CURRICULUM AND SOCIETY: 
AN EMPLOYERS' PERSPECTIVE

by

JOYCE BERLINA SEKELEKO

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SUPERVISOR: DR H C GEYSER
CO-SUPERVISOR: PROF J STRAUSS

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Suid-Afrika is tans in 'n oorgangstydperk wat gekenmerk word aan transformasie op die gebied van die ekonomie, politiek sowel as onderwys en opleiding. Transformasie behoort gerig te word op die gemeenskap se visie van lewenslange onderwys en opleiding. Die strewe na 'n relevante kurrikulum in die senior sekondêre fase het aanleiding gegee tot die empiriese ondersoek na werkgewers se persepsies van gemeenskapbehoeftes in die Gauteng provinsie. Die hoofdoel met hierdie ondersoek is om riglyne op te stel vir die ontwerp van 'n relevante kurrikulum vir senior sekondêre skole.

Hierdie empiriese studie ressoteer binne die kwalitatiewe navorsingsparadigma. Die fokusgroeponderhoude is met werkgewers in die Gauteng provinsie uitgevoer om data te versamel. 'n Literatuurstudie van relevante literatuur oor kurrikulumontwerp ten opsigte van kurrikulummodelle is gedoen.

Data wat versamel is, is geanaliseer deur middel van protokol en die werkgewers het die volgende behoeftes uitgelig:

- Sedeleer of sedelike gedrag behoort ontwikkel te word sodat tussen goeie en slegte gedrag in senior sekondêre skole onderskei kan word.

- Globale kompetisie en wedywering in die onderwys sal die leerlinge voorberei om suksesvol deel te neem in die internasionale ekonomie en produksie.

- Beroepsvoortligting behoort aangebied te word om skoolverlaters voor te berei om sinvolle loopbaankeuses te maak op dié gebiede, van veral wetenskap, wiskunde, handelsverkeer en die gebruik van tegnologie.
Veiligheid en emosionele sekuriteit in die onderwys is van belang ten einde die gemeenskap se belange te beskerm en dat leerlinge verantwoordelikheid kan leer sonder ontwriging.

Kuns, sport en ontspanning in senior sekondêre skole behoort by te dra tot leerlinge se gebalanceerde ontwikkeling.

Aanbevelings in die vorm van riglyne is saamgestel uit die werkgewers se geïdentifiseerde persepsies oor gemeenskapsbehoeftes.
CHAPTER 1

STATEMENT OF THE PROBLEM, AIM AND METHODOLOGY

1.1 ORIENTATION

The previous South African education system promoted racial, cultural, economic, political and gender inequalities. The existence of racially exclusive departments, provinces, homelands and self-governing territories resulted in the fragmentation of the education systems into nineteen different departments. Such a fragmented management structure prevented the implementation of a single national policy on any matter pertaining to education. The Department of National Education merely acted as an umbrella department for general policy.

The new democratic South Africa, which came into being in April 1994, challenged the previous dispensation (which had denied many people the right to education and the proper conditions for teaching and learning), by introducing the Reconstruction and Development Programme (RDP). This was aimed at meeting the necessary moral, social, political, economic and educational demands. The need for transformation in education stems from the above-mentioned factors of the past. This state of fragmentation, therefore, necessitates a curriculum change for all schools in the country.

According to Ornstein and Hunkins (1993 : 54-55) reconstructionism is "...a crisis philosophy appropriate for a society in crisis which is the essence of our society and international society today". As society is always changing, the curriculum has to change, the ideal being a curriculum based on social issues and social services. The emphasis on society-centred education, taking into consideration the needs of society and learners, is seen as being ideal and necessary. The need
for reconstruction in education has led to the introduction of a new curriculum in 1995 which has promotion of both technical quality and human ideals.

However, it is not clear whether the new 1995 curriculum was designed according to the needs of society as perceived by the parties involved in education. A systematic situation analysis is needed.

In this study the researcher will focus on only one aspect of this situation analysis in order to address part of the problem in the present education dispensation. The researcher intends undertaking a limited situation-analysis aimed at formulating guidelines on how to design a relevant curriculum for the senior secondary phase, with special reference to the needs of society as perceived by employers in the Gauteng province.

1.2 STATEMENT OF THE PROBLEM

There is a need for the formulation of guidelines for a relevant curriculum design for senior secondary phase, based on the needs of the society. In this study, the focus is on the needs of society as perceived by employers in the Gauteng province. This gives rise to the following questions:

* What are the needs of society as perceived by employers in the Gauteng province?

* How can these needs be addressed in guidelines for a relevant curriculum design for the senior secondary phase?
1.3 RESEARCH AIMS

The aims of this research are:

- to identify the needs of the society as perceived by Gauteng employers through focus group interviews.
- to formulate guidelines for a relevant curriculum design for the senior secondary phase that would address the needs of society as perceived by the employers in the Gauteng province.

A brief description of the relevant research methodology is provided underneath.

1.4 THE RESEARCH METHODOLOGY

In identifying the needs of the society, as perceived by the employers in Gauteng province, a descriptive exploratory and a qualitative study, contextual in nature, will be conducted.

1.4.1 Research design and development

An exploratory study will be undertaken in order to gain a perspective on the societal needs as perceived by employers in Gauteng. According to Mouton and Marais (1990: 45) a goal to pursue in exploratory study is the exploration of an unknown research area in order to gain new insight into the relevant phenomena. Such a study will lead to insights and comprehension, while involving the use of in-depth focus group interviewing.
The researcher will use a descriptive method of data collection to draw out the respondents' personal experiences and viewpoints. This will entail a description and an analysis of the interview material.

Mouton and Marais (1990 : 50) also state that a study having contextual interest is bound to the unique context of the domain phenomenon. By means of the identified societal needs as perceived by employers in Gauteng, the researcher will be able to formulate guidelines on how a new relevant curriculum, for the senior secondary phase, can be designed.

The sequence of the research study will be discussed as follows:

Chapter 1: An orientation, serving as an introduction of the study in which the identification of the stated problem, the setting of the aim of the study, a brief description of the research methodology, a clarification of concepts and a synopsis will be dealt with.

Chapter 2: A literature study of recent and relevant literature on research paradigms, qualitative and quantitative, will be undertaken in order to select a suitable research paradigm for data collection. Methods of data analysis and interpretation will also be discussed.

Chapter 3: The researcher will interview groups of employers in order to identify the perceived needs of the society in Gauteng. This research technique will be used to obtain data which will be analysed and interpreted to form categories of information from the findings.

Chapter 4: The descriptive aspect of the research will take the form of a literature study. Literature review of recent and relevant literature
and journals on curriculum design will be done in order to obtain theoretical information for the foundation of the study, in order to give recommendations for the formulation of guidelines.

Chapter 5: The researcher will integrate the theoretical guidelines in Chapter 4 together with the report findings in Chapter 3, in order to formulate guidelines for a relevant curriculum for the senior secondary phase. The researcher will conclude by making recommendations from the report findings.

The concepts related to the research will be defined underneath.

1.5 CLARIFICATION OF CONCEPTS

The specific terms relevant to the research are the curriculum and the employer, and will be defined accordingly:

1.5.1 Curriculum

A preliminary definition of curriculum is given below: The researcher will further define what the term "curriculum" means in chapter 4.

Carl (1995: 32) describes the nebulous concept "curriculum" as "...a broad concept which includes all planned activities and thus also subject courses which take place during a normal school day. It also includes after-school planned activities such as societies and sport. This takes place within a specific system. It is continuously subjected to evaluation and aims to lead and accompany the child to adulthood, so that he can be a useful citizen within the community."
Krüger (1980:19) also defines the term curriculum as "...geselekteerde en geordende onderriginhoude wat 'n program vir die onderrig daarstel waarin daar 'n funksionele samehang tussen situasie-analise-gdoelstelling, beplande leerervaring, aktualiseringsgeleenthede en evaluering aan te wys is...". Krüger's definition clearly reflects the Krüger model of curriculum design which includes the most important initial phase, namely situation-analysis, an ideal springboard for the researcher in identifying the society's perceived needs through focus group interviews.

1.5.2 Employer

The term "employer" is a noun derived from the verb "employ" which according to Hornby et al., (1974 : 282) means to give work to someone, usually for payment. In this study the Gauteng employers employ senior secondary school leavers to earn a living in the labour market sector.

1.6 SUMMARY

In Chapter 1, an orientation to the research project is given by outlining the problem to be investigated and formulating the aim of the research. The focus of the research study is stated as the formulation of guidelines for the senior secondary curriculum, based on the needs of society as perceived by employers in the Gauteng province. A theoretical explanation of the research design includes details with regard to the literature and the qualitative research studies. Clarification of concepts used within the context of the study concludes the introductory chapter.
CHAPTER 2

RESEARCH DESIGN

2.1 AIM OF THE CHAPTER

The aim of this chapter is to highlight the qualitative research paradigm, by comparing this to the quantitative research paradigm, in order to explain why the qualitative research method has been chosen instead of the quantitative research method. Focus group interviews as a qualitative research method to be used in data-collection, will be explained, as well as their validity and reliability. A protocol for data analysis will accordingly be formulated.

2.2 RESEARCH PARADIGMS

Guy et al., (1987:452) defines a paradigm as "...a pattern of beliefs, values, techniques and theories shared by members of a specific community as a fundamental image of subject matter within a science".

The researcher will discuss the qualitative and quantitative research paradigms in relation to their advantages and disadvantages. In so doing the researcher will attempt to demonstrate why the qualitative research paradigm is preferred instead of the quantitative research paradigm.

2.3 COMPARISON BETWEEN QUALITATIVE AND QUANTITATIVE RESEARCH

Scholars are of the opinion that qualitative research, when compared to quantitative research, can be distinguished by the inherent characteristics in its
design as follows:

Qualitative research refers to the research that depends on direct observation descriptive analysis of social interaction and outcome in specific social setting, sometimes relying on intuitive skills of the researcher (Guy et al., 1987: 452).

According to Rudestam and Newton (1992: 31), qualitative research implies that the data is in the form of words, as opposed to numbers, whereas quantitative data are generally evaluated using descriptive and inferential statistics. Qualitative data, however, are reduced to themes or categories and thus evaluated subjectively. Since the researcher intends studying the needs of society (lived, undergone or felt) as perceived by employers in Gauteng, the researcher has decided to use focus group interviews expressed in the form of words. The researcher will reduce the collected data to themes or categories and this will be evaluated subjectively. This qualitative research paradigm will be more likely to address and meet the needs of society, as perceived by employers, that can be addressed in the senior secondary schools in Gauteng.

In qualitative research, the researcher tends to become involved with the phenomenon, while the quantitative researcher adopts a more distant approach. A qualitative researcher is at times prepared to be part of that which is being studied (Mouton & Marais, 1990:163).

Mouton and Marais (1990: 163) further indicate that quantitative researchers tend to study a phenomenon as outsiders. They assume that if they are to become too involved with the "object" that is being studied, they would view the phenomenon from an excessively egocentric point of view. In contrast to the activities of the participant observer in the qualitative research field, the
quantitative researcher would rather make use of structured, objective and standardized observation techniques.

According to Cresswell (1994:162) qualitative research occurs in natural settings, where human behaviour and events normally occur. The focus of qualitative research is on participants, in this research, the Gauteng employers' perceptions. The researcher is therefore interested in understanding the needs of society as perceived by employers in the Gauteng province. In essence he or she wants to understand how phenomena occur and how meanings and interpretations are negotiated with human data sources because it is the subject's realities that the researcher tries to reconstruct.

This leads to a discussion of the advantages of qualitative research as a method to be used in finding answers to the problems in this study.

2.3.1 ADVANTAGES OF QUALITATIVE RESEARCH

According to Rudestam and Newton (1992:39) qualitative study emphasises the thick description, which is data in the form of words of a relatively small number of subjects. In this study these subjects are the employers within the context of a specific setting (Gauteng). Smaller, purposeful samples of employers in Gauteng can be more cost-effective, since, in this context, they are manageable and affordable.

Qualitative research methods will promote studies that will allow researchers to be more spontaneous and flexible in exploring phenomena in their natural environment (Rudestam & Newton, 1992:29). The focus of qualitative research will be on the participants i.e. the employers' perceptions and experiences.
including the relevance of these perceptions and experiences to their lives.

The qualitative research method advocates an approach to examining the empirical world, which requires the researcher to interpret the real world from the perspective of the subjects of his or her investigation. Krueger (1988: 18) states that qualitative methods seek to understand phenomena in their entirety, in order to develop a complete understanding of a person, program or situation (i.e. the whole is greater than the sum of its parts).

According to Wiersma (1991: 14) qualitative researchers emphasize a holistic interpretation. They perceive facts and values as inextricably interconnected. Because of the problem the researcher addresses, the obtained qualitative data, i.e the employers' perceptions, will be reduced to themes and categories which link them.

The intent of this study, using a qualitative approach, is to understand the needs of society (as perceived by employers in Gauteng) by producing or developing generalisations that will contribute to the theory and enable the researcher to predict, and explain these phenomena better.

The researcher will pay special attention to the focus group interviews as a specific method of research to be applied in this research for the collection of data which its validity and reliability will be addressed.

2.4. VALIDITY

Validity is an effective strategy which a researcher can use to establish the credibility of the data drawn from focus group interviews. Hammersley
(Silverman, 1994:149), interprets validity as the extent to which an account accurately represents the social phenomena to which it refers.

Qualitative research is therefore the culmination of the validity scaffolding process according to Henning as quoted by Gassiep (1994: 25). The validity of research is important because it involves the interpretation of the research results with confidence and the generalisability of the results. Validity testing will be accomplished by comparing the research results by means of a literature study.

When undertaking qualitative research, the researcher is primarily concerned with both infernal and external validity (Rudestam & Newton, 1992:39)

2.4.1 Internal validity

Internal validity refers to the validity of a causal inference. In naturalistic inquiry, credibility or truth values ascertained through structural corroboration (Rudestam & Newton, 1992:39)

For the purpose of this study, member checking will be used to ensure validity. In member checking the informants or respondents will serve as a check throughout the analytical process. An ongoing dialogue regarding the researcher’s interpretations of the informants’ reality and meanings will ensure the truthful value of the collected data.

2.4.2 External validity

External validity refers to the generalisability of the study’s findings (Rudestam & Newton, 1992:39)
According to Cresswell (1994:169) the primary strategy that should be utilised in this type of study, to ensure external validity, is the provision of rich, thick, detailed descriptions, so that anyone interested in transferability will be provided with a solid framework for comparison.

For the purpose of this study the researcher will use interviews as a means of collecting data. Validity is the effective strategy that will be used to establish the credibility of interview data, it is also a critical factor in ensuring an accurate representation of subjective human needs. Validity will also depend on a thorough examination of the relevant literature. Findings in this research study will be compared with other research conducted, so as to strengthen their validity.

2.5. RELIABILITY

According to Guy, et al., (1987: 23) reliability in social research depends on whether a piece of research can be replicated, i.e. whether a different investigator could achieve the same results using the same methods. In the social sciences, reliability is earnestly sought, after, but is not very often achieved, since very few pieces of research are replicated.

Hammersley in Silverman (1994 : 145) defines reliability as "...the degree of consistency with which instances are assigned to the same category by different observers or by the same observers on different occasions. To test the reliability, the transcribed interviews should be coded by an additional coder (Henning, 1993 : 116)."
It is evident that absolute validity and reliability in any research study are impossible to attain, regardless of the type, yet researchers, are able to establish an acceptable level of reliability and validity by maintaining a careful balance of the variable and effect operating in the research context (Guy et al., 1987: 23).

In this research the first reliability check will be verified when the researcher returns the transcripts back to the respondents. Agreement would be reached on the transcriptions after listening and reading. This is done to ascertain that there are no discrepancies between the respondents' contributions and the collected data. The second reliability check is achieved when the transcripts are given to the independent decoder, this includes the protocol according to which she or he will work to identify the categories and sub-categories and themes.

2.6 DATA- COLLECTION METHODS IN QUALITATIVE RESEARCH

The different methods in the qualitative research paradigm will be discussed with the aim of choosing the best suitable method. From the discussion the researcher will identify the method to be used in formulating the guidelines for a relevant curriculum.

2.6.1 The interview as a research method

According to Bogdan and Biklen (1992: 96) an interview is a purposeful conversation, usually between two people (but sometimes involving more), i.e. directed by one party in order to get information from another.

In qualitative research, interviews may be used in two ways. They may be the dominant strategy for data collection, or they may be employed in conjunction
with participant observation, document analysis, or other techniques. In all of these situations, the interview is used to gather descriptive data in the subjects' own words for the researcher to develop insight into the way subjects interpret an aspect of the world.

Bogdan and Biklen (1992: 96) further explain that early in the interview, the subjects should be told what the purpose of the interview is, and that the content of the interview will be treated confidentially. When an interview guide is employed, qualitative interviews offer the subject a chance to shape the content of the interview.

The researcher would review the interview as a research method because it is an exceptional way in which interaction between an interviewer and respondents takes place. This method also provides immediate feedback and greater clarity.

2.6.3 The focus group interview

The focus group interview is the best qualitative research technique to use in identifying the needs of society as perceived by employers in Gauteng. In so doing, guidelines for a relevant curriculum design for senior secondary phase can be formulated.

Krueger (1994: 6) defines a focus group interview as "...a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment".
The Gauteng employers will be interviewed in this carefully planned fashion in order to obtain their perceptions in identifying the needs of society. Through the interaction of several participants the researcher will try to identify the perceived needs of society that can be addressed in formulating a senior secondary phase curriculum in Gauteng. In any qualitative research paradigm the first important task is to gather the necessary data in order to reveal unanticipated outcomes and generalization through the focus group interview. The advantages of the focus group interview will be dealt with next.

2.6.4 Advantages of focus group interviews

The researcher prefers focus group interviews as the best qualitative research method to gather data owing to the following advantages:

According to Krueger (1988: 34 - 36) as quoted by Kingry et al., (1990: 25), the focus group interview, as a social oriented research procedure, involves a homogenous group of people engaged in a social interaction. Its flexible format allows the researcher to discuss a wide variety of subjects in different settings of natural, real-life situations. For the purpose of this study the Gauteng employers are the homogenous group engaged in socio-economic activities.

The focus group sessions also have a high face validity. The technique is easily understood and the results seem believable to those using the information, because the results are presented in layman's terms embellished with quotations from group participants. The focus group discussion can be relatively low cost because the respondents (for example the employers) are not compelled to answer each question. Rather, their responses are spontaneous. The results of the interview are speedily obtained in that a number of individuals (employers)
are simultaneously interviewed. All the above-mentioned advantages of focus group interviews are applicable to this research study. The limitations of focus group interviews follows.

2.6.5 Limitations of Focus Group Interviews

Krueger (1988: 36) states that all techniques for gathering data have limitations. Focus group interviews are no exception. It is therefore important for the researcher to be aware of such limitations when the needs of society, as perceived by employers, are determined. Among the limitations are the following:

The researcher has less control in a focus group interview because group interaction provides a social environment, comments must therefore be interpreted within that context. The data produced from the interviews is also difficult to analyse. The familiarity in analysing data according to the protocol is of relevant importance to the researcher, because the intention of the researcher is to conduct focus group interviews. The technique requires carefully trained interviewers or skilled moderators in order to achieve the best results. The use of open-ended questioning, pauses and probes requires the expertise possessed by trained interviewers.

Focus groups are difficult to assemble, because participants take time to come to a designated place at a prescribed time so that they may share their perceptions with the others. It is therefore important for the researcher to make convenient arrangements to bring participants together. The focus group interviews should furthermore be conducted in non-threatening surroundings favouring conversation. Participation incentives may also be required.
2.6.6 Characteristics of focus group interviews

The advantages of the focus group interview serve as motivation for the researcher to choose it as a research technique for the identification of the needs of society as perceived by employers in Gauteng. The success of the focus group interview as a research method for collecting empirical qualitative data depends on the characteristics as stated by Folch-Lyon and Trost (1981: 44), and Kingry, et al. (1990: 124). In this study, the researcher therefore will consider these characteristics when conducting the focus group interviews.

2.6.6.1 Participants

The focus groups usually consist of four to twelve participants. Groups of this size, especially the smaller ones, allow all the individuals to have an opportunity to share insights, while still eliciting a range of responses. The larger groups, in turn, provide diversified perceptions.

The researcher will interview small groups of between four and twelve representative employers from government departments, financial institutions and private/corporate companies.

2.6.6.2 Environment and location

Folch-Lyon (1981: 447) recommends that focus group interviews be held in hotels, offices or clubs with meeting rooms to ensure privacy. Such a comfortable, non-threatening environment is vital for the participants. This environment allows them to feel free in a tolerant and permissive atmosphere, conducive to conversation. Suitable locations are meeting rooms with
comfortable chairs placed around a table, so that the participants may talk at each other informally.

2.6.6.3 Duration of the focus group interview

For the purpose of this study, the focus group interview sessions are timed to last from one to three hours.

2.6.6.4 Recording of interviews

The focus group interviews are all recorded on a high quality tape recorder after each session. The tape recorder should be strategically placed to effectively capture the dialogue between the participants and the researcher. It's presence and use is firstly indicative of the fact that respondents contributions are valuable, and secondly that it is impossible for the researcher to take down notes of everything that transpires from interviews, or indeed to remember all the different points of view discussed.

2.6.6.5 Moderator involvement

In this study the moderator and the researcher are one and the same person. The moderator is responsible for the development of questions, the control and facilitation of interview sessions as well as, documentation analysis and the interpretation of the results. The moderator introduces and directs the discussion of topics and encourages full participation in the conversation. This is to ensure that all topics of interest are discussed, under guidance, as the session proceeds.
2.6.6.6. Question development

Krueger (1994 : 53) maintains that questions are at the heart of the focus group interview, because quality answers are directly related to quality questions. It is therefore important that careful consideration be given in developing well-structured and sequenced questions based (on the purpose of the study) to elicit a wide range of responses (Kingry et al., 1990 : 124). The general introductory questions should allow the participation of all focus group members, whilst specific questions should focus on critical issues. According to Krueger (1994 : 69) open-ended questions allow the respondents to determine the nature of the answer. The use of leading questions, dichotomous questions as well as the so-called “why” questions should as be avoided as much as possible.

2.7 THE FOCUS GROUP INTERVIEW AS A DATA-GATHERING INSTRUMENT

2.7.1 Data collection

After literature review on the subject, the researcher felt that the focus group interview would be the successful method to use when interviewing the Gauteng employers on what the needs of society are and how they can be met and addressed through senior secondary school.

2.7.2 Participant selection

Employers, from different institutions, departments and companies in the Gauteng province, will be interviewed. Specifically, these are employers who are directly involved in the recruitment of school leavers.
In this study, four groups are suggested for the focus group interview. In most cases, new information usually comes up in the first two group discussions. The focus groups usually consist of four to twelve participants (Kingry et al, 1990 : 124). However, the number of participants depends on the number of respondents, i.e. those employers who respond positively when they are requested permission.

Four to twelve Gauteng employers will be invited for participation. The number of focus group interviews will depend on the amount of necessary information available to the researcher. The employers will be able to understand the research question fully and arrive at clear and relevant answers.

The researcher will serve as a facilitator during the focus group interview sessions in trying to encourage the employers to limit their responses towards the research question asked. Owing to the nature, structure and sequence of the focus group interview, quality answers will be directly related to questions asked in order to draw employers' responses. The research question for this study reads thus as: "What are the needs of society, as perceived by employers, that should be addressed in (high school) education?"

2.8 DATA ANALYSIS

Analysis and interpretation of the transcribed interview is done according to the methods prescribed by Kingry et al., (1990 : 125) and Folch-Lyon and Trost (1981 : 447-448):
The moderator who conducts the interview is also responsible for the processing of the data. The interviewer becomes the decoder and applies the following protocol for data analysis of focus group interviews:

### 2.8.1 Protocol for data-analysis

For the purpose of this study these are the steps to be followed by the researcher and independent decoder in analysing and interpreting data collected through interviewing groups of Gauteng employers about the perceived needs of society that can be addressed in education (Kingry et al., 1990 : 125 and Folch-Lyon and Trost 1981 : 447-448).

The decoder purposefully place aside all prior knowledge or preconceived ideas about the curriculum and learners, and focuses only on the answers obtained in the transcription.

**Step 1: Reading of transcriptions**

The researcher should read the transcription and place aside all prior knowledge about the curriculum, the learners and the subject matter, and focus only on the answers in the transcription and the research topic.

The recorded and transcribed perceptions of the Gauteng employers should be read and listened to in order to get a clear picture of their response.

**Step 2: Identification of relevant answers**

The transcriptions should be read for the second time. The researcher should
differentiate the relevant answers from the irrelevant answers provided by the employers during interviews. A list of key items, words, phrases, sentences and actual quotations reflecting the focus groups' sentiments should be made (see Addendum A).

**Step 3 : Formulation of categories**

Categories should be formulated. The appropriate ideas and quotes that best substantiate the categories should be placed under each one.

**Step 4 : Reliability check**

The researcher should take the interview transcripts to the respondents for verification. This will ensure the first reliability check. The respondents are in most cases very busy, and it is difficult to meet all of them. However, the researcher will meet the available ones who will then read the transcripts. They are thanked by the researcher for their co-operation.

**Step 5 : An independent decoder**

The transcriptions and the protocol should then be taken to an independent decoder for validity and reliability check. The independent decoder will analyse the data according to the protocol. The above-mentioned steps will be repeated, in order to determine whether he/she:

- agrees with the researcher's classification into categories, and
- also the kind of categories identified.
(The independent decoder's insight regarding the transcription will be validated by means of the quotations and all material that would be returned to the researcher). The researcher and the independent decoder will then meet to compare and discuss the analysed data in order to reach a consensus overview.

**Step 6**

The decoder will then write his/her own report on the findings and will put forward recommendations for addressing the problem or shortcomings.

**Step 7**

The relevant literature should be consulted at a library to note similarities and differences. For the purpose of this study a literature check is an essential tool in verifying the evidence of the identified needs of society as perceived by Gauteng employers both in South Africa and foreign countries as both, reliability and validity are tested.

**2.9 SUMMARY**

Because the study focuses on the needs of society (as perceived by Gauteng employers) that can be addressed in the senior secondary phase, the researcher prefers focus group interviews as a qualitative research method of data collection. Data collected will be analysed and interpreted in the next chapter.
3.1 AIM OF THE CHAPTER

The aim of this chapter is to report on the focus group interviews which were conducted by the researcher. The collected data will be organised and analysed.

3.2 BACKGROUND TO INTERVIEWS

3.2.1. Focus group interviews

Four focus group interviews were conducted in the Gauteng province with employers involved in recruiting matriculants. Although a need exists for research to be conducted in all South Africa's provinces, time and financial straints limited this study to the Gauteng province only.

3.2.2 The pilot interview

The researcher firstly tried to utilise the individual interviews as pilot interviews. Such an interview was conducted at the respondent's office at a government department. This was to ensure a non-threatening setting as well as relaxed atmosphere. Confidentiality of information was assured and the anonymity of the respondents was guaranteed. However, this type of interview failed and could not be considered correct because the respondent gave irrelevant answers.

(a) **Participants selection**: A tape recorded group discussion of about 2 to 3 participants was made during each interview. The researcher interviewed 4 groups of employers. The size of the groups allowed everyone to participate, while still eliciting a range of responses. Participation was free and democratic during the interviews. Telephonic requests to conduct focus group interviews at government departments, financial institutions, technical institution and civil services were made and permission was usually granted, but at times refused. Appointments were at times postponed due to unforeseen circumstances. Despite these setbacks, the researcher ultimately managed to interview employers in the Gauteng province.

(b) **Location**: The focus group interviews were conducted in the participants' offices. These non-threatening, comfortable settings influenced their participation. Tea or coffee was also served.

(c) **Recording of interviews**: The researcher used a high quality tape recorder during the interviews to capture the dialogue between the researcher and the participants. The tape recorder was placed in full view of the respondents. The use of the tape recorder was clearly explained to these participants to show that their contributions were regarded as being valuable and important. It was explained that it is important to record what transpired from each and every focus group interview, so as to avoid problems of forgetting what was discussed during the interviews.
At the beginning of each interview the participants were introduced to one another.

The purpose of the interview was explained and the researcher reiterated that the respondents would remain anonymous. Confidentiality was guaranteed to all participants.

(d) *Duration of focus group interviews*: The sessions of each focus group interview with employers lasted not longer than two hours. Length generally varied between half an hour to one hour.

(e) *Moderator involvement*: The researcher (also moderator) controlled and facilitated the interview sessions by encouraging the respondents to interact freely. The researcher used the probe technique to get additional information from the participants.

(f) *Data-analysis*: The interviews were based on the experience of the participants and their responses will be used to test the validity of the research. The recorded data, with the transcriptions, was taken back to the respondents. They agreed to the transcriptions after listening and reading them.

All these factors had to be maintained to ensure that there would be no discrepancies between the respondents contributions and the data collected by the researcher for this study. The focus group data was then carefully analysed and interpreted according to the protocol (see relevant answers in addendum A).
3.3 REPORT ON TAPED FOCUS GROUP INTERVIEWS

The transcription of focus group interviews and data-reduction leading to the summary of different focus-group interviews was done according to the protocol given in chapter 2, paragraph 2.8.1 of this study.

3.3.1 Protocol

Step 1: Reading of transcriptions

The researcher read the transcription and placed aside all prior knowledge about the curriculum, the learners and the subject matter, and focused only on the answers in the transcription and the research topic.

The recorded and transcribed perceptions of the Gauteng employers were read and listened to in order get a clear picture of their responses.

Step 2: Identification of relevant answers

The transcriptions were read for the second time. The researcher differentiated the relevant answers from the irrelevant answers provided by the employers during interviews. A list of key items, words, phrases, sentences and actual quotations reflecting the focus groups' sentiments was made (see Addendum A).

Step 3: Formulation of categories

Categories were formulated. The appropriate ideas and quotes that best substantiate the categories were placed under each one.
Step 4: Reliability check

The researcher took the interview transcripts to the respondents for verification. This ensured the first reliability check. The respondents were in most cases very busy, and it was difficult to meet all of them. However, the researcher met the available ones who then read the transcripts. They were thanked by the researcher for their co-operation.

Step 5: An independent decoder

The transcriptions and the protocol were then taken to an independent decoder for validity and reliability check. The independent decoder analysed the data according to the protocol. (The independent decoder's insight regarding the transcription is validated by means of the quotations and all material that was returned to the researcher). The researcher and the independent decoder met to compare and discuss the analysed data in order to reach a consensus overview. The identified categories were more or less the same, and the researcher settled for those that are discussed next.

3.3.2 Categories identified from focus group interviews

The following four identified categories, namely moral education, global competitiveness, occupational skills, and safety and security will be clearly defined. A few quotations from the focus group interviews will be provided under each category on a table form and a literature check will be done under each particular category to ensure reliability and validity (table, see Addendum A, page 103)
3.3.2.1  **Moral education**

According to Garforth (1985: 176) moral education consists of learning and learning to live with the morals of the particular society into which one is born. It is part of the process of initiation which every society must undertake. Kohlberg in Morrison, (1993 : 55) believes that morality is "basically a matter of good or bad, based on a system of punishments and rewards administered by adults in authority positions". The moral system consists of principles reflecting universal consideration and rights, and conforms to images constituting good behaviour in order to support and justify the order of society. The right action will be guided by the individual rights agreed on by all in society, both democratically and constitutionally. That much is seen as being right is also relative to personal values.

From the employers’ perspective it seems that morality, (i.e standards or principles of good behaviour) is lacking in the present education system. This is supported by the following quotations:

"Particularly in black schools, there does not seem to be any order".

"Things are going on in a chaotic fashion".

"Discipline must be there, everybody must be disciplined".

The employers feel that there is an urgent need for schooling to provide this essential training. Some of the information gathered from the interviews includes the following:

"Make sure that kids understand how classes work at school, how they are responsible in contributing towards their education and advancement in life."

"Let every person take charge of his/her life".

"Today, when children in senior secondary school phase mature, where
forces of corruption are powerful and insistent and where family life has
lost much of its educative influence, moral education must be offered".
The research of Morrison (1993 : 56) in United States and Doll (1992:177) in
London underline the fact that moral education is best conceived as a natural
process of dialogue in which the teacher and the curriculum are act as facilitators
by presenting challenging situations to the pupil.

3.3.2.2 **Global competitiveness**

The South African economy is faced with the challenge of integrating itself into
the competitive arena of international production and financial activities. From
the employers perspective, global competitiveness is an identified societal need
which is lacking, while the country is facing multiform and accelerating changes
in the areas of production, culture and communication. According to Hornby
(1975 : 371 & 173) the term "global" means world-wide while "competitiveness"
means that for which there is competition". The employers provided the
following information in relation to global competitiveness:

"Look at the world competitive report".

"We have to have skills to be able to be competitive in this world today: ...
life skills training, basic life skills, and actual things like assertiveness, life
skills functions".

"Life skills foundation is what they need in order to have a better picture
of global competitiveness".

As the country locates itself in the network of global exchanges and
interactions, the employers would like senior secondary education to
produce the skills and technological innovations necessary for successful
economic participation in the global market.
The application of new and relevant knowledge, information and culture increasingly occupying a borderless world with instantly advancing communication technology will transform the way in which society works, produces and consumes. This society must also educate a new generation with the requisite cultural values and communication competency to become South African citizens of an international and global community (Green Paper, 1996: 14). Ornstein and Hunkins in Boston and Morrison (1993: 397) also did research regarding this category in Florida (USA).

3.3.2.3 **Occupational skills**

(Career guidance, technology, science and commercial skills will be dealt with under the category occupational skills).

* Career guidance

Career guidance as defined by Morrison (1993: 402), is an effective guidance system which exposes youth to an adult who has the time and responsibility to provide advice on academic, personal, social and career matters. Vocational or career guidance is concerned with a students choice of a future career.

Career guidance and educational guidance are closely related, because guidance counsellors use the same methods in providing daily quality services necessary to the students. Through career guidance the students are assisted in understanding how jobs or occupations differ (World Book Encyclopaedia. Vol. 8, 1991: 446). The Gauteng employers highlighted the information as follows:

"The individual knows exactly what subjects to take to prepare himself or herself for that career ... and having guidance counsellors".

"Guidance is important to make a relevant choice of subjects ... properly
guided and harnessed".

They also indicated the importance of career guidance and training at junior phase. This is supported by the following quotations:

"We need to concentrate on the lower levels ... career guidance from a very early age ... to develop specific skills that has been identified to help a person achieve realistic job and career expectation".

"Curriculum at school is not career focused".

Brezinka (986: 141) also points out that the survival of a state depends to a large extent on the educational guidance that the young receive in order to serve their communities in future.

According to Strauss (1990: 68) South Africa cannot afford the luxury of a traditional academic approach if the final years at senior secondary phase are to be meaningful. Educators should rather start acknowledging that not all pupils are equally gifted in the same fields. Their needs also differ. To acknowledge this is to allow those pupils who are not academically inclined to excel in other fields. It must be accepted that these areas are as vital to the progress and prosperity of the country as are the academic ones. Dekker and Lemmer (1986: 14 - 15) in their research in Johannesburg have also identified this category. They have stated that occupational choices are made from primary school onwards and the school assists directly and indirectly in this process. In the process of guidance, schools may provide the student with specific information about occupations and guidance about occupational choice.

* Science

According to Hornby (1974: 775) science is knowledge arranged in an orderly manner, especially knowledge obtained by the observation and testing of facts. It is an exact discipline in which basic and applied research in the field of the
physical sciences can be conducted, such as organic, inorganic, physical or analytical chemistry, mechanics, electronics, nuclear physics, geophysics, geology, meteorology and astronomy (Department of Manpower, 1992: 17).

The information provided by the employers in relation to science is as follows:

"Hard sciences are the most important ones in order to make the country tick". "We want scientifically orientated people to drive the company towards attaining goals and objectives".

"We are talking about scientific inventions ... under supply of hard sciences".

"If you lay a foundation, start these youngsters with Maths, Science, Physics, Chemistry ..."

The employers want science to be offered in senior secondary phase in order to make the country develop.

The American Association for Advancement in the report called Project 2061: Science for All Americans, multi phase, long-term undertaking, designed to help reform science, technology and mathematics education in the United States of America highlighted its importance. This association's contribution towards science is marked: it clearly states that a scientifically literate person is one who is aware that science, technology and mathematics are interdependent human enterprises with their own strengths and limitations; this person is also one who understands key concepts and principles of science and who is familiar with the natural world and recognizes both its diversity and unity such a person also uses scientific knowledge and different ways of thinking for individual and social purposes (Morrison 1993: 297). From the employers perspective this is indeed what senior secondary education should offer in order to produce scientifically-orientated, literate people to drive a company towards attaining goals and objectives, and to make the country "tick".
* Technology

Technology is the application of scientific materials and human resources to the solution of human needs. It can be of benefit to people, as in modern medicine, where new life can be given to people through microsurgery and organ transplantation (Morrison 1993: 411). Williams, (1990) in the National Curriculum Report: Science for ages 5-116, also defines technology as "...a creative human activity which brings about change through design and application of knowledge and resources". Some of the employers' contribution emphasising the need of technology to be taught at senior secondary schools, are:

"We need to have technologically active, technologically literate students coming out of a school situation ... conversant with Maths .. preferably computer literate at this stage".

"We need technologically orientated people ... scientifically orientated to drive the company towards attaining its goals and objectives".

According to Norton (in Educational Technology, 1992: 35-43) technology can make education more productive, more individual and powerful, make learning more immediate, give instruction a more scientific base and make access to education more equal. Each technology carries with it implications that shape the activities humans engage in when they put technology to use, for example, the use of computers to engage in human intellectual activities. Any technology that is used to structure processes and communicate knowledge must be understood as a discourse form, with the potential to affect what we know and how we know it. Morrison (1993) in Florida, Williams, (1990) in New York and Norton in New Mexico have also contributed towards the category technology in their different studies.
* Technical schools

According to Hornby (974: 904) the term "technical", as derived from the term "technique", is concerned with the mechanical or industrial skill in arts, or with methods used at institutions by experts and artists (that is, technicians who are highly skilled craftsmen or mechanics). From the employers' perspective there is a definite need for technical schools. This is highlighted in the following quotations:

"South Africa needs 75 000 technical schools in the year 2000".
"We need to concentrate on technical schools".
This clearly indicates that technology is an essentially cross-curricular entity and finds a natural home with science as a core subject it is a discipline in which language, numbers and scientific concepts development intersect (Guidelines for the General Education Curriculum Framework, 1995: 128).

* Commercial skills

The commercial history of South Africa is closely related to the development of the country. Owing to rapid population growth, products have in the past been imported from overseas by wholesale dealers and then supplied to retailers. Trade activities involve the whole field of consumers' demands and the needs that have to be met, include products such as food, hardware, fashion goods, pharmaceutical products, furniture, industrial equipments and machinery as well as fixed property sales also have to be provided (Department of Manpower, 1993:686).

The employers provided the following information in relation to commerce: "Commercially orientated people drive the company towards attaining
goals and objectives".
"...Commercialisation are the most important to get the economy growing".
"Emphasize on financial subjects like Business Economics, Economics, Accounting and Banking".
"Focus must be business orientated".
"Let the pupils sell their stuff and make their own money by creating a business mindset for them".
To support these quotation, Betty, in the Sunday Times, March 9, (1997: 27) states that "enlightened" schools like Kingswood in Grahamstown were among the first to introduce entrepreneurial skills training in 1988, and Midge Hilton-Green, who developed this course will be starting courses at Diocesan College Prep School (Bishops) in Cape Town 1997. The introduction of business and budgeting as subjects is aimed at helping teenagers to budget successfully and providing them with an opportunity to mature and hence become self-sufficient and confident financial managers in later life.

Morrison (1993: 7) states that the public, in general, believes that a primary goal of education should be to help develop children into productive adults, because the country's best defence against outside forces is a well-educated, economically productive population. From the employers' commercial perspective, education is the primary source of economic strength, effecting the intellectual skills to produce quality goods and services (Morrison 1993: 8). Encouraging proper money habits in young children not to be underestimated, this can help them to cope with the globally competitive world and provide an opportunity for them to become aware of what lies ahead. Noah and Eckstein (in Dekker & Lemmer, 1986: 133) in referring to the British Chambers of Commerce Report, indicate the following qualities as requirements:

the ability to learn,
the ability to get on well with people,
reliability, basic literacy and numeracy,
an understanding of how society’s wealth is created.

* Mathematics

Mathematics is defined as "a science of size and numbers of which arithmetic, algebra and trigonometry are branches (Hornby, 1974 : 532). The information highlighted by the employers includes:

"We need to have literate students coming out of a school situation ... conversant in Maths".

"If you lay foundation start these youngsters with Maths".

"Do practical things in Business Economics and you pick up your Economics, then Maths comes into both of these.."

The National Council of Teachers of Mathematics (1988) also contributed towards, mathematics in Science Fairs and Projects in Washington, D.C. by defining a Mathematics curriculum as "an operational plan that details what mathematics students need to know, how students are to achieve mathematics goals ...". (Ornstein and Hunkins (1993), in the United States of America also contributed towards this category).

3.3.2.4 Safety and security

The growth of the nation's population and economy puts increasing pressure on protective services to check crime, minimize the loss of life and enforce regulations that protect the health and safety of citizens at home, school and work (Department of Manpower, 1993 : 562). Employers highlighted the information in relation to the above-mentioned category as follows:

"The Child Protection Unit should be introduced in schools"
"They should learn to report crime and vandalism occurring in their schools".
"They should learn to say no to drugs and alcohol".
"Leadership training in safety and security".
"Arts, sports and recreation as physical and social needs are essential to develop talents, body, mind and soul".
"Socialization aspect should be emphasized".

According to Morrison (1993:19) parents and teachers provide children with physical protection, while adults pay taxes for police protection. Teachers provide children with emotional security by helping them to become confident and competent individuals. Employers also deemed it fit for children to feel physically and emotionally safe in schools and classrooms, as well as in their homes. Doll (1992) has also done research in London in relation to the above-mentioned category.

3.3.3 Additional information on focus group interviews

3.3.3.1 Comments on teacher skills

The employers are concerned about teachers lacking skills related to technology, science and mathematics. This is supported by the quotation: "Technology, science and mathematics ... most of teachers don't have these kind of skills". A need for in-service training is suggested by the employers in that teachers should be equipped with such skills. "Hopefully some kind of program is being developed for them, bridging courses...".

If the teachers are to be effective in the classroom, they must first organise themselves, which involves learning the attitudes, abilities, characteristics and
skills that will enable them to help all children to achieve their fullest potential. This organisation of self includes professionalism, enthusiasm and caring. Being a professional means that the teacher's abilities and conditions of education (for the benefit of pupils, parents and community involvement) should be improved (Morrison, 1993: 17). The concern of Gauteng employers, just like the many reported in United States of America lamented the current status of technology, science and mathematics skills and wonder where the nations will recruit their future scientists in order to maintain their economic competitiveness. All these above-mentioned concerns have tremendous implications for curriculum and instruction.

3.3.2 Involvement of parents, community and other stakeholders

The involvement of parents, community and other stakeholders is not classified as a category. However the prevailing illiteracy in the South African community and the lack of understanding of parents in the education of their children, are great concerns which prevent them from fully participating in the children's education. The employers in Gauteng highlighted the following information:

"The whole community needs to be involved in the whole restructuring of education".

"Begin an awareness for the parents as to what is required ... by involving parents and other stakeholders in decision-making about what they want to be taught in schools".

The community's needs are naturally taken into consideration in curriculum development and it must be determined what the needs are for a more relevant school curriculum (Carl, 1995: 98). The newly enfranchised stakeholders, such as parents and the business-industry complex (who are vitally concerned about the outcomes of schooling) are in this way involved, consulted and given a role
in decision-making (Morrison, 1993: 166).

According to Carl (1995: 99) it is essential to look at the entire community as a whole as well as the relevant school’s local community. Their needs can vary from those of a more physical nature, to more psychological and norm-oriented needs such as freedom, peace, opinions, values, education, teaching, literacy, culture, career matters, vocational guidance, academic or technically oriented curriculum and family guidance.

Morrison (1993: 442) states that parent involvement is a threefold process in which there is a partnership between parent and teachers. This is built over a period of time through intentional planning based on partnership and shared decision making.

It is also a process of helping parents to use their abilities in benefiting themselves, their children, and school programmes. Parents, students and the programme are all part of the process, and all three parties should benefit from a well-planned programme of parent involvement.

Morrison (1993: 444) further underline the importance of a comprehensive programme of parent involvement, which includes parents, families and teachers as well as schools as the fourth component. Professionals seek ways to link parents to community services and resources.

3.4 RESEARCH FINDINGS

The interviewed employers highlighted that moral education should be offered in senior secondary schools, because principles of good behaviour are lacking and that things go on in a chaotic fashion. Learners must understand how classes
work and how they are responsible in contributing towards their education and advancement in life.

The employers are also concerned about the global competitiveness in the South African economy. They feel that if the South African society is to be able to compete worldwide in the arena of international production and financial activities a foundation, in basic life skills is necessary. The senior secondary education should produce such skilled people so that successful economic participation in the global market will be possible.

*Career guidance* should also be taught seriously at senior secondary phase. The employers maintain that it should in addition be offered at the junior phase because then students will be able to make a relevant choice of subjects in order to prepare themselves for their future careers, i.e. preparing for life after school. Through career guidance the learners will be assisted in understanding how occupations differ in that not all learners are equally gifted, but are different in that their needs differ in preparing themselves to serve their communities in the future.

*Hard science* or *science* as a discipline in which basic and applied research can be conducted through scientific inventions should be taught in senior secondary schools in order to help the country to prosper. It should be offered in order to produce scientifically orientated people who understand the key concepts and principles of science, who are literate and are familiar with the natural world and recognize both unity and diversity. Such individuals would use scientific knowledge obtained by the observation and testing of facts and theories for both individual and social purposes. Such people will drive companies toward obtaining specific objectives. As successful participants in the competitive arena of international production and financial activities, they should furthermore be
aware that science, technology and mathematics are interdependent human enterprises.

The employers emphasize the need for technology being offered in 75 000 technical schools in the year 2000 in South Africa. Society needs technologically active, computer literate school-leavers, who are conversant in mathematics. Such students will be prepared for the industrial world with its accelerating changes in production culture and communication technologies, transforming the way people work, produce and consume.

Commercially orientated people are also earnestly needed in the world of business to help the growth of the economy. Employers want commerce to be taught in schools in order to develop commercial skills. By allowing students to sell and make money, schools will be introducing business and budgeting as subjects. Teenagers who can budget successfully will mature to become self-confident, competent financial managers in later life. Senior secondary schools introducing commercial subjects for entrepreneurial skills training will furthermore be preparing the students to cope with the globally competitive outside world.

The employers are emphasizing the need of technologically literate students who are conversant with mathematics, coming out of the school situation. By illustrating that technologically active, literate students, ... preferably those who are computer literate are needed, clearly shows that they are aware that mathematics, technology and science are interdependent enterprises. One cannot do without the others. Mathematical skills will be adequate to serve anyone who wants to live and work productively in the 21st century.

The lack safety and security is one of the burning issues in homes and at schools,
because scholars are greatly affected by this. The employers emphasise the introduction of the Child Protection Unit to schools. The pupils should be taught about the safety and security regulations that protect the health and safety of citizens at homes, at school and at work. They should learn to report any abuse, crime and vandalism occurring in their schools or elsewhere.

The introduction of the *arts, sports and recreation* in senior secondary schools is what employers are yearning for, because the students' talents, bodies, minds and souls will be developed simultaneously. Students will be socializing with others as well as learning how to use leisure time fruitfully.

The employers are however concerned about teachers who are lacking technological, mathematical and scientific skills. They suggest a need for in-service training and bridging courses to equip these teachers with such teaching skills.

The involvement of parents, community and other stakeholders in education is a concern raised by employers in Gauteng province. The prevailing illiteracy in the community, parents lack of understanding in their children's education and the reluctance of other parties involved in education should all be addressed. The above-mentioned involvement will enable parents to share the responsibility of the education of their children with the State, will offer them an insight into what is being taught at school and will enable them to participate in governing bodies of schools. The shared role played by parents, community and other stakeholders will ensure that pupils are well equipped to deal with the future challenges of a changing society and are being properly developed.
3.3 SUMMARY

The data collected by means of focus group interviews has been analysed. The identified categories have been defined and the research finding were highlighted. The information in Chapter Three, together with the information to be discussed in Chapter Four, will enable the researcher to write guidelines as well as recommendations in the concluding Chapter Five. Curriculum design will be dealt with in Chapter Four.
CHAPTER 4

CURRICULUM DESIGN

4.1 THE AIM OF THE CHAPTER

The aim of this chapter is to review literature on curriculum design. This will serve as a theoretical foundation for the formulation of guidelines for designing a relevant senior secondary curriculum in South Africa, accommodating the needs of society, as perceived by employers in Gauteng province. This will enable the researcher to integrate a sound theoretical foundation with the empirical data of the study.

4.2 CLARIFICATION OF CONCEPTS

Definitions by different authors, relevant to this study are offered underneath.

4.2.1 Curriculum

Curriculum experts define the concept "curriculum" similarly, yet differently at different times to suit different purposes because there is no universally accepted definition.

Longstreet and Shane (1993: 49) have listed definitions of curriculum which can be categorised as follows: (1) Subject-centred curriculum designs, (2) Learner-centred curriculum designs and (3) Society-centred curriculum designs.
4.2.1.1 Subject-centred curriculum design

Broudy, Smith and Burnett, as quoted by Longstreet and Shane (1993: 49), define subject-centred curriculum as "... modes of teaching that are not, strictly speaking, a part of the curriculum [which] consist primarily of certain kinds of content organized into categories of instruction". They are supported by Carl (1995: 37) who states "... subject curriculum includes all details for a specific course or school phase which the teacher may require in order to instruct effectively in the subject". The emphasis is on content and omits the learner, who is a member of a society, which should also be considered as being important. As the oldest and popular curriculum design, Oliver in Longstreet (1993:49-50) defines it as "... the plan or program for all experiences which the learner encounters under the direction of the school".

This advantage of subject-centred curriculum design according to Ornstein and Hunkins (1993: 242) is that it is the most popular and widely used curriculum design. Its knowledge and content are accepted as integral parts of curriculum. The disadvantage is that the design prevents individualization of the program and fails to emphasise the notion of the learner. The stress on subject-matter fails to foster social, psychological and physical development. Organizing by subjects compartmentalize learning to emphasize memorization and make the subject central (Doll, 1992: 163; Ornstein & Hunkins, 1993: 243).

The over-emphasis of subject-matter results in curriculum that is too technical and too specialized, instead of a general design that integrates content with the learner's prior experiences, leading to meaningful new experiences which the learner is to acquire to prepare him or her for the functions of future life (Ornstein & Hunkins 1993: 244).
The subject-centred design stresses content and neglects learner's needs, interests and experiencing. In the context of this dissertation, the researcher should consider using it with the learner and society centred curriculum design when formulating guidelines on designing a senior secondary phase curriculum.

4.2.1.2 Learner-centred curriculum design

According to Oliver [in Longstreet and Shane (1993 : 49 - 50) curriculum is, "... the plan or program for all experiences which the learner encounters under the direction of the school". Wheeler (1983 : 11) defines curriculum as "... planned experiences offered to the learner under the guidance of the school". Tanner and Tanner (1975) describe curriculum as, "... the planned and guided learning experiences and intended learning outcomes, formulated through the systematic reconstruction of knowledge and experiences under the auspices of the school, for the learner's continuous and willful growth in personal-social competence"

The advantages of the design is that the hybrid curriculum emphasizes the process, the ways of knowing and thinking, and provides the skills for learners. Individualisation is stressed because it is based on the students' lives, their needs and interests. The students are active in their environments and learning is not separated from the ongoing lives of students (Ornstein & Hunkins, 1993 : 249).

Although this design is advantageous it will not be utilized in this study because of the following disadvantages. It relies on testimonials and subjective assessment by students and teachers. There is little empirical evidence present in the design. The teaching-learning process is unstructured (Ornstein & Hunkins 1982 : 406 - 408).
In the context of this dissertation, the learner-centred design is also not preferred because it does not consider the systematic structure of content and the needs of society. The learner-centred curriculum is an important hybrid design and the designers should also consider equally the content and the needs of society. The learner’s needs must be balanced by the identified needs of the society as perceived by the employers.

4.2.1.3 Society-centred curriculum design

Smith, Stanley and Shores, as quoted by Longstreet and Shane (1998 : 49 - 50) see this curriculum as, "... a sequence of potential experiences - set up in school for the purpose of disciplining children and youth in group ways of thinking and acting". Faunce and Bossing, in Longstreet and Shane (1993: 49-50) define curriculum as, "... those learning experiences that are fundamental for the learner because they derive from (1) our common, individual drives and needs, and (2) our civic and social needs as participating members of a democratic society". In both definitions, the focus is on the societal needs and content is excluded. According to Wheeler (1979 : 11) education of the children and youth always takes place in a particular society. It is evident that any study of curriculum must concern itself with the nature of the society and with the nature of the individual member as well as the nature of the content offered within the school. According to curriculum design, the purpose of schooling is to serve the needs of society. Perceived needs form thus the bases for content.

According to Ornstein and Hunkins (1993 : 254) the focus is on perceived realities, as well as institutional and group life, both for individual and for the society in general. The curriculum is planned and organized to enforce cultural traditions, to address the social needs that are currently unmet and also to
address individual's problems as well.

Its advantages are that it includes the individual and society in general that is, all diversity citizens and societal classes. It influences children and youth in ways prescribed by their culture. Doll (1993: 190) regards society as a source from which ideas about curriculum are derived and that the school owes its existence to the society that has fostered it. Therefore, it should acquire ideas from the social situation it observes.

Its disadvantage is that it focuses more on the problems of the society and it tends to ignore the learner and the subject-matter. It is not easy to obtain an accurate reading of how society in general is changing because of the large number of diversified, well informed people (Doll, 1978: 154).

The researcher does not need a society centred curriculum but intends using the integrated, balanced approach, in which the needs of society, the learner and content are considered equally important.

4.2.1.4 An eclectic approach

In the context of this dissertation the researcher intends using a balanced approach which acknowledges the importance of the subject-matter, the learner and the society. Krüger's definition of curriculum, which acknowledges the importance of all three, (i.e. subject-matter, the learner and the society) will be used in this study.

Krüger (1980: 19) defines curriculum as, "... the selected and ordered educational content which is a teaching-learning programme in which a functional coherence
exists among the situation-analysis, selected objectives, planned learning experiences, actualizing opportunities and evaluation”. According to Krüger’s model of curriculum design, (1980:19) which consists of the six above-mentioned, equally important principles of curriculum development, situation-analysis is regarded the most ideal springboard for data-collection, when identifying the needs of society, as perceived by the employers in Gauteng, through focus group interviews. They will serve as a good guideline for designing a relevant senior secondary phase curriculum.

A relevant curriculum must take full account of the social situation, the pressures and the needs of the community of which the school is a part. A curriculum comes into existence owing to social needs. The function of a curriculum is to address the identified social needs (Krüger, 1980 : 42).

The researcher agrees with the Tanner and Tanner’s (1975 : 8, 9, 43) argument about the changing curriculum definitions, nature of knowledge, conception of learners demands of social life to suit a purpose and also supports his point of view concerning social situation, pressures and the needs of society which a school is expected to address. The researcher would thus define curriculum as "...a planned, integrated, relevant education and training programme, appropriate to the current and anticipated future needs of society and the individual, as an active social, political and economic participant”.

From the similarities and differences of curriculum definitions noted, it has been realized that Krüger’s definition of curriculum and the six principles of his model of curriculum design are regarded as the best and suitable for this research and will be taken up in subsequent discussions of curriculum design models.
4.2.2 Curriculum design

The term "design", from the concept curriculum design, magnifies the technique of dealing with the purpose, content, learning experiences, organization of learning opportunities and evaluation. Design deals with devising the plan and the characteristics of the plan itself (Schubert, 1986:189).

It is important to create a balance between subject-centred curriculum design, (which stresses subjects-matter), learner-centred curriculum design (where the learner's needs are the centre of focus of the program) and society-centred curriculum design, which focuses on the perceived realities of institutional and group life, both for the individual and for society. Doll (1992:273) supports this with these words, "... bases for making curriculum decisions may be summed up in these phrases: learners and learning, social forces, and subject matter. Education that over-emphasises one of the three, and largely ignoring the other two, is not fair to the pupils".

For the purpose of the dissertation, the above-mentioned three determinants are equally important in curriculum design. Morrison (1993:139) states, "... gone are the days of teaching thinking and inquiry and subject-matter as separate entities".

4.3 APPROACHES TO CURRICULUM DESIGN

There are various approaches to the process of curriculum development which could serve as theoretical foundation. Walters in Carl (1995:49) considers the following approaches to be important in designing a curriculum, namely the academic, experience-based technological and pragmatic approaches which the
researcher might choose as a relevant approach to curriculum design.

4.3.1 The academic approach

According to Carl (1995: 49 - 51) the academic approach to curriculum development is a systematic process, directed by academic rationality and theoretical logic, based on the application of studied logic in educational decision-making. This systematic process starts with the identification of goals and objectives, then follows the selection procedure of content, the classification thereof, the designs of methods and eventually the evaluation of the outcomes.

Academic approach includes methods of direct inquiry, self-discovery, and the development of intellectual skills or cognitive processes. The following skills - namely discussion-making, problem solution, reflective thought and critical thought containing an inherent logic - lead to systematic academic analysis. The academic approach is not an accepted one because it ignores the society's needs as well as the learner's needs. It is a linear, technical-scientific approach and ignores interaction. It therefore cannot be chosen for this research study.

4.3.2 The experiential approach

It is a learner-centred approach which is subjective, personal, heuristic and transactional. It stresses the role of teachers and pupils, and their co-operative curriculum decision, using self-paced, self-directed, unstructured and personalized instruction programs at. Learners only learn what has meaning for them personally, and they create their own learning through selective perception.
The function of teaching and education is pursued through curriculum content and experiences aimed at the retention of the unique appreciation of each individual's attributes in respect of intellectual, and especially the emotional, social, physical, aesthetic and spiritual qualities. The social life of the child is the basis.

This approach achieves success in various curricula in human sciences and art subjects at high school level. The experiential approach is not accepted because it is a learner-centred design and it ignores the needs of society. It is a technical scientific approach and thus also cannot be chosen for the purpose of this research study.

4.3.3 The technical approach

"The technical approach is analytical and regards instructional planning in terms of 'systems, management and production" (Carl, 1995 : 53). It endeavours to maximise educational effectiveness by applying the same scientific management and production principles to the instructional situation in regard to industry. This approach uses principles of system analysis, empirical methods and management effectiveness, whilst the academic approach in decision making in regard to curriculum is based on theoretical and academic logical argument.

According to this approach, knowledge worth acquiring prepares the learner for the functions of life, that may be reduced to their distinguishable component parts. The learning process comprises a change in behaviour, and that as behaviour is demonstrable. Learning outcomes or successes are perceptibly and quantitatively measurable.
Curriculum designs based on this approach are, inter alia, computer supported instructional programmes, programmed instructional packages, achievement contracts, certain vocational and technical subjects and competency-based teacher education programmes, as espoused by (Walters, 1985: 13) in Carl (1995:55).

The technical approach in designing curriculum for senior secondary phase is not accepted because it replaces the teacher, it is not feasible for the South African situation because the society is complicated and the technology is not yet highly developed.

4.3.4 The pragmatic approach

The pragmatic approach is the outcome of a long and dynamically complex process of involvement and interaction. It is a political and eclectic process in which a large collection of concepts and principles, derived from various theoretical models are utilized. In the same curriculum, elements of the academic, experiential and technological approaches can be used. It is a "naturalistic" model, as "co-operative curriculum change" is based on a combination of other models (Walters in Carl, 1995: 56).

According to Ornstein and Hunkins (1993:265) curriculum draws on usually technical or scientific principles and consists of those processes (humanistic and artistic) that allow schools and people to schedule and realize certain educational goals. There are numerous models from which to choose, most models can be classified as either technical-scientific or non-technical, non-scientific. Technical-scientific approaches are (1) behavioural, (2) managerial, (3) systematic and (4) academic. Persons who believe in subject-matter curriculum designs advocate the technical-scientific approach. The non-technical, non-scientific approaches are
humanistic and (2) reconceptualistic. Those individuals who favour a learner-centred curriculum design advocate the non-technical, non-scientific approach. The society-centred curriculum design, however, can fall within either approach.

In conclusion, the pragmatic approach can be selected and other concepts and principles can be added to it to create an eclectic approach. An eclectic approach is integrated and balanced; it acknowledges the importance of the learner, the subject-matter and society. All three will be considered equal in designing a relevant curriculum for senior secondary phase for the identified needs of society as perceived by employers in the Gauteng province. Levels on which curriculum may take place will be dealt with underneath.

4.4. LEVELS OF CURRICULUM DESIGN

If the South African education is to address the identified needs of the society (as perceived by employers in Gauteng), it can only do so with the full co-operation of curriculum experts, subject specialists, subject didacticians, educational psychologists, those in the teaching practice and other interested parties. Curriculum design is a planning phase, during which decisions are taken with regard to content which must be included, how this should be presented, and how it should be evaluated. There are various levels of curriculum practice extending from the functions of decision-making on the "macro" level, through organisational and planning functions on the "meso" level, to the functionalism of curriculum practice on the micro level (Carl, 1995: 82).

The nature as well as the extent of curriculum design will differ, depending on the levels on which one moves. The nature of activities of a developed curriculum, involved on national level with a curriculum committee, will differ
from that of the subject teacher developing curricula for specific pupils at a "micro"-level. The "macro"-level refers to curriculum design at national level. The "meso" being at provincial or departmental level and the "micro" at school level (Carl, 1995 : 82).

"Macro", "meso" and "micro" are relative terms that may be applicable within a particular school. To avoid this problem, preference is given to the following levels, sectors or areas:

- a community's philosophy of life and thus its educational views
- government level and education legislation
- school-phase and school-type planning
- syllabus development
- school curricula

At each of the above-mentioned levels, aspects of curriculum design are applicable. For example, while in school-phase planning the broad curriculum (for a total school population and country) is considered, the subject teachers in his or her classroom will be involved with micro curriculum development (objectives, goals, contents, media, methods, evaluation for a specific pupil or group of pupils). There is, in fact, an interdependence and interaction between the various levels which determine the success of curriculum development (Carl 1995 : 83/84). Curriculum design can therefore take place during the design of the broad curriculum, but it is further filled in during syllabus design and development by curriculum committees for a particular standard. This in turn leads to further design actions when the subject teacher designs a subject
curriculum and/or a micro curriculum (Carl 1995: 54). The researcher intends formulating guidelines to design a curriculum for a senior secondary phase at "meso" level in order to be implemented at micro level.

4.5. MODELS FOR CURRICULUM DESIGN

According to Carl (1995: 89-90) a variety of curriculum models are encountered which arise, inter alia, from curriculum developers' methods of approach. These methods of approach are the source of curriculum models, as well as society's needs and even the nature of a particular education system which lead to the design of a particular model.

The choice of models for curriculum development are often refinements of already existing models and can give direction and purpose to the process of design. The "existing apartheid" education system, in South Africa, for example, led to an attempted design of a democratic, relevant, balanced and integrated curriculum model, which should acknowledge the equal importance of the learners, the subject matter or content and the society. This model for curriculum design will be designed for senior secondary phase from the needs of society as perceived by employers in Gauteng province. Adjustments may be made on the existing model, or the existing model may then be used in planning.

4.5.1. The Walters model

Walters as quoted by Carl (1995: 93) has developed a model which consists of the following components: initial evaluation, selection of goals, selection of content, classification and organization as well as outcome evaluation.
This model shows a dynamic interaction between the components, as well as a close relationship and flexibility between them. In this model evaluation, a testing and development function exists at various levels. Through initial evaluation (in which situations are analysed), progress evaluation (applied in regard to the formulation of objectives, selection of contents, classification of contents and planning of method) and through outcome evaluation (evaluating the end result of the educational undertaking) the result of the design is continuously tested and further developed. Although Walters' model is a good model as it is flexible, and allows for the interrelationship of the principles of curriculum, the researcher will not use this model for this study, because of its shortcomings.

4.5.2. The Stellenbosch or Cawood, Carl and Blanckenberg's model

This model is more detailed in respect of the various components. It can be utilized at any level, that is at the "macro", "meso" or "micro" level. This model consists of nine components, namely: learner oriented evaluation; goals; core content and scheduling; teaching content; instructional and learning objectives; teaching methods and teaching media; planning of instructional learning situation; implementation of instructional learning situation and contextual evaluation of the whole curriculum.

The dynamic interaction of the various components is also stressed. Goals and core content represent a syllabus. A clear distinction is made between core contents which eventually take shape as core syllabi. A continuous evaluation is strongly placed. Contextual evaluation, which includes the concept "situation analysis" is centrally placed and shows a dynamic interaction with each of the other components. The value of this model lies in its possibilities of adaptation.
on the various curriculum levels and also in its detailed spelling out of the components which may promote systematic design (Carl, 1995 - 94). Although this model is a very good model, it is complicated and not all components will be applicable at all levels. The model is of particular value in the design of modules. For the purpose of this study, the researcher disregards this model because it also has its shortcomings.

4.5.3. The Krüger model

Krüger's model (1980 : 33 - 35) is a comprehensive model developed cyclically in the same way as that of Wheeler (1967 : 30). It’s point of departure is based on education which ultimately changes the behaviour of the learner. This Krüger model (Krüger 1980 : 26) consists of components, such as the following principles which apparently form the common factors in most of the curriculum models mentioned.

\[ \text{Situation analysis} \rightarrow \text{Aims and objectives} \rightarrow \text{Selection of content} \rightarrow \text{Learning activities and experiences} \rightarrow \text{Evaluation} \rightarrow \text{Situation analysis} \]

**FIGURE 4.5.4 : THE CURRICULUM CYCLE**

(Adapted from Krüger & Müller, 1988 : 27)
The researcher prefers the Krüger model (1980) because its six curriculum principles are related and interdependent. These principles are: (1) Situation analysis, (2) Aims, goals and objectives, (3) Learning content (4) Learning experiences, Learning opportunities and (5) Evaluations. In respect of this model the planned learning experiences must develop a 'vertical' and 'horizontal' educational spiral. The idea of a spiral build-up of knowledge, implies, on the one hand, a vertical deepening of specialized knowledge experience in every subject terrain, and, on the other hand, a horizontal integration of experiences across the differing subject terrains in order to develop the pupils' general education and all the values that go with it (Carl, 1995 : 94). These principles combine to form a cyclical process and the final evaluation phase is continuous, and affects the initial phase. Each phase is a logical development of the proceeding one while each one is equally important. In the context of this dissertation, they will serve as guidelines for designing a senior secondary phase curriculum from the identified needs of society as perceived by employers in Gauteng.

A good, relevant curriculum design like that of Krüger (1980) describes the relationships between the curriculum principles and indicate priorities among factors and principles considered important. Krüger's (1980 : 19) definition of curriculum design, which the researcher intends adopting, appears to be the best because it acknowledges the importance of the three determinants, namely, the learners' needs, the subject-matter and society's needs as well as the six principles of curriculum design which will refer to the guidelines that can be followed in improving the curriculum for the senior secondary phase in Gauteng.

4.5.3.1 Situation-analysis

According to Krüger (1984 : 29) situation-analysis implies an investigation into the needs and demands of a society in regard to a given teaching-learning
programme. Marsh (1992:79) by situation-analysis refers to the concept "situation" which is the initial state in which the learner (who is a member in society) finds himself or herself. In the context of this research the researcher will find out about the initial state of the learner and of society. This will be done through focus group interviews and the collected data will be analysed and interpreted.

Situation-analysis can be considered as the recognition of some identifiable problems, for example, the needs of society which will enable the researcher to design a relevant, balanced, integrated curriculum for senior secondary phase in South Africa. This situation-analysis phase will be used as a springboard for the identification of the needs of society as perceived by employers in Gauteng province.

Soliman (in Marsh, 1992: 80) has developed a situation-analysis checklist which covers such factors as: societal and cultural values and expectations, resources and finances, educational system requirements, content, forms of knowledge, internal factors and learning processes.

There are determinants of situation-analysis relevant for identification of society's needs, namely, the expectations and needs of society, the needs of the learner, value credits, didactical needs, socio-economical needs, future needs and the development of disciplines as identified by Krüger (1980 : 35 - 48), Oliva (1992 : 165) and Marsh (1992 : 79). This research focuses on the formulation of guidelines for the design of a relevant curriculum for senior secondary phase based on the needs of society, as perceived by employers in Gauteng province. It is therefore important to concentrate on the above-mentioned three determinants, that is, learner's needs, subject-matter (content) and society's needs. Those will be
involved in data-collection, analysed and interpreted.

(a) The needs of society

Krüger (1980: 43) states that society, demands the schooling and cultural education of its youths. It is the responsibility of the school to offer basic educational skills which are the foundation for the training of the young workers entering the world of work. In support of this, Steeves and English (1978: 121) state that "... for millions of secondary school students, vocational education therefore represents not only a viable curricular place of some importance and interest, but an avenue to a productive place in society and the world of work". They clearly emphasize that schools are responsible for offering career guidance because ... the total education of the student most definitely includes some preparation for the world of work" (Steeves & English, 1978: 137).

According to the National Education Policy investigation document of the African National Congress (1992: 2) a curriculum is drawn up by particular groups of people, reflecting points and values anchored in the experiences of particular social groups, producing particular patterns of success and failure.

It is believed that the curriculum to be designed for a particular group of people, for example, the senior secondary phase, should have social and economic patterns, as well as the cultural values which the society is striving for.

Society is constantly changing. These changes affect schools. Where homes have renounced their responsibility for moral suasion and setting values, many people expect the school to fill this gap (Doll, 1992: 98). The schools have retained their responsibility for educational developments of pupils, but they have become
more directly responsible than ever before.

According to Doll (1992: 98) there are four changes in society that particularly affect the schools, namely (1) knowledge explosion or continuing change in development and communication of knowledge (this growth in the "knowledge industry" is occurring under the control of big business); (2) the change affecting the financial support of public schools; (3) the shift in the realm of human conduct; and (4) the social movements that include racial integration, mobility of population and the movement of people from lower to higher socio-economic status. When family life disintegrate, the school finds itself taking on more responsibility than what the family assumed. The school becomes responsible in addressing the needs of the society. "Needs can vary from those of a more physical nature (food, clothing, housing) to more psychological and norm orientated needs such as freedom, peace, opinion values, education, understanding of other cultures, vocational guidance and family guidance" (Carl, 1995: 99).

Doll (1992: 121) maintains that planning and preparing for a future career "is an important culture based curriculum idea". The career needs of the learners, who are members of a society, are currently taken into consideration. This is done because the learners are expected to act out different roles in a society, and this could be analysed to find the competency that they would need in order to function effectively in addressing the needs of society. The needs of manpower in general, and the specific environment at present and in future are all important for curriculum design. For a researcher to be able in formulating guidelines, in order to design a curriculum for senior secondary phase, he or she must have collected relevant information or data on the needs of that society (as perceived by employers in Gauteng through focus group interviews).
(b) The learner

The curriculum designer or researcher will search for educational aims, goals and objectives by gathering and analysing data relevant to the student needs and interests, i.e. the analysis of the physical, psychological, educational, social, occupational etc, developmental level of the learner, his or her motivation and the skills he or she needs during and after school and needs to be made (Krüger, 1980:44; Oliva, 1992:165).

The learners grow and develop physically, intellectually, sociably and emotionally (Carl, 1995:98). They all have certain basic needs and interests or desires. They are members of a particular society, with its societal needs. Morrison (1993:4) clearly indicates that children are complex human beings who are responsible in part for their own development; they are shaped, formed and influenced by biological, social, cultural, economic, political and environmental factors.

Morrison (1993:11-15) states that "...as society changes, so do children, who are a major portion of the society. Today's children are different from the children of even fifteen years ago". This means that the children in today's schools are, in many instances, different from the children members of the older generation went to school with. The differences have implications for the curriculum and instructional processes. When designing a curriculum it is important to consider what the learner's needs are, what the society's needs are, and which social; economic; political and environmental factors are influential on their development and education.

Learners are all members of the home sapiens. Yet, in spite of their biological
similarities, each child is unique in meeting their needs. They respond differently in teaching-learning situation. From a humanistic point of view, the learners need food, warm and protective clothing and adequate shelter. Maslow’s (1908 - 1970) "Hierarchy of needs" tabulate the basic needs for all humans, these needs are critical to human well-being and happiness. Maslow’s theory plays an important role in curriculum design and instructional processes because the physical development of the learner is taken into consideration (Morrison, 1993:17).

In the context of this dissertation the senior secondary curriculum is expected to provide the learner with knowledge and skills for use in learning different subjects. It is the duty of curriculum designers to take the learners’ needs and interest into consideration when designing a curriculum. The senior secondary phase is an external class which writes an external examination, and certificates are issued after completion. What is offered in this phase should provide skills to those learners who leave school to find employment and also to those who proceed to university, colleges and technikons.

(c) Learning content

According to Carl (1995 : 108) content is an aspect which normally determines the nature and extent of the relevant curriculum. It is that component which is included in a school subject, i.e. the "WHAT" which must be conveyed to pupils, which form part of a child's development and education, for example, "life contents" which they have to do with in situations outside the school context. Content within the educational and school context is more formal by nature within the subject context or a structured instructional learning situation.
The selected content, which determines the nature and extent of the curriculum as the content, is used to achieve the set of goals and aims. It is more than what is merely reflected in one subject; as a collection of subjects, for example, a school curriculum is also regarded as content (Carl 1995: 109).

When developing a syllabus, a curriculum designer has to consider contents, which must be dealt with within a specific subject. During this phase a further expression of the school phases and subjects takes place as they are now expressed by more specialized contents. These contents are usually described in a syllabus (Carl, 1995: 109).

A senior secondary phase curriculum is an example of a school phase curriculum which has a specific collection of subjects for the relevant phase and standard. It could be regarded as the content of the relevant school phase. It is indeed that collection of examination and non-examination subjects which the society and pupils need. The collection of subjects could then also be regarded as the content of the school curriculum.

According to Carl et al, (1988: 30) learning content should be analysed in the light of following: "...linking up with objectives, extent, relevance, degree of difficulty, available sources, demands and requirements of the syllabus, depth of study, classification, time-scheduling, textbooks available, other available learning content, suitability for relevant pupils, and the structure of the subject-content". Syllabus interpretation makes out an important part of such a situation analysis.

Krüger (1980: 72) states that surroundings (leefwêreld) is the primary source from which content is drawn. Selection and classification of contents cannot take
place in a haphazard manner, because irrelevant and incorrect contents can, by their impact, drastically influence the path of life of the learner (Krüger, 1980: 65). In the National Education Policy Investigation document (1992: 31-32) of the National Education Co-ordinating Committee, it is mentioned that subject syllabuses are overloaded with content. Therefore contents should never be heaped up in a reckless and unplanned manner. By stressing the formative value of the content, while there is presently an enormous explosion of knowledge taking place, there should be a careful selection made as to what contains the highest priority value for the child's future adult life. Similar knowledge contents must be subjected continuously to evaluation in the light of the rapid development, particularly in the field of technology, so that the essential facts are retained and the less important omitted (Carl et al, 1988:43).

To support the above-mentioned point of view, in the document "Curriculum Framework for the General Phase of Education" (1995: 16) it is mentioned that, owing to the demand for inclusion of many new curriculum areas, the addition of new curriculum areas should not be allowed to overload the existing curriculum further. Care must be taken to integrate much of the "new" material into a limited number of subject domains, so that key concepts and skills may be dealt with in depth without the increased volume of "content" dictating a shallow approach. "The scope and sequence of the existing subject matter against the background of its rationale and aims would be of value to predict the suitability thereof in the target subject-curriculum" (Steyn, 1992:17).

The curriculum designer or researcher should turn to the subject-matter, and the disciplines themselves. The subject matter should correlate with all other components of curriculum design. The analysis and study of the curriculum development and innovations is necessary for designing a relevant curriculum
for senior secondary phase. This relevant curriculum should equip learners to
deal with their daily needs, allow them to engage effectively with a range of
contexts as well as laying the foundation for further education. These concerns
are congruent with the aims and objectives of education.

(d) The implication for the dissertation

There is a need for this research because of the increasing number of
unemployment, violence and crime in Gauteng province. Situation-analysis will
serve as a springboard for the researcher to identify the needs of the society as
perceived by the employers in Gauteng province. These identified needs will
enable the researcher to formulate guidelines for designing a relevant curriculum
for senior secondary phase through limited a situation-analysis.

4.5.3.2 Setting of aims, goals and objectives

In the curriculum design model the setting of aims, goals and objectives is linked
at situation-analysis and to society's philosophy underlying the nature of what
is taught and learnt. According to Longstreet and Shane (1993 : 58) the purpose
of schooling forms the bases for curriculum design. When society organises
schooling into formal education, it is purposeful. This results in the values and
needs of society being represented by means of educational purposes, expressed
systematically as aims. The selected aims, goals and objectives should be clearly
stated at the beginning of any programme (Krüger, 1980 : 54).

(a) Aims

Eisner, as quoted by Marsh (1992 : 86) defines aims as "... general statements that
proclaim to the world the values that some groups hold for an educational program these statements form a kind of educational manifesto...". According to Krüger and Müller 1990: 39 aims are a long-term educational intention (Krüger and Müller 1990:39). They are derived from sources such as empirical, philosophical, contextual, social, political, economic and moral values (Hunkins, 1980:198). Aims are broadly phrased in statements, as long term and generally apply to systems rather than to individual schools. An aim is "...a general statement of intent for a curriculum" (Pratt, 1994:69) as it is placed at the beginning of a curriculum and will have an influence on the reader's feelings about the whole curriculum.

A well-written curriculum aim can be based on the following three criteria: "It should be significant, clear and concise" (Pratt, 1994: 69). A curriculum is worth, expressed in its aim, must be apparent to everyone, including students. Furthermore a curriculum aim is clear if it can be understood without further explanation. An aim of a curriculum is concise if it states the basic intent of the curriculum in about fifteen words (Pratt, 1994: 69/70). An aim acts as a unifying theme to enhance the conceptual integrity and structural unity of the curriculum. The above-mentioned criteria, then, can serve as guideline in designing a curriculum for the senior secondary phase in Gauteng Province.

Carl (1995:100) also state that "...aims exercise a direction giving influence on the didactic design of instructional learning situations for pupils, as well on their implementation in practice." They must be in the service of the particular needs of the pupil and contain the nature of the learning contents, the nature of the claims of the community and must also take into account the precise nature of pupil, who moves through different developmental phases, of which intellectual development is only one.
Aims should be significant, concise and be clearly stated as part of the curriculum process and because of their open-ended nature, continuity should be expressed and emphasized in order to make it possible to translate them into specific learning environments and activities. These will guide teaching and learning.

(b) Goals

Goals are the basic elements in curriculum design. They determine what content is important and how should it be organized. Marsh (1992: 85) defines goals as "... more precise statements of curriculum intent, which are medium to long term and directed to the student's achievement".

The educational goals, which are written operational statements of education outcomes, clearly represent the purposes of a particular course or unit of instruction. These goals serve as a basis for the decision making process during the drawing up of an accountable and manageable working plan. Marsh (1992: 86) maintains that there are common goals for schooling such as academic, vocational, social and personal goals. Academic goals are perceived by students, teachers and parents as major goals at all levels of schooling. The vocational goals are geared at assisting learners in making decisions about career options and enabling them to make well-informed choices. They also include developing habits and attitudes about productive participation in economic life. This might help in the context of the dissertation, after identifying the needs of society as perceived by employers in the Gauteng province.

According to Marsh (1993: 88) students at senior high school have preferences for vocational goals instead of academic goals. It is therefore important for the
researcher ultimately to state the goals very clearly after analysis and interpreting the collected data. "An educational institution like a secondary school can only be successful if there is clarity as to the goals and what is intended by them" (Carl, 1995: 100).

The reflection of societal needs in educational goals usually results in a statement describing categories of human behaviour. Krüger (1980: 54) considers goals to be "... ‘n vooruitgryp na die verowering en beheersing van leer-en-leefinhoud deur die leerder". Educational goals are achieved when pupils have internalised contents and are able to apply that in a teaching-learning situation, indicating how students behaviour has changed as a result of learning experiences.

(c) Objectives

Objectives are short term specific statements of intent about anticipated changes in learners (Marsh, 199: 85). Eisner, (1979: 117) as quoted by Marsh (1992: 86) clearly states that goals justify particular objectives which can be defined as specific statements of what students are able to do after having experienced an instructional unit or a portion of one. Longstreet and Shane (1993: 59) support Marsh (1992: 85) by maintaining that objectives represent the analysis and transformation of goals into actions believed to support the achievement of goals.

Objectives give direction to what has to be achieved and are necessary because they identify how learners should change their behaviour as a result of certain learning experiences. Objectives are precise descriptions of a relevant pupil's required behaviour or achievement which are to be realized at the end of a certain time.
Carl (1995: 107) states that it is essential during curriculum development to distinguish between instructional objectives which are formulated to spell out the instructional actions of the teacher, and learning objectives which are formulated to spell out the expected learning profits, which the pupils should be able to do and know at the end of the lesson. Objectives state what the learners are expected to learn in their classroom activities, this should be consistent with the aim of the school.

In conclusion, aims, goals and objectives should reflect the norms and values of a society. They should be directed at structured learning outcomes. The following components - learning activities and learning content - should be present when formulating goals which, in turn, justify particular learning objectives which give direction to what has to be achieved.

4.5.3.3 Learning content

"Aims and objectives point the way to the content that pupils are to learn. Some of the content may be formal subject-matter. Part of it, especially in the affective domain, is likely to be informal and may not even be classified as content (Doll, 1992: 28). This study is concerned with learning content as one of the principles of curriculum design.

(a) Selection of content

According to Doll (1992: 133) decision making about content selection is guided by two classic considerations:

* "The nature of the learner and the learning content..."
Wheeler (1979: 37) states that the selection of subject-matter or content tends to become the principal concern of many curriculum-makers. The content dimension is a core aspect which determines the nature and extent of the relevant curriculum. Content is that component which is included in a school subject, in other words the "WHAT" which must be conveyed to pupils as part of a child's development and education, for example, life contents and contents with which they are exposed to in situations outside the school context. Content within educational and school context is formal by nature (Carl, 1995: 108 -109).

Content can be used to achieve the setting of aims and goals. It is organised into a collection of subjects - for example, a school curriculum is regarded as content. Selected content of a school phase curriculum has a specific collection of subjects for the relevant phases and standards.

A school phase curriculum, for example a senior secondary phase curriculum, consists of those examination and non-examination subjects which have been chosen to supply the needs of the societies, community and pupils (Carl, 1995: 109).

It is important to distinguish between the classification of contents and the selection of contents. According to Carl (1995: 110) the selection of content will be particular to the relevant levels of areas dealt with. The selective action of a curriculum committee choosing core contents at national level will differ from those of the teacher who has to choose the teaching content for a specific lesson in a "micro"-curriculum. The action of classification of core content by a
curriculum committee will differ from the arrangement and classification of teaching content for a particular lesson by the subject teacher.

To support what Carl (1995: 110) says, Marsh (1992: 96) maintains that the way in which subject-matter is selected and organized for teaching and learning depends on one's philosophy of what counts as important knowledge. The selection of content is determined by both situation-analysis and objectives. Selection and classification cannot take place in a haphazard manner. This is of fundamental importance for the curriculum developer, as irrelevant and incorrect content can, by their impact, influence the path of life of the pupil. Therefore content should never be heaped in a reckless and unplanned manner (Krüger (1980: 65).

Selected and classified content should have formative value, while an explosion of knowledge takes place. The curriculum designer should be very careful in selecting what contains the highest priority value for the senior secondary pupils’ future adult life. There should be a continuous evaluation owing to the rapid developmental changes taking place in the field of technology. This will enable the curriculum designer to omit the less important aspects and to retain the essentials (Carl 1995: 111). Scope and sequence as methods of organizing content will be discussed next.

(b) The scope

Marsh (1992: 96) by scope refers to the extent and arrangement of curriculum elements that can occur across topics or subjects. Scope is sometimes termed "horizontal organization". According to Doll (1992: 168), this dimension of the curriculum can be seen in the weekly programme of a school. The breadth of a
school programme is great, it is therefore important to keep the scope of the curriculum within bounds by cultivating allegiance to carefully selected objectives. Objectives in secondary schools are the achievement of skills in communication, skills for continuing learning, understanding of people and their world, physical and mental health, desirable behaviour as citizens as well as aesthetic, moral and ethical values.

To add to what Doll (1992) has said, Marsh (1992 : 97) characterises this scope as follows:

(a) The scope of curriculum gradually expands at higher levels of schooling.
(b) The scope of a curriculum changes from one level to another as some elements are reduced or deleted while others are added.
(c) An important decision for the scope of any curriculum is the breadth of coverage and the depth of coverage.
(d) The scope of a curriculum also has to consider the common processes or skills which should occur in all subjects.

In terms of scope or horizontal organization Marsh (1992 : 97) says that a number of approaches have been advocated, including:

* Organization by subjects referring to specially selected, important subjects.
* Organization by activity by considering the student's own experience as the starting point for planning.
* Organizing by core will including organization on basis of social problems.
* Organization by correlation implying that elements from various separate subject are correlated and interrelated.
* Organizing in broad fields implying that subjects areas are correlated and focused into broad fields of study.
* Organization around persistent life forms, meaning that content is organized into major societal problems or life situation. Sequence as another method of organizing content will also be discussed.

(c) The sequence

By sequence Marsh (1992: 96/99) refers to the organization over a period of time. In some cases this can mean a number of years. It is termed vertical organization. It is concerned with the order in which content is taught and what is to follow other learning content. Sequence may include:

* movement from the simple to the complex;
* study based on prerequisite learning;
* movement from the part to the whole;
* movement from the whole to the part;
* chronological ordering of events;
* movement from the present into the past;
* concentric movements, spiralling of concepts;

Marsh, (1992: 99) clearly states that a major problem associated with sequence is to ensure that cumulative and continuous learning occurs as students progress through the curriculum.

(d) Criteria for selection of learning content

The primary basis for content selection must always be the stated aims, goals and
objectives of the curriculum. When selecting learning content the following criteria are taken into consideration and regarded as important.

* Significance and validity of the content as disciplined knowledge: some items of content available to learners are likely to be of little worth because they are consequential. Such items should be ruled out (Doll, 1992: 147)

* Interest and appropriateness of the content to pupils' needs: Pupils' interest are important in the selection of content of curriculum, but casual interest are not hard to identify, while lasting interest and real need are much more difficult to determine. Only the passage of time permits curriculum planners to know the pupils enduring interests (Doll, 1992: 147).

* Balance: A reasonable alliance between scope and depth of curriculum should be maintained (Doll 1992: 14): In selecting the experiences to be included in the scope of the curriculum, balance that also becomes a problem. "How the formal curriculum is balanced between student-centred and subject-centred courses, individual needs and the formal disciplines, societal needs and individual learner needs" (Ellis et al, 1992: 222).

* Relevance: "In learning is to be meaningful and applicable, the content learned must be meaningful to the student. The student must see how, what he is learning relates to life" (Ellis et al, 1992: 222).

* Integration: Some subject matters have the potential of relating readily to content from other subjects. Teaching content that is capable of crossing
subject lines in this way facilitates reinforcement of learning as the learner is reminded of his or her previous contact with it in other settings. (Doll, 1992: 148).

* Learn ability of content: No attempt should be made to teach pupils that which they cannot learn. (Doll, 1992: 148).

The selection and classification of learning contents is an important function of a curriculum. By organizing and arranging the chosen content systematically, accountable actions based on educational criteria correspond with the set of objectives. It is through content that the learners get the opportunity to understand reality and the work, so that they may enable them to function meaningfully.

In the context of this dissertation the curriculum designer or researcher (in terms of the selection and classification of content, as well as its scope and sequence) should ensure that cumulative and continuous learning occurs as students progress through the curriculum. This leads to a discussion of learning experiences and learning opportunities.

4.5.3.4. Learning experiences and learning opportunities.

According to the diagrammatic presentation of principles by Krüger et al. (1988:27), learning opportunities and learning experiences are two separate, but related principles of the curriculum design model (see Figure 4.4.3). It is important to find out whether the curriculum offers a possible sequence of structured learning opportunities and learning experiences. Tanner and Tanner (1975: 16) state that it is wise to remember the words of John Dewey who in 1902
said that "...the scheme of curriculum must take account of the adaptation of studies to the needs of existing community life, it must select with intention of improving the life we live in common so that the future shall be better than the past..."

The learning content derived from the curriculum should be actualized in the didactic situation as learning experiences. Learning opportunities are didactical activities created by the teacher in the classroom whilst learning experiences indicate the interaction between the learner and content. Learning experiences are psychological acts. The distinction between learning activities and learning experiences lies in the difference between intent and result (Zais, 1976: 352). The learners might be involved in identical activities, but the experiences they derive might be different.

Carl et al, (1988: 48) as quoted by Carl (1995: 114) maintain that there is a close connection between learning experiences, learning opportunities and teaching methods. This connection may be described briefly as follows: by means of instruction and learning actions on the part of the teacher and the learner, a learning opportunity is created for the pupil also to be personally and actively involved with a view to derive the most meaningful experience from this involvement. It is from this didactic situation that instructional learning situation is created. It is therefore important that, in writing guidelines for senior secondary phase, the researcher should consider what type of experiences the learners might have at this phase and plan accordingly.

Learning and education will take place when content is present and or provided in a teaching-learning situation. The teacher must first appear on the scene and create a particular situation within which a particular active process is put in
motion. After a decision has been made regarding specific aims, the teacher will consider ways or means which will acquaint the pupils with the content in such a manner that it will lead to learning. These ways, means or actions are called methods or didactic work forms. With the help of these methods the potential of pupils is developed so that they may fill their proper places within a future society.

By understanding the learning experiences, the students should be aware of the behaviour expected of them. They should have the opportunity to practice the desired behaviour. This suggests that learning experiences should be build upon earlier activities (vertical organization or spiral development) and that there should be an interrelating or integrating of learning experiences across subjects (Horizontal organization).

Doll (1992: 208) clearly indicates that not everything is to be taught in school, but that one must be selective in what one wants to teach in a classroom situation. One must have standards of criteria. Selection and organisation of content and learning experiences, as well as opportunities, should all be taken into consideration in curriculum design.

4.5.3.5 Evaluation

Evaluation, as the final phase in the curriculum design, refers to the conclusions drawn about the success or failure of the educational enterprise by the measurement or assessment of a change in behaviour (Wheeler, 1976: 48).

According to Marsh (1993: 103) the term evaluation is often used synonymously with the term assessment or measurement, but there are important distinctions
between the two terms. Evaluation describes all the kinds of data which are collected about schooling, including data about students' behaviours, teachers' planning, instruction and curriculum materials used. The term assessment is typically used to describe the activities undertaken by a teacher to obtain information about the knowledge, skills and attitudes of students. Measurement is the physical testing or examining to determine whether pupils have mastered certain contents and knowledge.

The evaluation can be pupil orientated or curriculum orientated, depending on whether the focus is either on learning outcomes or curriculum development. It is important that the initial evaluation, as well as the formative and summative evaluation are thoroughly done. The pupil-orientated evaluation is mainly adopted to determine to what extent pupils have made progress on the road to goal-realization and in regard to the lesson, series of lesson or the annual programme, while curriculum-orientated evaluation seeks to determine to what extent the objectives of the curriculum have been achieved. Pupil-orientated evaluation is only one aspect of curriculum evaluation, as the focus in regard to the curriculum-orientated evaluation falls on other aspects other than that of the pupil (Carl, 1995: 119). For the purpose of this study, evaluation is learner-directed and not curriculum directed.

There are two types of effective evaluation that are vital, namely formative and summative evaluation, vital as they contribute towards the writing of theoretical guidelines in the following chapter.

(a) **Formative evaluation**

De Corte et al., (1981 : 353-354) as quoted by Carl (1995 : 121) state that it is
desirable to evaluate the product during the developmental phase on an ongoing basis in order to ensure relevancy and appropriate changes. Errors may be identified and corrected at an early stage as a result of this continuing process. Carl (1995:121) further states that formative evaluation offers encouragement to pupils if they reflect the content correctly and also offers feedback to pupils who do not comply with the requirements. Output evaluation enables students performance to be assessed in order to determine those aspects needing improvement and in what ways the curriculum may need to be adjusted (Longstreet & Shane, 1993:145).

(b) **Summative evaluation**

According to Calitz et al., (1980:74) as quoted by Carl, (1995:121) during summative evaluation the learning gain is looked at. It is mainly a summarizing evaluation which takes place at the end of an instructional learning process (Oliva, 1988:446). Summative evaluation concerns itself with the final results of a curricular or instructional activity. The student in this case is a product and the teacher is the manager who is held accountable for output and for a final productivity assessment (Longstreet & Shane, 1993:145). Such assessment techniques may take the form of formal projects, term tests and examinations (Marsh, 1993:102-103). These above-mentioned forms of summative forms of evaluation will be discussed below.

(c) **Tests and examinations as forms of evaluation**

Tests and examinations are valuable ways of evaluating a student's achievement at the end of a course or at the end of a school year. Tests for measuring attainments of objectives should be carefully designed (Ornstein & Hunkins,
Both aim at gathering data for analysis or supplying information. Tests typically refer to materials that are used to assess a student's work and which are amenable to grading. All tests should have a high degree of validity and reliability. Validity refers to the extent to which the test items are representative of the knowledge, skills or values areas being assessed. Reliability refers to the consistency with which items in a test measure the former (Marsh, 1993: 103).

Standardized tests, according to Marsh (1993: 103) are centrally developed and carefully planned. Usually long periods of time are taken to develop items that discriminate adequately and have high levels of validity and reliability. These tests are norm directed and provide a totality of the students' level of achievement in a particular subject and are thus directed to a summative evaluation.

Tests constitute a particular kind of measurement that can provide useful data for curriculum and learner evaluation, but when they are overemphasized they distort curriculum evaluation and can even unintentionally influence curriculum goals and outcomes (Zais, 1976: 371).

According to Calitz et al., (1982: 71 - 72) the purpose of examinations are the diagnosis of learning problems, syllabus evaluation, and the prognosis and determination of the level of achievement. The value of an examination is also to reveal the pupil's degree and quality of progress. Examinations also reveal possible weaknesses in the pupils equipment of knowledge and are also an indication of the effectiveness of the teaching-learning methods that are used.
Because an examination is a measurement of achievements, it has strong motivation value for both teacher and pupil. It is important in relation to the progress and the certification of pupils. Because an approaching examination spurs the pupils into revision and independent study. It is a useful means to prepare the pupil for the application and use of his acquired knowledge. The universities and employers are interested in examination scores. Examination results can provide significant information to show a pupil the direction which he ought to take in the future, to reconsider subject choices, to change from higher grade to standard grade, or to consider an academic or a practical field of specialisation (Marsh, 1993: 102).

However, in a certain sense an examination provides good training in school, in that pupils learn to complete given assignment within a given time, to remain calm under tension and pressure, to distinguish between the essentials and the less important aspects and are encouraged to think clearly and logically. In the light of the above preceding, criteria for effective evaluation will be discussed.

(d) Criteria for evaluation

Evaluation, as a principle of curriculum design should be based on specific criteria in order to determine the extensive quality evaluation. It is very difficult to measure the behaviour of a pupil, which is the expected outcome of education, as compared to knowledge, skills and attitudes of pupils. The necessary evaluation must be continuous, consistent, valid, reliable, useable, individualised and democratic. For the purpose of this study evaluation is necessary to assess the success of teaching including the extent to which the aims have been realized.
Continuity
Wheeler (1983: 269) states that whether the evaluation programme is directed towards course improvement, decisions about individuals or administrative regulation, it must be continuous. Assessment feedback is necessary in motivation.

Consistency
Curriculum objectives present some sort of hierarchy in that they can be arranged in an order of importance. The same hierarchy must be present in various aspects of assessment. If emphasis is laid upon the measurement of cognitive outcomes, it should be because cognitive outcomes are thought to be more important, not because measuring them is easier or more reliable (Wheeler, 1983: 270).

Validity
In the evaluation procedure, the greatest care should be taken to ensure that any measures used have empirical validity in the sense of relevance, that is, closeness of agreement between what the test measures and the function it is supposed to measure.

Reliability
Reliability refers to the stability or consistency of the accurate test results.

Useability
A test possessing useability quality, is relatively easy to administer and score. It is also not expensive.

Individualization
Individualization refers to self-evaluation because it offers each pupil or student an opportunity to evaluate him or herself and thus see his own actions in
perspective. It makes provision for individual differences and needs.

**Democratization**

Evaluation must be democratic in the sense that opportunities are made for each pupil in a learning contract.

In the context of this dissertation, when aims, goals and objectives have been stated, the learning content selected, the learning experiences planned, the learning opportunities integrated, organized and translated into practice in a teaching-learning situation, an operation will be needed. The result of planned procedures in a teaching-learning situation will be termed "outcomes" or desired "ends" produced by a "means". Evaluation will enable teachers to compare the actual outcomes with the expected outcomes, and will arrive at conclusions about the comparison with a view to the future (Wheeler, 1976: 267). It is an important final phase letting one know whether objectives have been realized and, indeed to what extent they have realized.

**4.6. SUMMARY**

In this chapter the researcher discussed the principles of the curriculum design in detail. The researcher has chosen the Krüger (1980) model for curriculum design because of its six interwoven principles, which are related interdependent and combine to form a cyclical process, and the final stage is continuous, affecting the initial phase. Each phase is a logical development of the proceeding one. This will serve as a guideline in designing a curriculum for the senior secondary phase. Chapter Four leads to the discussion of conclusion and recommendation in Chapter Five.
CHAPTER 5

AIMS, GOALS AND RECOMMENDATIONS

5.1 AIM OF THE CHAPTER

The aim of this chapter is to integrate the empirical research information of focus group interviews conducted in Chapter 3 with the theoretical guidelines for curriculum design in Chapter 4, in order to conclude and draw up recommendations for designing a relevant curriculum for the senior secondary phase.

5.2 RECOMMENDATIONS

5.2.1 Aims and goals

In the curriculum design model the setting of aims and goals is linked to situation analysis and to society's philosophy in underlying the nature of what is taught and learnt. Therefore the researcher will concentrate on aims and goals. These aims are long term, broadly phrased statements whilst goals are medium to long term, precise statements. Because the senior secondary phase takes a medium to long period of five years, that is from Grade 8 to Grade 12, this will suit the purpose of concentrating on aims and goals and (not on objectives, which are short term, specific statements, devised by teachers at the micro level). This has enabled the researcher to formulate aims and goals from the empirical research data, highlighted by Gauteng employers during the focus group interviews.
5.2.1.1  Aims

The following aims may serve as guidelines for designing a relevant curriculum for the senior secondary phase in the Gauteng province.

* The aim of moral education is to develop a sense of morality, i.e. good behaviour and responsibility in the learners, which is acceptable in society.
* The aim of global competitiveness in education is to develop and prepare skilled school leavers who can successfully participate in the worldwide economic market.
* The aim of career guidance should be to develop vocational, scientific, technological, mathematical and commercial skills.
* The aim of safety and security in education is to develop a sense of responsibility and security, an essential requirement for the learner’s healthy development and the basic security of a place to study and live at.
* The aim of an art curriculum is to develop the learners’ creativity and vocational skills, in pursuit of building up self-esteem and self-development.
* The aim of sports and recreation may be to develop the learner’s physical fitness, motor skills and sport skills for recreation and socialization.

5.2.1.2  Goals for schooling

The following goals for senior secondary schooling in Gauteng province have been identified taking into account the above-mentioned aims.
Social goals: Moral and ethical character

* To develop a sense of morality by teaching learners to distinguish between right and wrong in their everyday lives at school and elsewhere.
* To teach the learners the values and meaning of being disciplined and responsible at school, i.e. not to be late at school or elsewhere, and not to dodge classes when homework is not done.
* To be disciplined and responsible by contributing towards one's own achievement and education.
* To develop the judgement to evaluate events as being right or wrong.
* To develop a commitment to the truth and good/proper values.
* To develop an understanding of the necessity for moral conduct.

Goals for globalization:

* To train and develop skilled school leavers to work hard and become equipped with knowledge that will enable them to participate successfully and competitively in a rapidly changing world of international production and financial activities.
* To develop skills for communicating effectively in groups.
* To develop a concern for humanity and an understanding of international relations.

Vocational goals:

* To learn how to select an occupation that will be personally satisfying and suitable to one's skills and interests, in order to become experts in their vocations, for example in the fields of science, technology, mathematics
and commerce.

* To learn how to make decisions based on an awareness of knowledge of career options.

* To learn marketable skills and specialized knowledge that will prepare one to become economically independent.

* To learn to work for the society.

* To develop an awareness and capability to use science and technology in the service of human and other needs.

**Academic goals : Mastery of skills and intellectual development**

* To teach learners how to handle basic mathematical operations.

* To teach learners how to utilize mathematical concepts.

* To teach learners how to accumulate knowledge including information and concepts in science, mathematics, technology and commerce.

**Social and civic goals :**

* To teach learners a sense of safety and emotional security by helping them to become confident and competent individuals in a secure environment, i.e. the school (which is essential for learners' development), and a basic, securely place to study as well as home to live at.

* To teach learners about protective regulations for their health and ensure their safety from abuse.
Personal goals: Arts, sport and recreation

Arts goals: Creativity and aesthetic expression

* To develop an aesthetic sense.
* To develop learners' ability to experience and enjoy different forms of creative expression and self-esteem.
* To teach learners the ability to evaluate various forms of aesthetic expressions.
* To develop learners' creative ability in arts, for life and work.

Sports and recreation goals: Emotional and physical well-being

* To develop physical fitness, self-esteem and recreational skills by means of the relevant exercises.
* To develop competency in sport.
* To learn how to use leisure time effectively.

The section of aims and goals leads to the guidelines on content selection.

5.2.3 Content Selection

In the curriculum design process the selection of content determines the nature and extent of the relevant curriculum. It is the relevant selected "WHAT" which must be conveyed to pupils as part of education and development, in order to achieve various aims and goals. The selection of content in this chapter is based on data illustrated by Gauteng employers in Chapter 3. The moral education content should be selected in relation to what takes place in the learners everyday lives and environment. For the development of morality, learners should be
taught the values and the principles of good behaviour as well as values such as right or wrong to ensure the smooth running of classes and schools. Learners should be taught the value of time, that is, to be punctual at school, in class and at any activity taking place in school and elsewhere. Pupils should never be late at school, they should avoid dodging classes if they have not done their homework. They should learn, for example, that it is wrong to tell lies, to insult others and to stealing other pupils' books, pens, rulers, money or any other equipment in school and elsewhere, because none of the above-mentioned acts are acceptable in our society. Stealing other peoples property is a crime and no society accepts or tolerates thieves, because it is generally believed that it is wrong to steal. They should learn to know what as well as the repercussions thereof. Television and radio programmes on such offences and crimes should be watched and listened by learners. Church ministers should be invited to schools to come and preach in order to impart proper moral values. Officers from the Safety and Security Departments should be invited to schools for workshops arranged by teachers on moral issues and its legal implications.

In relation to Safety and Security, the selected content should ensure the pupils' safety and security in homes and schools, because the rate of violence, rape, child abuse and crime has increased. Such safety will be ensured when Child Protection Unit is introduced to schools in order to protect and to teach learners about child abuse. They should be taught about the terrible reality of rape and child abuse, their implications and how to avoid these crimes. Pupils should be taught about the health, safety and security regulations protecting them as citizens, at school, home and wherever they are. They should learn to report any crime and vandalism occurring in their schools, homes and elsewhere in their neighbourhood.
Learning content selected in relation to *global competitiveness* in South African context should be realised in socio-economic. In terms of economic education, particularly with socio-economic relations, the pupils should be taught and encouraged to compete worldwide in the competitive arena of international production and financial activities. In such global competitions the learners should be taught different basic life skills in order to become skilled school leavers who can participate successfully in the global market.

The selected learning content in relation to *career guidance* is based on vocational training. Learners should be taught how to select future occupations that will satisfy them as individuals and also be suitable to their skills and interests, so that they may become experts in their own vocations. Through career guidance the learners should be helped in understanding the different types of careers or jobs related to the relevant subjects they are studying. They should learn to make choices and decisions based on an awareness and knowledge of career options. They should learn marketable skills and specialized knowledge that will prepare them to become economically independent and earn a living, and also serve the society in which they live. The relevant learning content should link the learners with the business world, and should foster the ability to interact effectively with others in the home, school, workplace and the community. They should learn to respect authority in school, as this will enable them to respect authority and others in the workplace.

In relation to the *occupational skills* of technology, science, mathematics and commerce, the learning content should be carefully selected. The selected content in relation to science should be based on what the society needs as highlighted by the employers. The learners should be taught how to obtain sufficient knowledge by observation and testing. For example in physical science there
should be basic and applied researches conducted. In so doing the senior secondary phase will produce scientifically orientated, literate persons who will understand the key concepts and principles of science, who will be familiar with the natural world who will recognize both its differences and unity, and who will be able to use scientific knowledge and ways of thinking as an individual for social purposes.

The learning content of *Technology skills* should be selected to make education more productive, powerful and learning more immediate. Learners should be taught how to operate computers in accordance to their level of development and understanding. Technology is an essential cross-curricular entity which finds its natural home with science as a core subject, in which language, mathematics and scientific concept development intersect. Through the learning content offered at school, learners should be able to use technology effectively and meaningfully in gathering information to solve problems, to create and evaluate products and to communicate results. They should learn to use technology safely and ethically at school, at home and as workers serving their community and society. Being technologically and scientifically literate one becomes aware that science, technology and mathematics are interdependent human enterprises with their own strengths and limitations.

The employers highlighted that society needs school leavers who are conversant in *mathematics*. For learners to become conversant in mathematics, the selected learning content should give learners access to mathematics by getting them involved with mathematical processes. Learners must know more than just how to add, subtract, multiply, divide and how to approach percentages, decimals and interest rates. These above-mentioned consumer mathematics skills will not be adequate enough to serve anyone who would want to live and work productively
in the 21st century. Pupils need an operational plan for instruction that details (1) what learners need to know, (2) how they are to achieve the identified intended mathematics curricular goals, (3) what teachers are to do to help them develop their mathematical knowledge and (4) the context in which learning and teaching are to occur.

Commercially orientated people are the most important ones to get the economy growing. The selected learning content taught at school should be focussed around business. Learners should be taught how to start their own business by selling their own items and making money. The enlightened schools, such as Kingswood in Grahamstown who have introduced business and budgeting as subjects, teach their teenagers how to budget successfully and become mature self-confident financial managers in later life. Carefully selected commercial content for entrepreneurial skills training will enable them to cope with the competitive world outside school.

The learning content selected in relation to the arts, sports and recreation should be taught to the learners in order to help them develop their talents, bodies, mind and souls. The art content should include creativity and aesthetic expression and the learners should be taught how to become artists by expressing their feeling, such as anger, happiness and disturbance through drawing, painting and carving wood. They should be taught how to appreciate a beautiful picture and how to evaluate different forms of creative expression. A pupil who is talented in art should be encouraged, for example, to make it a career and to earn a living from it.

The sports and recreation content should be selected in accordance to the developmental level of learners. It should include different types of sporting
activities such as soccer, netball, basketball, tennis, athletics, swimming, javelin and others. Sporting activities and regular exercises will promote emotional and physical fitness as well as increase self-esteem. By regular participation in sporting activities one develops competence in sport, and is able to be selected in South African teams representing the country, in the Africa games and the Olympics. Through sports one socializes with other people and uses leisure time effectively.

5.2.4 Learning experiences, learning opportunities and evaluation

The guidelines are formulated from the interpretations of what the employers said during the focus group interviews. The employers did not say much about how to teach, but they mentioned that South Africa needs 75,000 technical schools in the year 2000. Learning opportunities in such technical schools should be created to enable the learners to experience practical application of learning content, for instance in a computer centre where learners will be able to operate computers on their own.

The learning opportunities in relation to moral education, globalization education, career guidance, science, technology, mathematics, commercial skills, safety and security, arts, sports and recreation should be relevant to the life situation in reality. Senior secondary learners may gain experience through experiments in science, projects, discussions and field work and other methods. The learning experiences and opportunities in relation to moral education, globalization, career guidance, science, technology, mathematics, commercial skills, arts, sports and recreation should be integrated in the curriculum so that the learners can be able to take their place in their society and address the needs of society as perceived by employers in Gauteng. Learners should be evaluated
in terms of the identified specific skills the employers need for employment in the labour market. For the purpose of this study, the formative evaluation ongoing and may take place in the course of the instructional learning process after the finalization of goals to be used in identifying learning problems which may occur in a teaching-learning situation. The summative evaluation which takes place at the end of an instructional learning process should also be used in identifying learning problems. The needs of the society will then be evaluated as the proper needs. The practical application, for example in a computer course of instructional learning processes, will put the theory which the learners learned into practice. This leads to a discussion of the limitations as well as the value of this study in the next paragraph.

5.3 VALUE AND LIMITATIONS OF THE RESEARCH

The researcher conducted only four focus group interviews in the Gauteng province, because of time limits and financial constraints. The dissertation is part of a group project in which seven researchers identified the needs of society in seven different perspectives, namely the parents, lecturers, employers, subject advisors, religious leaders, and learners. In this dissertation the needs of society as perceived by Gauteng employers were identified.

The value of this research study lies in the fact that the researcher has identified the society's existing needs. These needs were interpreted in terms of guidelines in curriculum design. The learning content has been selected from the identified needs of society.

In concluding this study the researcher recommends that further research be conducted by curriculum designers in order to develop a further set of
guidelines based on an outcome-based curriculum. This need exists because the researcher did not undertake any outcome-based curriculum design in this research study.

5.4 SUMMARY

The aim of this study has been to identify the needs of society as perceived by Gauteng employers through focus group interviews. In the last chapter, aims and goals were formulated from the empirical data highlighted by employers during focus group interviews in Chapter 3. The research study was then evaluated and concluded. Recommendations were made in the form of guidelines for designing a relevant senior secondary phase curriculum in the Gauteng province. A relevant, balanced and integrated curriculum aimed at developing life long education and training for the 20th century is highly possible, but only if these formulated guidelines can be effectively implemented in the senior secondary schools in the Gauteng province. Such a curriculum will give young people still at school better opportunities to continue with their education and training in good faith, and thusly with zest and motivation.
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## ADDENDUM A

### LIST OF RELEVANT ANSWERS

<table>
<thead>
<tr>
<th>Interview 1</th>
<th>Interview 2</th>
<th>Interview 3</th>
<th>Interview 4</th>
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<tbody>
<tr>
<td>• skills to be able to be competitive in this world today</td>
<td>• have ability to develop life skills</td>
<td>• if you find somebody lacking skills we have our own training</td>
<td>• have skills for unemployment to be addressed in terms of being competitive</td>
</tr>
<tr>
<td>• life skills training, basic life skills, and actual things like life skills functions</td>
<td>• lack of job opportunities leads to crime, robbery and violence</td>
<td>• get the skills</td>
<td>• bring in more training to acquire the skills that the company needs him or her for</td>
</tr>
<tr>
<td>• life skills foundation they need .. have better picture of global competition</td>
<td>• future careers and skills, very important</td>
<td>• if they don’t have skills we don’t appoint them</td>
<td>• today’s life needs skills to be competent and conversant with the environment</td>
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<tr>
<td>• recruits to have particular skills, bridging courses ...</td>
<td>• important societal needs is employment</td>
<td>• you move in other fields, you will always have business skills to use to your advantage and making it more practical</td>
<td>• education focus must be business orientated, all subjects done by students and lessen the concentration of sticking to mother tongue</td>
</tr>
<tr>
<td>• give them skills in technological and scientific fields</td>
<td>• create jobs for citizens to prevent crime</td>
<td>• ...more emphasize on financial subjects like Business Economics, Economics, Accounting and Banking</td>
<td>• involve community, they can have responsibility in projects, have a say, to tell what their needs are</td>
</tr>
<tr>
<td>• a skilled and literate work force is able to do contributions</td>
<td>• squatting a serious problem, shacks as informal settlement are mushrooming everyday</td>
<td>• let pupils sell their stuff and make money by creating a business mindset for them</td>
<td>• focus must be business orientated</td>
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<tr>
<th>LIST OF RELEVANT ANSWERS</th>
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<tr>
<td>Interview 1</td>
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<tr>
<td>- companies should be involved in sponsoring students</td>
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<tr>
<td>- organization is moving towards technologically driven process, we need technologically active, literate students coming out of school situation</td>
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<tr>
<td>- conversant in mathematics, preferably computer literate</td>
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<td>- commercial and hard sciences are the most important to get economy growing</td>
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<tr>
<td>- hard sciences make the country tick ... we are talking about scientific inventions</td>
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<tr>
<td>- If you lay a foundation start these youngsters with Maths, Science physics, Chemistry</td>
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<td>Interview 2</td>
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<tr>
<td>- homeless and squatters needs can be addressed when treating settlement aspect</td>
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<td>- own a house according to law passed by parliament, instead of unlawful squatting</td>
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<tr>
<td>- importance of Maths, Science and cultural values should be emphasized</td>
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<td>- Education is an important societal need... successful society needs citizen with strong foundation of education</td>
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<td>- have ability to learn and apply new knowledge</td>
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<td>- explain how to keep their areas clean</td>
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<td>Interview 3</td>
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<tr>
<td>- if subjects are there they need to get are realistic approach to business economics</td>
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<tr>
<td>- ...giving more specific training ... making it more practical to suit the banking environment</td>
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<tr>
<td>- make a choice of career and then training in their later part</td>
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<tr>
<td>- do practical things in Business Economics and you pick up your Economics then Maths comes into both of these</td>
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<tr>
<td>- guide them in practical way how to do business and they assimilate</td>
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<tr>
<td>- they basically have to make own decision on how to run own business</td>
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<td>Interview 4</td>
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<tr>
<td>- ...need technically orientated people, scientifically orientated, commercially orientated to drive the company towards attaining goals and objectives</td>
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<td>- ...pupils to do technically orientated subjects and stop wasting time</td>
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<td>- pupils to be properly guided and harnessed</td>
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<tr>
<td>- curriculum at school level is not career orientated, kids choose subjects without being guided as to what stream to follow, what do they intend doing in life</td>
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<tr>
<td>- career guidance to start at secondary school</td>
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<tr>
<td>- South Africa needs 75 000 technical schools in the year 2000</td>
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<td>Interview 1</td>
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<tr>
<td>Provide more specific subjects, e.g. arithmetic or basic numeracy functions for tellers training</td>
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<tr>
<td>... guidance, the individual knows exactly what subjects to take to prepare him/herself for that career</td>
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<tr>
<td>career guidance, we need to concentrate on the lower levels from a very early age, to develop specific skills, identified to help achieve realistic job and career expectation</td>
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<tr>
<td>we need to concentrate on technical schools</td>
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<tr>
<td>introduce more technical schools</td>
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<td>in black schools it does not seem to be any order, things are going on in a chaotic fashion</td>
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<tr>
<td>make sure kids understand how classes work, how they are responsible to contribute towards their education and advancement</td>
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<tr>
<td>Department of Education has to come up with policies that could bring discipline and effectiveness in schools</td>
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<tr>
<td>Interview 1</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td>• whole community needs to be involved in the whole restructuring</td>
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<tr>
<td>• Education is an investment in future, not an expenditure</td>
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Researcher : Good morning, gentlemen

Respondents : Good morning

Researcher :
Thank you very much for accepting my request for an interview. I am going to interview you as employers who are involved in recruiting matriculants. We do not have right and wrong answers. As such, I want each of you to be free and contribute as much as you can. The information that I am going to get is confidential. Your information will help me in designing a relevant curriculum for senior secondary phase. I will start by asking this question.

In your opinion, what do you think are the needs of society that can be addressed in high school education?

Respondent 1:
Thanks, I think, I will answer this, purely out of the employer’s perspective at this stage, in saying that in our organization we are moving towards a technological driven process within our organization, and as such we need to have a technologically active, technologically literate students coming out of a school situation, who are conversant with mathematics, for instance, and preferably computer literate at that stage. Because of the nature of our business a lot of our processes are actually being computerized and being actually controlled by and done by computers, and as such that is our basic need or primary need as employer. We do have obviously a lower skills requirements, but I think in the long term we are looking towards a technologically driven process in our company.
Respondent 2:
I think, to add on what he has said, as far as societal needs are concerned, South Africa has entered a new era where we become a part of the world community, and as such we have entered a global village as competitors as far as business is concerned and then obviously we have to have skills to be able to be competitive in this world today, and I think one of the major issues that needs to be addressed as far as societal bearings, as youngsters need to be in the workforce to give them skills and these skills will be in the technological and scientific fields.

Respondent 3:
Just to add on that I am of an opinion that there is a belief amongst the black society that most of the young ones concentrate on the general subjects or so, when you look at, when you now come to the side of the work, commercial and hard sciences are the most important ones. In order to get the economy off and going we have to concentrate on that. In that version it is very, very necessary to restructure the whole education field in order for us to meet the needs of the society.

Respondent 1:
I think I have mentioned to you that the numbers of people we employ, so we are considered as a major employer in the South African sense and across the broad spectrum our experience in the past has been, especially the black education system that provision has not being made for a function specific subjects as your arithmetical function, for instance we are experiencing short term problems of finding people not with the right potential but with actually the right educational foundation and it sometimes is necessary that we actually provide bridging courses in the basic numeracy functions to actually equally equip these people to undergo the training that we expected them, the training if we just take one aspect of our period and it requires a lot of basic numeracy skills so that is what we are experiencing up until now, that's why we are saying in longer terms we need to have education system that will improve, provide these people with the more functional subjects, general subjects is not really what we are looking for.
Respondent 2:
I think to add further, the question of guidance as far as these youngsters are concerned in high schools, in especially predominantly black schools in the past I don't remember having a single guidance career counselling as far as the career guidance is concerned. I think that is important, such that these youngsters as they go along through high school they must be able to make their choices as to whether to go into medicine as to whether into business and what have you and I think that guidance is very crucial so that the individual knows exactly what subjects to take to prepare himself or herself for that career that he wants to pursue in the future.

Respondent 3:
Just to emphasize the question of career guidance, we are now looking at the senior secondary level, but we need to start somewhere. We need to concentrate on the lower levels, if we would like to build really a future. We have to start now, forward. We have to look now for the next 20 years. Now with our particular members. We have to start with the lower levels, the greater ones ... the greater we start there and we identify our market there and on that particular level, it is where we are going to identify our people. We concentrate on the hard sciences and commercial subjects and in that version from that particular growth at the end of the day, when we will be having the required people or the required outside world skills whereby we need to utilize in the working atmosphere.

Researcher: (Nods her head)

Respondent 2:
I mean, as I have said earlier on I am not sure if the companies can directly help to meet the societal needs. The only thing that the employers or potential employers could do is to recruit individuals and evaluate them as to the skills that they have and then from there try to develop these skills or bridging courses, and what have you, but then generally looking at it from a societal perspective I think politicians are the ones that are in need to be advised as to exactly what the situation is at the ground level, that we are experiencing the problems, what if you pass certain legislation to make sure that we get
somewhere and what have you, but generally I think employers themselves are out there to recruit and make sure that the individuals they have recruited have particular skills and if they don't have them, help give those individuals with particular skills, bridging courses and what have you, and that is the only way they can do it to provide these skills.

Respondent 1:
I think I have made a point that we should be looking at longer terms definitely the whole education policy the government should be looking at longer terms and saying what kind of skills do we need to produce in the country at the end of the day and I have mentioned the term of 20 years, that is a bit long, Ah... but not totally unrealistic, but what would happen if we look at the curriculum entirely and make provision for that career guidance from a very early age and evaluation of a certain potential and what is really needed to develop specific skills that has been identified and to actually help the person at the end of the day to achieve realistic skills level and also realistic job and career expectation.

Researcher: (Still nodding)

Respondent 3:
I think in addressing these needs in high school education, I think we need to concentrate on technical schools. We have less technical schools and more general high schools, so we have to go back again concentrate, and look at our teachers whether they have got basic skills to teach these subjects because if we introduce more technical schools we'll automatically, be addressing these particular problems. In that version even the employer now would like to empower and educate his own people, he will simply refer this particular group which has join the Department for so many years to such a technical school to perform and improve their own skills, but because of lack of such facilities you find yourself still following up in the same route whereby they concentrate on the general subjects. You will be simply teaching them how to write their own names and to read, that is all, which is not really the solution to the problem.
Researcher:
Does your department have technicians who are trying to address the needs of the society?

Respondent 1:
... not in the broader sense. Ah . . . ! Our core strategy is actually providing service to the society. Eh! But we are not geared to actually to addressing the educational needs of the society. What happens in practice is that because of the current education system I think I mentioned earlier on that we do sometimes have to provide certain bringing courses Eh... ! we are busy providing adult basic education of those people on our service and who are actually disadvantaged as far as education is concerned Eh! But those are the core functions of the company.

Researcher:
Can anyone add on this?

Respondent 3:
I think I do agree with what is said by the speaker

Respondent 2:
We are I mean, internally focused in terms of trying to develop our employees as per say not the general society but I think in a little way you can look at that as contributing to society and if your own work force that is skilled and literate that is able to do the job effectively then I think you have contributed to in a lot of ways to society and it's not a direct contribution.

Researcher:
... Well are there any other points of view concerning these societal needs?

Respondent 2:
I think may be in general again one of the societal needs that we need to address here today in South Africa especially looking at where we come from and as to how we as society, we have been disrupted I mean, you look at education system as to what happens in most schools particularly black schools I mean it does not seem to be any
order, things are going on in a chaotic fashion. I am currently trying to talk about discipline, I am not talking about old days whereby somebody gets out of the line, you had to be punished, that individual and that stuff but I think of a very structured form of making sure that kids understand how classes work at school, how they are responsible to contribute towards their own education and advancement in life. I think somehow the Department of Education has to come with policies that could bring discipline and effectiveness in schools. As I say, I mean you listen to people who are involved in education at times kids leave school at 10 o'clock in the morning and they never come back and stuff like that so I think discipline has to be brought in, and this could be done through ways of policies that are put forward by the government because obviously I think the new government does not want to follow the old ways of just simply punishing and caning kids because they misbehaved and stuff like that, but there has to be a way of bringing order and discipline in schools that remain focus that will help us to move forward as a society especially as far as the education of our kids are concerned.

Respondent 3:
Just perhaps to bring more on what he is saying. I think I remember the other day last week I had to phone the principal because there is always a tendency that between 9h00 and 11h00 you will see kids going to the post office, paying teachers telephone accounts, buying postal orders, sending money orders and all those things and so on, that one really is a problem, I mean that time I normally ask myself that if that particular kid, two or three are inside the post office at that time, is that particular teacher at that juncture adjourning the class, awaiting for the kids or is he continuing or what and then what future holds for such kids and for that particular teacher, also I mean we have to restructure, we have to start afresh and concentrate, the DET has to look at itself first and discipline its own people, but now the whole thing lies on the imbalances, they have to try and balance the set up and they have to work intensively before they can come up with the policies.

Researcher :
Don't you think that the needs of the society are not addressed in the sense that services
need to be taken to the society, to the school community, in schools in the area perhaps if you bring the services nearer to people?

Respondent 3:
Ja, Ja, I do believe that we need to take the services nearer to the people, then it will address the societal needs, but then what is important is, irrespective Rome was never build in a day, so we cannot justify what I have just mentioned because of that, but what is important is that, we have to strive, we have to bring that to the society, but what is important is that the discipline must be there, everybody must be disciplined.

Respondent 1:
I think the two aspects here that both respondents have touched, that is long term and short term. I don't think in the short term we can justify what respondent 3 and 2 has been telling us, with our existing structure you should be able to focus on the society's needs, Eh! In terms of there is an existing infrastructure and that must be used optimally, Eh! Not allowed to be abused if I might use that term. The other issue, the longer term and that is what respondent 2 has said, the question of self-discipline and that could be addressed by curriculum life-skills training, basic life-skill, training and actually the things like assertiveness, eh ...! even basic life-skills functions like how to deal in the bank, how to run your personal accounts and things like that, but I don't think that these things are addressed effectively and the result is you have not got the self-discipline and even when these people leave school they do not have the ability to actually work with money and that goes across the broad spectrum as well.

Researcher:
So, what are your suggestions or points of view in improving this situation that we are faced with?

Respondent 2:
I think that as I have said on earlier, obviously we as a society, generally it is our responsibility to make sure that we have an interactive system of education that will contribute to the well being and the development of the country, but once again I will
come back to the question of the policy, it is only the government that can guide us. I mean you said earlier on that how could we try to get education to the people, obviously it should be a situation whereby the people feel, this is our responsibility, we are trying to develop ourselves, we want to make a contribution to the well being of our community but through government policies there could be guidelines as to how society try to advance themselves through government policies there could be guidelines as to how society try to advance themselves through developing a curriculum benefits that particular society and generally the country as a whole. I think the government has the responsibility of coming up with the right policies that will guide different communities, the country as a whole as to this is where, and how we are trying to grow, this is how we are trying to develop this kind of educational system. I think the government has the responsibility and nobody else because I mean obviously in a lot of way we as individuals in our society we have different ideas but if we have politicians that have been elected, they have the responsibility to build up guidelines that will help us to get somewhere else.

Respondent 3:
Now, then the whole community needs to be involved in the whole restructuring, we, the forums need to be held, the parents need to be involved, to have a saying in the type of education their kids are in, they need to be there whenever they are required. I think there are a lot of things perhaps we are not aware of, of which parents know, or may perhaps come up with better solutions, once we go down there and speak to the people on the ground, and do thorough investigations during the workshops, and whatever forums may be held for the community. At this juncture each and every community has a structure, they have various forums we can utilize their meeting in order to address these needs.

Respondent 1:
I think there is an urgent need to relocate the curriculum, eh! Totally, not only the secondary school, but possibly your immediate concern should be on the secondary school because they are the people that are in a short term are going to leave school, are going to be seeking employment, eh... long term, you will have to look at the total
curriculum system though in the function of foundation the life-skill foundation they need eh! In a way I agree with respondent 3, but I would be careful at the extent of the parents involvement, eh! The parents, agreed, should be made aware of what is best. I am not saying we do not take note of their input, but parents tend to see their children development or measure the developments of their children against their own development or some other role models and they don't necessarily know what is best to their kids, but certainly they should know, but should be completely aware and involved in the obligation to actually educate their children.

Respondent 3:
Ja..., perhaps to elaborate on that, the problem we have, more especially the black is at the rural areas. It is just in broad that they don't know what is happening and they are not involved. Whenever a child comes back from school, and started doing something else, whenever a child talks about homework, it is something they, parents don't understand and in that version that particular child gets punished if he doesn't take instruction from the parents, so you'll find that this child is forced to do something else, and he doesn't have a time-table, you know sometimes whenever you read CV's of other educationists, he will tell you that he use to do the homework with a candle under a blanket. It seems that this person is lying, but he was doing that to avoid that parents should think that the person if fast asleep, instead under the blanket and candle he is reading, trying to accumulate and doing the homework, so these are some of the things, it is a long term thing, but needs to be addressed it must not be totally ignored.

Respondent 1:
That is correct, that is not the point actually the parents or we could be generalizing now, parents would tend to think it's not necessary for children to do their homework. Eh! what is then necessary is to actually begin an awareness for the parents as to what is required to actually educate themselves not necessary for them to say what they think is necessary in terms of the curriculum but certainly to be made aware of what is the broader obligation of education the homework requirements, eh! Even the stimulation in the home, you know and the support and the opportunities he allows for education.
Respondent 2:
I think somebody has mentioned earlier on, I think one of the most crucial key thing to be done is the evaluation of our teachers in terms of their skills. Eh! I think most of our teachers, particularly black teachers as they come from the Bantu Education system I mean the kind of courses they had to do in a lot of ways are irrelevant to today's world, I mean, eh! respondent 1 mentioned earlier on technology, science and what have you, and mathematics and you find that most of our teachers don't have those kind of skills and then hopefully some kind of programme is developed for them, bridging courses and what have you so that they can be able to teach these kids that what we are talking about, eh! otherwise without evaluating them or so, we are not going to go anywhere because we want people with skills to teach our children so, that has got to be taken into consideration and I think it is the government's responsibility in that particular area.

Respondent 3:
Respondent 1, perhaps to add on that, on the level of teachers the other thing, because it seems now, in order for a teacher to go in a certain curriculum they should have a certain qualification, how they achieve it, then in which level he/or she majors is not a problem the main important thing is the certificate, so they are not educated but certificated, so it's in order for the department to put an embargo on it, they have to channel this thing that the subjects like Criminology, that must be too expensive for a teacher to follow that curriculum but it must be cheaper for the hard sciences and commercial subjects, well, I remember talking to a certain guy from America. He was telling me about beers, cigarettes, cars and all those, when you go overseas you find that they are very expensive and you cannot buy there, but those things which are societal needs are so cheap and affordable, that the 99% of the community tend to concentrate on what they can achieve and if you see a person in Japan driving a car you must know that this person is a multi-millionaire, you can bring that into education and put an embargo on that if you follow this line you must pay heavily in order to achieve the criminology degree or whatever but if you want to achieve the hard sciences or commercial then it is free of charge in that particular level in that version we are going to stipulate what we are going to have in that.
Researcher: 
Don't you think that the Department of Education has stated that there is nothing free, they cannot give free education, now with that problem how would that be motivated that teachers should be trained in this particular field?

Respondent 2:
I think again the government has the responsibility and I guess, I mean this kind of political educator and you remember during, or before the elections you know the campaign, the promises that they made and then I think generally most people have come to believe that there are certain things that they will always get free, so I think that the government has the responsibility to explain to people that, guys we are ready to meet you half way, but know that you also have a part to play as regards to paying of fees and what have you because right now to a certain extent people take it for granted that now we have a black government everything is free, reality is, somebody has to pay for that and obviously government doesn't have money, doesn't make money, government takes money from people in the form of taxes, now when we don't have enough people employed, how would the government generate funds to meet other obligations in society like education itself so what I simply say in short is that the government has to go back to the people and explain to them that we can go thus far, you as individual within society, you as a citizen have a certain responsibility, we can't pay everything for you, I guess this Masakhane campaign could be used in that sense too as far as the question of education is concerned, I mean, eh! We can see what is already happening in the Tertiary education. I mean eh! Most kids feel like it shouldn't be fees paid at all, you know but there is always somebody paying those fees and at the same time we are talking of trying to grow the economy, but when the government overtax people, how will people save money to invest in business and as such created jobs and what have you, so those things have to be balanced and have to be looked at very careful, so I think it's the government's responsibility to make sure that people play their part and act responsibly.
Respondent 3:

..... And of course having that in mind also D.E. doesn't sponsor and doesn't say education should be like this for the children and what should be done is simple and straightforward we have to have companies in South Africa to be involved as long as this is done by the Department of Education, that will be successful. The companies should be brought in, should be involved in sponsoring those particular students, but what I have said is, it should be made difficult for a student to obtain a bursary to study general subjects that should be maintained and then the bursary should be made available for these hard sciences and commercial subjects and the companies at the end of the day the government will never even spend a cent once the companies are brought in, and they are given the blueprint, this is our version, that we want to move in that particular direction of not going to offer any assistance to those particular students, we are strictly going to invite as this is our concern, if a person in this juncture apply for a technikon, and obtain a lower D symbol, should sit for an aptitude test to add to your symbol or marks, and that very same thing should happen. It should not be seen as just because you have obtain an A symbol in Biblical studies you must automatically qualify for a bursary or a university entrance, and you must not go through this, in exception only those whom we know that they are there to build our own country.

Respondent 1:

I think one should be careful here on being too rigid in this, I think the basic point of departure should be that education is an investment. It should be seen as an expenditure, eh! It's an investment in the future of not only of certain individuals but of the country in general because without an educated population, I think you end up in a spiral declining economy etc. If you don't have an educated workforce at the end of the day you don't have a developing economy etc, eh! Then the demise might disturb the system, now, so one should be very careful to say that nobody gets anything for free. I still personally feel there is an obligation in the part of the government to provide a free education or at least heavily subsidised education up to a certain level. I agree 100% with respondent 3 once it comes to specific subjects and Tertiary education etc, then the subsidy should be varied in terms of what is the priority requirements that should be heavily subsidised. The lower level priority of subjects and skills that are not
required they should not receive a subsidy because I think even in the past in the White Universities you had hundreds of students going in the field of BA degrees and Biblical Studies, Criminology and the things like that and that would be subsidised to some extent, to your Medical students, eh! And your Science and Engineers. Eh! There is something wrong with the system and that is probably where the imbalances occurred in the past, is that the priorities were just wrong and the money was channelled to irrelevant studies.

Researcher :  
Don't you think that such studies too are also important for addressing needs of the society, because there should be balances?

Respondent 2:  
Are you talking about Social Studies Sciences and what have you?

Researcher :  
Yes

Respondent 2:  
I think they are important, then I mean if you talk about Social workers and what have you, but the reality is right now South Africa has entered the global village and whether we like it or not it's hard Sciences that make a country tick, we are talking about Scientific inventions. We are talking about medical fields and what have you then I think after the economy takes up, after the country has been in the process of development, obviously we need people like social workers and what have you to help bring order and maintain society in the rightful way but I think without the economy growing, without scientific inventions and what have you, there is no way a society can advance, so its only through hard sciences that we can be able to do that. We are not saying that its not important for somebody to study Sociology. We are not saying its not important to study Criminology. We always need all expertise in any society, but lets face facts that for any country to advance you need hard sciences.
Respondent 1:
I agree, there I think as the graph is soaring up in terms of development the hard sciences, the actual necessity for the social involvement will become less and less because the more the economy grow the more jobs we have the less the welfare society we are, etc, crime rate goes down, etc, so the priority that we have now, currently is not the Social Sciences, but we have an oversupply this time and the undersupply of the hard sciences. You are totally right when you say there must be a balance, the balance must go now towards the hard issues and the focus must move away from the social issues.

Respondent 3:
We should turn the percentage from 60% to 40% so that there should be balances otherwise as it is right now, I was happy about the direction the North Province Department of Education took, whereby they cut the intake of teachers in their colleges because they said they have got exercive teachers and they are all doing the same courses, so they definitely need to reduce the number in courses, possible in their province.

Respondent 2:
Earlier on respondent 3 said that companies should be encouraged and involved in education by way of bursaries and stuff like that. I think to a certain extent companies have been involved, the problem is that the companies are not able to get kids or students who are better with the hard science background, most of them have Agriculture and Biblical Studies and what have you, it makes it difficult, so no if you lay a foundation whereby we start these youngsters with Maths, Science, Physics, Chemistry and what have you, that will be a foundation for companies to go interpersonal. We can take these individuals further but right now companies have to look for somebody who have done Agriculture and Biblical studies. We are not saying that these disciplines are not important, but for society that we are trying to move to, it becomes a problem.
Researcher:
Don't you think that by being invited to schools, it would be possible for you to explain the services so that such streams should be introduced in schools?

Respondent 1:
As long as that does not create the expectations with the students that we are actually recruiting people. We looked serious at that. We repeated that in the past, that you are packed up in a career show, for instance and you have a small cliché basically what we are trying to do is to give information and how people should or what type of development we need in an employee eh! And what type of skills we are looking for but we are not necessarily at that stage recruiting and two weeks after the show you get literally thousand of applications for employment so which is a problem because there is no employment and there is oversupply of school people, actually so that is the danger of something like that, but it can certainly serve a purpose in sort of sensitising kids to know that. I was thinking of doing Geography and History at Matric level but you know that this company is a large employer it is saying to me that I am not gonna hope of getting a job with these subjects.

Respondent 2:
In a lot of ways to overcome the problem that respondent 1 is right to mention, is that of having guidance counsellors in schools instead of having companies to go there because they create expectations so I think in that way guidance counsellors can help.

Researcher:
Don't you think this very guidance counsellor can invite you and that is when you get a platform to explain you services and clarifying such misconceptions of being employed?

Respondent 2:
I mean, I think as he says, as long as it doesn't create that problem of expectations that now this guy is going to recruit us, he is going to give us jobs, and stuff like that I mean such things if they are arranged properly in the school that we will be actually we will
be coming, but coming under this auspices.

Respondent 3:
I think that it is very important.

Respondent 1:
If basically, in our career guidance prospective certainly you can gain something over it. It must be that clear cut guideline or division, saying that we are not recruiting.

Respondent 2:
A lot of things that I have experienced in our communities, more especially among Black is that, normally there is a tendency that whenever a person is from the Department of Education, being a guidance teacher or whatever, and talk to them about their curriculum or their guidance career guidance, they seem to ignore you because they think the possibility of promotions are limited, of becoming a teacher, principal is difficult or an inspector. Sometimes these people invite people from various human resource managements, from various companies just to come and talk in general about that. It will definitely help, they will tend to believe even if there is no guarantee, then the expectations will be created. There is no way we can avoid that because that particular person after addressing them his car will be mobbed up by students who will be looking for his business card, or address, or would like to come and see you in your office just to talk about something, instead he will be coming to look for a job, because he will be thinking that is the right man, the right section, the right department I would like to be at, so then the creation of expectations will always be there. In that way it is important to break the monotony of the teacher always standing in front of them, let different people come and it must be from different companies and each company has human resources and these managers will be utilized and used for these purposes.

(Respondent 1 left for an urgent meeting)

Researcher : Do you think we have missed anything in the discussion up to so far?
Respondent 2:
I don't think so, unless my colleague have something to say. I think we have touched a number of issues, but I mean for re-emphasis sake, I think I will come back to the question that, it is the government's responsibility of guiding us as society as to where we have to find ourselves, especially they have a better picture of this global competition that is facing us in terms of what we need to do to become competitive in this world. So the government policies are very, very critical in this regard.

Respondent 3:
I do believe that there is a document right now from the South African Qualification Authorities which intend to address, basically, based on the companies, it needs to address Adult Basic Education in the companies. It is a nice document whereby we can address the needs. The basic aim is to build the future. Even if I had earlier on mentioned the 20 years approach, but it can still be reduced to 5 years. We still need to start and ask ourselves questions like, if an employer or employee has 20 years service in the company and is about 45 or 52 years, for how long will it take a company to make that particular man, a cleaner or whatever a director of that company? We should create a platform for such person to get that post.

Researcher : Oh, well gentlemen, in conclusion I would like to thank you all.
TO WHOM IT MAY CONCERN

Ms JB Sekeleko is a registered M.Ed. student at RAU doing research in Curriculum Studies.

It would be appreciated if she could interview a group of employers in Gauteng during July/August 1996.

Yours faithfully

DR HC GEYSER
SUPERVISOR