTRODUCTORY COMMUNICATION

CONCEPT	MARKER A		MARKER B	
Communication				
Time-management				
Constructive activities				
Concise				
Emphasize				
Strategy				
Memorandum				
Notice				
Minutes				
Conference				
Verbal				
Values				

QUESTION 1& 2: INTRODUCTORY COMPUTER PRACTICE

CONCEPT	MARKER A		MARKER B	
Edit				
Insert				
Format				
View				
File				
Toolbar				
Icon				
Delete				
Italics				
Database				
Mouse				
Stiffy				
Virus				
Hardware				
Software				
Spreadsheet				
Word processing				
Advantage				
Disadvantage				
e-mail				

QUESTION 1 & 2: INTRODUCTORY ENTREPRENEURSHIP

CONCEPT	MARKER A		MARKER B	
Entrepreneur				
Economy				
Cash flow				
Capital				
Interest				
Corporation				
Infrastructure				
Balance sheet				
VAT				
Retailer				
Brand				
Shoplifting				
Budget				
Insurance				
Security				
Cheque				
Traveller's cheque				
Invoice				
Statement				
Insolvent				