AN APPRECIATIVE INQUIRY INTO THE DESIGN OF A CONCEPTUAL MODEL FOR A FLEXIBLE UNDERGRADUATE CURRICULUM STRUCTURE

BY

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DECLARATION

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LIST OF ABBREVIATIONS AND ACRONYMS

AI	Appreciative Inquiry
CHE	Council on Higher Education
DoE	Department of Education
DHET	Department of Higher Education and Training
FET	Further Education and Training
HE	Higher education
HEI	Higher education institution
HEQSF	Higher Education Qualification Sub-Framework
SAQA	South African Qualifications Authority
VUT	Vaal University of Technology

ABSTRACT

The aim of this study was to develop a conceptual model for a flexible undergraduate curriculum structure offered at a higher education institution, using the Appreciative Inquiry theoretical framework.

Since 1994 the South African education sector has gone through significant changes. These changes have brought about many challenges in the sector. For instance, massification of higher education has caused higher education institutions to reform their curricula in order to accommodate previously disadvantaged students entering tertiary education. In this way, the South African government has been attempting to redress the social inequalities that had prevailed in the education sector during the apartheid era. One of its efforts has been widening access for a variety of groups in society, in order to increase their participation in the higher education sector. Widening of access should also lead to academic success; however, many students who enter higher education are academically underprepared, even though they meet the minimum admission requirements for higher education studies. They lack basic academic foundation in communication (oral, reading and writing), numeric and literacy skills. These inadequacies are mainly the result of admitting students from rural and economically disadvantaged backgrounds who are not being sufficiently prepared for studying at higher education level when they leave the secondary basic education and further education and training school system, resulting in the creation of a so-called “articulation gap”.

An explorative case study was conducted at the Vaal University of Technology to respond to the study’s research question, which was: How may a flexible curriculum structure for an undergraduate programme be designed in order to address the articulation gap between further education and training and higher education? Staff involved in an extended programme of the institution and students who either had gone through the extended programme or were currently in the programme, participated in individual interviews and focus group interviews, respectively.

The investigation discovered that the first-year students in the extended programme had diverse needs. It became evident that many students were not only academically underprepared; they were also socially, culturally, emotionally and intellectually

underprepared to enter higher education. In this study the design of the proposed conceptual model was based on Tyler's model for curriculum design that has been used in education since 1947. The Tyler Model identifies and focuses on designing a curriculum that addresses the diverse needs of students. The increase of student numbers in higher education poses challenges to higher education institutions, and research should be conducted into preparing students at secondary school level for higher education demands. Further research is needed to establish how curricula for extended programmes could be reformed to enhance academic success of students, and how to increase the throughput in higher education.

Keywords: Articulation, curriculum design, curriculum development, extended programmes, transformation, underpreparedness.

OPSOMMING

Die doel van hierdie studie was, om met behulp van die teoretiese navorsingsbenadering van waarderende ondersoek, 'n konseptuele model vir 'n buigsame struktuur vir ‘n voorgraadse kurrikulum wat by 'n hoëronderwysinstelling aangebied kan word, te ontwikkel.

Die Suid-Afrikaanse onderwyssektor het sedert 1994 beduidende veranderinge ondergaan. Hierdie veranderinge het tot baie uitdagings in die sektor gelei. Massafikasie van hoër onderwys het onder meer veroorsaak dat hoëronderwys-instellings hulle kurrikula moes hervorm ten einde voorheen akademies benadeelde studente in tersiêre onderwys te akkomodeer. Só poog die Suid-Afrikaanse regering om die maatskaplike ongelykhede wat tydens die apartheidsera in die onderwyssektor geheers het, reg te stel. Een van hul pogings is om toegang vir ‘n verskeidenheid groepe in die samewlewing te verbreed, te einde hulle deelname aan die hoëronderwyssektor te verhoog. Verbreding van toegang moet egter ook lei tot akademiese sukses, maar baie studente wat hoër onderwys betree, is akademies onvoorbereid, selfs al voldoen hulle aan die minimum-toelatingsvereistes vir studie op hoëronderwysvlak. Hulle het nie die basiese akademiese grondslag in kommunikasie- (verbaal, lees en skryf), numeriese en geletterdheidsvaardighede nie. Hierdie tekortkominge is hoofsaaklik die gevolg daarvan dat studente uit landelike en voorheen benadeelde agtergronde toegelaat word, maar dat hulle nie deur die sekondêreskoolstelsel (basiese onderwys en verdere onderwys en opleiding) voldoende voorberei is om op hoëronderwysvlak te studeer nie. Dit gee aanleiding tot die sogenaamde artikulasiegaping.

‘n Verkennende gevallestudie is in reaksie op hierdie studie se navorsingsvraag by die Vaal Universiteit van Tegnologie uitgevoer. Hierdie vraag was, hoe kan ‘n buigsame kurrikulumstruktuur vir ‘n voorgraadse program ontwerp word om die artikulasiegaping tussen basiese onderwys en hoër onderwys te oorbrug? Personeel wat by die betrokke instansie se uitgebreide program betrokke was en studente wat op die program was, of wat reeds die program voltooi het, het aan persoonlike en fokusgroeponderhoude onderskeidelik deelgeneem.

Die studie het bevind dat eerstejaarstudente in die uitgebreide program uiteenlopende behoeftes het. Dit het duidelik geword dat baie studente nie net akademies swak voorbereid is nie – hulle is ook sosiaal, kultureel, emosioneel en intellektueel onvoorbereid om studie in hoër onderwys suksesvol aan te pak.

In hierdie studie is die ontwerp van die voorgestelde konseptuele model gebaseer op Tyler se model vir kurrikulumontwerp, wat al sedert 1947 in onderwys gebruik word. Die Tyler-model identifiseer en fokus daarop om 'n kurrikulum te ontwerp wat die uiteenlopende behoeftes van studente aanspreek. Die toename in studentegetalle in hoër onderwys stel uitdagings aan hoëronderwysinstellings, en navorsing moet gedoen word oor hoe om studente op sekondêreskoolvlak vir die eise van hoër onderwys voor te berei. Nog navorsing is nodig om te bepaal hoe die kurrikulum verbeter kan word om die akademiese sukses van studente te bevorder, en hoe om die aantal studente wat hoër onderwys suksesvol afhandel, te verhoog.

Sleutelwoorde: Artikulasie, kurrikulumontwerp, kurrikulumontwikkeling, verlengde programme, transformasie, onvoorbereidheid

CHAPTER 1: ORIENTATION TO THE STUDY

1.1 INTRODUCTION

South Africa is in dire need of more graduates of good quality to meet all forms of socio-economic development demands posed by the country. The South African higher education (HE) system has been greatly influenced by national and international movements, which include concerns about the nature of skills required in the 21st century by the knowledge economy, employability of graduates, and demands for greater accountability. Global trends also influence the HE sector's focus, which includes political and socio-economic change; hence, many changes have occurred in South African HE (Rooth, 1997:11; Sutherland, 2009:1-2; Sutherland and Weatzel, 2005:1). While the South African government is attempting to redress the social inequalities that prevailed in the education sector during the apartheid era (Sutherland, 2009:1-2), HE institutions in South Africa need to educate students in specific skills required to address and sustain the knowledge economy. Thus, HE institutions are expected to deliver employable graduates who will contribute to meeting the needs and demands of South Africa (CHE, 2013:15; Sutherland, 2009:27).

The government's education strategy involves addressing the inequalities within the HE sector. Its focus has been to widen access to HE institutions for a variety of groups in order to enhance participation. Unfortunately, most of the students attempting HE are academically underprepared due to a lack of sufficient life skills, language skills, numeric skills and social skills (CHE, 2013:28; Fergy, Marks-Maran, Oom, Shapcott and Burke, 2010:108; Mori, 2002:27; Swail, 2004:108; Tinto, 1993:26; Tinto, 1997:20). Owing to the lack of these skills, HE institutions have been inspired to develop alternative access (i.e. extended, bridging and foundation) programmes to bridge the "gap" that exists between secondary and tertiary education levels.

Furthermore, the Department of Higher Education and Training (DHET) encourages HE institutions in South Africa to reconsider and change the way academic development is taking place. Pandor (2006:1) stated that, "*academic development in our country, has to a considerable extent run alongside the transformation of the higher education sector and in particular the expansion and broadening of access to the sector"*. She added that academic development plays an important role in broadening access for students to

higher education and training. Broadening access for students has to happen through the development of alternative admissions and placement processes (Pandor, 2006:1; Sutherland, 2009:4). As a result of the massification of education and the heterogeneity of the student population, traditional teaching methods have become obsolete and alternative approaches to teaching and learning need to be integrated into curriculum design to accommodate underprepared students (Volbrecht, 2005:586).

Due to the political background of South Africa, diversity in current school curricula might be one of the most important factors causing the difficulties undergraduate students experience in meeting HE demands (Asmal, 2000:4; Pandor, 2008:2). The total number of students graduating from HE institutions in critical disciplines is not sufficient to meet the country's needs. The low internal efficiency of utilising human and material resources is absent (CHE, 2013:43-46). According to the White Paper for post-school education and training (DHET, 2013:16), the government's aim is to increase student enrolment by 8.3%, to 1.6 million students at universities, by 2030 (CHE, 2013:15). Simultaneously, universities need to focus their attention on student academic performance, student academic success and student academic throughput (DHET, 2014:16).

Government's aim is to utilise alternative access programmes to accomplish this goal. Achieving this goal is likely to pose a serious challenge for the university sector, due to the fact that many students who complete the Secondary school or Further Education and Training (FET) phase and enter the higher education and training phase lack skills in various contextual, conceptual and cognitive domains (CHE, 2013:44; DHET, 2012b:13).

During the past decade universities, have questioned the results of students who have completed their Grade 12 examinations and want to enter HE studies. The Department of Basic Education inflates student results to obtain a higher pass rate for Grade 12 learners. Universities experience that students entering HE for the first time lack the basic academic competencies and skills necessary for studying at the higher education level. Therefore, a deficiency in academic skills limits the possibility of closing the articulation gap between the basic education and further education and training system and the tertiary education system. Throughout literature this gap is referred as the articulation gap (CHE, 2013:17). According to Fisher and Scott (2011:1), we can say in

relation to the HE educational role that it is a “low-participating, high-attrition system” that has not come to terms with its developing-country environment.

The articulation gap is the gap between students’ prior knowledge and the assumptions underlying the university’s traditional undergraduate curricula (CHE, 2013:54-68; DoE, 1997:2.3; Scott, 1995:9). Its nature is complex in the sense that it does not involve only subject knowledge, but also academic skills and literacies, approaches to study, background knowledge and forms of social capital. To address the articulation gap, HE needs to use comprehensive and multi-faceted alternative access approaches, which could include foundation and bridging programmes, and flexible and extended curriculum reform within HE structures (Shandler, 2009:4). These programmes do not take students’ prior knowledge for granted. Furthermore, the articulation gap can be bridged from either the basic education and further education and training or the HE side, by either strengthening the outcomes of basic education or improving the responsiveness of the educational processes of HE (CHE, 2013:17, 61-62). Academic staff can make use of baseline assessment tasks to assess students’ prior knowledge and to determine the point of departure for the teaching and learning experiences in alternative access programmes (Shandler, 2009:22).

In essence, closing the articulation gap demands a realistic assessment of expectations regarding the contributions that can be made by the various education sectors to developing underprepared students for HE studies (CHE, 2013:62-70). For instance, closing the articulation gap may include addressing the programme design rather than programme delivery. Ferrell (2010:2) advises that, instead of fitting the student to the provision, the approach to curriculum design should focus on supporting entry and progression routes that meet the needs of different learner groups. This advice is aligned to Beetham’s (2009) research that suggests that the greater diversity of students nowadays requires a more flexible approach to transitional support through programme and curriculum design (Beetham, 2009:5). Beetham (2013:2) asserts that taking the flexible curriculum route would enable and improve communication, the mode of curriculum delivery and the pace of delivery, and lower the attrition rate. Hence, this study will focus on designing a conceptual model for a flexible undergraduate curriculum design.

1.2 THEORETICAL AND CONCEPTUAL FRAMEWORK

Various studies have been conducted on topics relating to undergraduate extended programmes, bridging and foundation programmes, such as the following:

- Broadening access for undergraduate students to HE, by Boughey (2005:232) and Rollnick and Tresman (1995:382);
- Addressing the needs of underprepared students in HE, by Bettinger and Long (2009:42) and Shandler (2009:16);
- Student retention and throughput in HE, by Gouws and Van der Merwe (2004:253); Favish (2005:290) and Mori (2002:23); and
- Reasonable success of undergraduate bridging programmes, by Kieswetter (1996:19) and Sutherland (2009:5).

Most of these studies on the abovementioned programmes address the academic underpreparedness of students and consider very little relating to their social, cultural and emotional preparedness. The students require social, cultural and intellectual competencies when they enter HE institutions (Fergy *et al.,* 2010:108; Sutherland, 2009:16).

In this study, I used Appreciative Inquiry (AI) to guide the study toward the formulation of a conceptual model for a flexible extended undergraduate curriculum. AI is conducted according to a so-called 4D framework (Stavros, Cooperrider and Kelley, 2003:2-4) that involves the following phases:

1. **Discovery** (Constructionist principle): Participants in the research study are asked to reflect on and discuss the best of *what* concerns the object of inquiry. They are encouraged to share their best experiences (Kessler, 2013:3). This stage appears to be part of the key innovation of the AI method as the intention is to discover *what supports participants' best experiences.*
2. **Dream** (Principle of simultaneity and poetic principle): Participants are asked to imagine the perfect scenario in relation to the affirmative topic: *How do we want it to unfold?* This phase is necessary for the researcher to determine the common aspirations of the research participants/members and to symbolise them. The researcher attempts to determine how participants *envision the future* (Clossey, Mehmert and Silva, 2011:259, Shuayb *et al.*, 2009:7-11).

3. **Design** (Anticipatory principles): The structure and process or social architecture model focuses on how the *dream* can be supported. When the common goal is identified and in place, the participants are asked for feedback by means of proposals for fulfilling the *dream (*Cooperrider, Whitney and Stavros, 2008:1). Kessler (2013:3) calls this a *"provocative proposition".*
4. **Destiny** (Positive principles): This phase attempts to envision how we perceive the future. Throughout this phase we invite others to join us on our journey (Clossey *et.al.,* 2011:262, Cooperrider *et al.,* 2008:5).

Most HE institutions in South Africa follow the constructivist and or social constructivist academic approach in their teaching and learning pedagogies (Daniels, 2005:286-326). Social constructivism indicates that, for learning to take place, constructive experiences should occur in a social environment (Wood and Lithauer, 2005:1003-1008). Through the constructivist research paradigm the researcher aims to understand people and their socially constructed experiences (Creswell, 2002:8).

The curriculum design process for undergraduate programmes is influenced by government and institutional policies and regulations. According to the constructivist learning approach, teaching, learning and assessment are learner-centred; the focus is on teaching and learning activities involving active and interactive participation of students. In this scenario, the lecturer is expected to act as the facilitator to ensure effective learning.

It is known from literature that different academic subjects and different forms of curriculum methodologies produce different kinds of individuals (Becher, 1989:16; Brennan and Lebeau, 2002: 5; Pascarella and Terenzini, 1995:23). The placement question is central to the long-term impact of HE on graduates who may influence the future direction of the society. Sharma and Ghista (2008:2) refer to universities as laboratories for the development of a progressive society. Most flexible, extended undergraduate curriculum programmes are based on specific academic principles (Shandler, 2009:45), such as the following:

- The needs of the undergraduate first-year students, and not that of the National Senior Certificate syllabi are considered;
- The system identifies and manages struggling students;

- Academic staff use innovative pedagogical strategies and methodologies to ensure the acquisition and application of appropriate skills, rather than the reinforcement of rote-based learning of content (Shandler, 2009:45);
- Small-group teaching (30-40 students) allows for personal, individual attention to students who are in need thereof (Snyder, 2002:4);
- Academic staff use interactive and active teaching methodologies to enhance students' participation (Brennan and Lebeau, 2002:5; Pascarella and Terenzini,1995:25);
- Academic staff employ a holistic approach to support students with academic and non-academic problems (Snyders, 2002:4). The holistic approach is directly linked and endorsed by the First Year Experience, an initiative of universities that promotes positive experiences for first-year students;
- Modules of the extended undergraduate curriculum programmes are aligned with the competencies, skills and knowledge required by mainstream undergraduate programmes, even though substantial foundation provision is incorporated; and
- Continuous assessment activities are used to accommodate students' diverse learning styles, and to monitor student progress and performance on a regular basis (Scott, Yeld, McMillan and Hall, 2005:12-14; Snyders, 2002:5).

Competency-based education is an integrated teaching, learning and assessment approach that guides students to acquire specific skills for specific fields of study. Competency-based education in a social constructivist environment is founded on the predication that a specific profession is, to some degree, dedicated to prescribed skills, proficiencies, techniques and strategies. The lack of these competencies within a specific discipline has been cited in different studies (Saunders, 2000:37; Sutherland, 2009:50; Whitty and Willmott, 1991: 309).

1.3 RESEARCH PROBLEM

Most prospective first-year students from the basic education sector who seek admission to higher education institutions are underprepared for mainstream undergraduate studies. They lack foundation academic skills, or they do not meet the necessary admission requirements of a specific programme (CHE, 2013:27). Some students exiting the basic education system find it difficult to successfully participate in the higher education environment. This is because these students lack the necessary

skills needed to succeed in HE studies, such as social, cultural, emotional and intellectual competencies. Therefore, they cannot complete undergraduate studies successfully (Tinto, 1997:20).

The JET Annual report of 2013 mentioned that the pass rate of matriculants in 2013 was 33% (JET, 2013:7), and not 78.2% as stated by the minister of Basic Education. *Rapport* (2017:1) investigated the 2016 matric results that were released by Education Minister Angie Motshega, and the newspaper's investigation revealed a different picture. *Rapport* (2017:1) reported that the true, correct matric results differ from what was reported in the Department of Education's official press release, and, in fact, the average for Grade 12 mathematics was 30.8%, and 35% for physical sciences and 39% for geography. These results were compared to that of the last 10 years and proved that the matric pass rate had declined considerably.

An unofficial survey done by the North West University in 2012/2013 found that first-year students' reading skills were on Grade 7 school level, and their writing skills on Grade 5. Universities are compelled to address these deficiencies if students are to succeed in HE studies. This study is, therefore, an attempt to address the articulation gap. It proposes a process for designing a framework for a flexible undergraduate curriculum structure. Such a model would provide for the development of the necessary skills in students, so that students can undertake undergraduate studies and complete them successfully.

1.4 RESEARCH QUESTIONS

In order to address the stated research problem, the following overarching research question was set:

How may a conceptual model for a flexible curriculum structure be designed using an Appreciative Inquiry, in order to address the articulation gap between basic education, further education and training and higher education?

Subsidiary research questions are:

- From literature, what are the theoretical underpinnings of a flexible undergraduate curriculum design?

- How could a flexible undergraduate curriculum be designed to develop the necessary competencies in students in order to reduce the articulation gap between basic education and HE?
- How may the ideas about designing a flexible undergraduate curriculum be organised to develop a conceptual model design?

1.5 RESEARCH AIM AND OBJECTIVES

The aim of the study was to design a preliminary conceptual model for a flexible undergraduate curriculum, using the AI approach.

In order to fulfil the aim stated above, the study endeavoured to:

- Review literature to investigate the theoretical underpinnings of a flexible undergraduate curriculum design using AI;
- Gather information from the university community about the requirements of a flexible undergraduate curriculum structure (this information could help reduce the articulation gap between basic education and higher education and training, using the 4D cycle of the AI approach) and
- Organise the research findings in order to formulate a conceptual model for a flexible undergraduate curriculum design.

1.6 DEMARCATION OF THE RESEARCH

This study was conducted in a university environment. The findings informed the recommendation for a conceptual model of a flexible undergraduate curriculum. Therefore, the study falls under the key theme of course design within higher education research as identified by Tight (2012:65-69).

1.7 CLARIFICATION OF TERMS

Appreciative Inquiry: AI is a change management research approach that focuses on identifying what is working well, analysing why it is working well and then planning to do more of what works well. As a method of action research, AI actually challenges the problem-orientated approach often applied in action research (Grant and Humphries 2006:403). Cooperrider (1997:1) explains that “Appreciative Inquiry involves a paradigm shift that will vitally transform, for example, how mergers or diversity initiatives are

approached. The key, early on, is to prioritize several areas where there will be a high value-added contribution and, in those areas, take the appreciative approach to the hilt."

Articulation: The term articulation can be used to refer to the "linkage between educational levels, phases, programmes or qualification types. There are thus vertical, horizontal and diagonal forms of articulation" (CHE 2013:5). The term refers predominantly to educational continuity between consecutive educational levels or phases, i.e. vertical articulation.

Articulation gap: The disparity between the learning requirements of HE programmes and the knowledge and competencies students entering universities possess. This disparity is caused by differences in teaching and learning between secondary high school and university (Lewin and Mawoyo, 2014:51).

Conceptual model: A representation of a system, made up of the composition of concepts that are used to help people know, understand, or simulate a subject the model represents.

Curriculum: The courses offered by educational institutions (Merriam-Webster, 2017). The term curriculum can encompass many dimensions. As the focus of this dissertation is the structure of an extended undergraduate programme, the term curriculum as used here refers primarily to the formal curriculum, that is, the planned learning experiences that students are exposed to with a view to achieving desired outcomes in terms of knowledge, competencies and attributes (CHE, 2013:5). Behar, 1994 in Watermeyer, (2012:2) understands curriculum as the "totality of experiences undertaken by learners within a programme of education encompassing broad yet defined objectives and goals and facilitated by established theoretical and empirical accounts. These experiences translate as the syllabus, which represents a formal agreement between student and teacher and articulates course content and requirements for successful completion."

Flexible curriculum: Flexible entry routes and approaches to learning. Flexible curriculum programmes are designed to accommodate multiple entry routes, multiple prior learning experiences and multiple delivery strategies without disadvantaging the learner that originates from a disadvantaged socio-economic and educational background CHE (2013:97).

Higher education/tertiary education: The terms higher education and tertiary education are often used interchangeably, as is done in this dissertation, to represent all forms of organised educational learning and training activities beyond the secondary school level (i.e. post-school), Mohamedbhai (2008:2).

Massification: The mass adoption of a phenomenon by the suppression of its distinguishing features. A massive increase of student participation (Mohamedbhai, 2008:27, 31). Scott (1995) uses the term massification in the context of higher education systems to describe the rapid increase in student enrolment in the latter part of the 20th century.

Socio-economic status: The extent of an individual's family income, parental education level, parental occupation, and social status in the community. Okioga (2013:38) says that, "socioeconomic status is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position relative to others, based on income and education, and occupation".

Student engagement: The extent to which students devote their time and energy to educationally purposeful activities. Student engagement refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education (Great Schools Partnership, 2014).

Throughput rate: Percentage of a cohort of students who complete their registered qualification within the prescribed or within a limited extended time period (Lewin and Mawoyo, 2014:6).

Underprepared: Primarily used here to describe students whose secondary school preparation presents challenges to them when they first enter university. Aspects of underpreparedness include being unable to speak the language of instruction at university fluently, which affects verbal and written literacy (communication). Underpreparedness could also refer to students who lack social, cultural, emotional and intellectual skills, and who are unable to manage learning independently (CHE, 2013:17, Lewin and Mawoyo, 2014:6).

1.8 RESEARCH DESIGN AND METHODOLOGY

I conducted a qualitative case study using the 4Ds (Discovery, Dream, Design, Destiny) of the AI model (Stavros *et al*., 2003:2-4), hence, innovative, generative and collaborative methods (Kessler, 2013:3) were utilised. By employing a qualitative approach, I collected and reported, in-depth exploration and description of the phenomena (McMillan and Schumacher, 2010:319).

During the research process, I gained an understanding of and gathered knowledge about the meanings, implications and actions related to the views of participants (Maree, 2010:59). The rationale for employing this approach was grounded in a constructivist epistemology, where the researcher addresses the processes of interaction among individuals (Creswell, 2014:80). Therefore, I relied a great deal on the participants' views for constructing meaning about the subject of investigation (Creswell, 2014:80; Maree, 2010:59). The research sought to explore how the articulation gap between school education and HE could be closed by developing a conceptual model for a flexible extended undergraduate curriculum design.

The target groups for the study were the academic staff who were involved in the extended programme, the students who had gone through the extended programme (Shuttleworth, 2008:75), and some who were currently in the programme. Interviews were conducted with two focus groups. One group consisted of 10 students who were currently in the extended programmes of engineering (electronic, civil and electrical) and the other group consisted of 15 students who had already gone through the extended programme. In addition, nine academic staff members were interviewed individually; they were three curriculum designers, three lecturers and three heads of academic departments offering these programmes. Then, a workshop with all the participants or representatives of each group was held, during which interaction of the community collaboratively generated meaning (Creswell, 2014:9) regarding the designing of a flexible curriculum that could address the articulation gap. A member-check process was incorporated into the discussions of the workshops to confirm the "dream" ideas of the participants. All proceedings were audio recorded to facilitate data collection (Denzin and Lincoln, 2005:3).

I organised the data gathered from interviews and the workshop based on Tyler's Model of curriculum design in order to develop a conceptual model for designing a flexible undergraduate curriculum.

1.9 VALUE OF THE RESEARCH

The proposed conceptual model is meant to provide management, academic staff and curriculum developers with a clear indication of design and development issues that need to be considered to address the articulation gap, in terms of developing underprepared students entering the university. Although this research is a case study and its findings are not generalisable, other institutions may learn from it for their own extended curriculum designs.

1.10 ETHICAL CONSIDERATIONS

Permission to conduct this study was sought from the deputy vice chancellor: Academic and Research at the Vaal University of Technology's (VUT) main campus. In addition, ethical clearance for the study was sought from and granted by the University of the Free State. Participation in the study was voluntary and anonymity was assured. I clarified the purpose and goals of the research, and requested a signed informed consent form from all participants. Participants had the right to withdraw from the research at any given time without reprisal. Confidentiality of data and anonymity of participants were assured at all times. On completion of the research study, the findings and recommendations of the study will be made available to the participants.

1.11 TRUSTWORTHINESS OF THE STUDY

The quality of a qualitative study is evaluated in terms of its trustworthiness. The term comes from Lincoln and Guba (1985), mentioned in Patton (2002:546), who viewed trustworthiness of qualitative studies as parallel to the rigour in quantitative studies, because of the technique of triangulation used during a qualitative study. Patton (2002: 556) explains triangulation as a method that can add to the validity and reliability of a qualitative analysis by using multiple data sources, observers, methods, and/or theories. The criteria for trustworthiness include credibility, transferability, dependability and confirmability (Babbie and Mouton, 2006:277; Mertens, 2010:255; Patton, 2002:546). Details of how trustworthiness was ensured in the study are presented in

Section 3.4. The data of the study was obtained through interviewing, and my own experience of curriculum design and comparison of results with relevant literature was used in the analysis of the data; this increased the reliability of the conclusions drawn.

1.12 LAYOUT OF THE DISSERTATAION

In order to fulfil the aim of the study, individual subsidiary research questions are addressed in the chapters listed below. The cumulative responses from the chapters provide a response to the main research question. The dissertation chapters are as follows:

Chapter 1: Orientation to the study

Chapter 2: Literature review

Chapter 3: Research design and methodology

Chapter 4: Data analysis and discussion of research findings

Chapter 5: Synthesis of findings, recommendations and conclusions

1.13 SUMMARY

Chapter 1 provided the orientation, background and motivation which guide and give insight into the development of the study. The aims of the study were stipulated. In order to achieve the aims, I conducted a comprehensive review of relevant literature. However, literature on this research topic (‘underprepared students from secondary school level entering higher education studies, articulation gap and curriculum reform in higher education’) was limited. I included a section to clarify key concepts that occur throughout the thesis (study) as means of contextualising the study. Thereafter, I discussed the research design and methodology. I discussed the value of this study in the higher education context which was then followed by the ethical considerations and issues of trustworthiness were explored.

Chapter 2 will provide the context of the study by presenting literature relating to the key concepts of the study as well as some background of the curriculum-related issues in South Africa. Theoretical information on appreciative Inquiry is also provided.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This literature review aims to provide historical background information and a theoretical and conceptual perspectives for the development of a conceptual model for a flexible undergraduate curriculum. The study is contextualised within the academic development domain, hence, the literature review includes brief discussions on transformation of HE, transformation within tertiary academic programmes, curriculum models, and the underpinnings and processes used in South Africa's HE sector since 1994. These discussions form the background to the information on extended curriculum programmes and foundation programmes, which is very limited in the literature. In addition to this background information, the chapter describes AI, which is the theoretical framework chosen for the research process.

AI is an affirmative inquiry-based process for change and transformation (Donnan, 2005:2). AI achieves much better results than seeking to solve problems (Ludema, Whitney, Mohr and Griffen, 2003:10; Shuayb *et al.*, 2009:2). It is a tool for connecting to the transformational powers of the core of positive change, opening up strength, innovation, hope and dreams to systematic inquiry (Cooperrider *et al.,* 2008:9). AI's aim is to identify good practice, and to introduce and to implement change successfully. It focuses on the positive, i.e. "*what works well",* rather than fixing what does *"not work well"* (Cooperrider, 1997:3). Shuayb (2009:3) explains that "the AI research approach presents an alternative to the problem-solving approach underpinning action research and offers an affirmative approach for evaluating and envisioning future initiatives based on best practices". Therefore, it could be said that AI is a theory and practice for approaching change from a holistic framework. Based on the belief that human systems are made and imagined by those who live and work within them, AI leads systems to move toward the generative and creative images that reside in their most positive core – their values, visions, achievements, and best practices (Watkins and Mohr, 2001:31-32).

Student underpreparedness for higher education mainstream studies is a reality (CHE, 2013:27, 39; DHET, 2012a:19; DoE, 1997:2.34). This is evidenced by many students who, upon applying to enrol at a university for the first time, discover that they do not

meet the minimum educational requirements for the programme of their choice. However, underpreparedness is a relative concept. Some students might not be prepared for a specific programme; therefore, they are seen as underprepared (CHE, 2013:17), although these students may be adequately prepared for another programme that has different prerequisites (Tinto, 2007:4-5). Judging only a student's academic underpreparedness to enter a specific academic programme has important implications for discontinuity between secondary and tertiary education in South Africa (DoE, 1997:2.34). The implications could include, but are not limited to intellectual, conceptual and contextual underpreparedness of students assuming tertiary studies. A variety of factors, such as socio-economic background, geographical heritage, a sense of belonging, and cultural and traditional preparedness have to be considered by HE institutions. If government (DHET) expects citizens of South Africa be successful in higher education studies, these factors have to be addressed by either the secondary or tertiary education sectors to ensure good quality education for citizens, so that they can contribute positively to meeting the socio-economic demands facing South Africa. Therefore, if future academic programmes do not address these shortcomings, the argument could be made that not all students are equally underprepared for higher education mainstream studies. More opportunities are possible for positive action to be taken within higher education to focus on the underpreparedness of students. These possibilities present opportunities to close the so-called articulation gap between basic education and HE systems.

2.2 TRANSFORMATION OF HIGHER EDUCATION

Since 1994 there has been consensus among the DHET, the Council on Higher Education (CHE) and higher education institutions that HE should be planned, governed and funded as a single national system. Transformation in HE is clearly outlined in the White Paper 3 (DoE, 1997), *A Programme for the Transformation of Higher Education*, and is given effect by the Higher Education Act (CHE, 1997, RSA, 1997). Subsequently, the transformation and performance benchmarks and targets are outlined in the National Plan for Higher Education (CHE, 2000:64; CHE, 2013:39; RSA, 2001:45).

It has been argued that representation of numbers in South African HE is an indicator of extreme transformation and curriculum reform (DoE, 1997:1.14). Since the establishment of democracy, an extensive drive was undertaken by government to

change HE curriculum structures. Government envisaged that massification (increase in student enrolments at HE institutions) would give “colour” and “shape” to a new education environment. Although massification in HE institutions was initially partially successful, it soon became clear that more students who were underprepared after basic education were enrolling for HE studies, causing an increase in student failure and dropout rates (CHE, 2013:40). Massification caused students to become mere numbers; more than anything else, the increase in student enrolments at universities was not matched with a proportionate number of graduating students (CHE, 2013:16-20, 40-41; DHET, 2012b:14). HE institutions had to take citizens’ backgrounds and prior knowledge more seriously. Because the knowledge, competences, and cultural and socio-economic backgrounds of these citizens were dissimilar, a different approach was necessary. The DHET (2012b:6) and CHE (2013:64) suggest that HEIs should introduce alternative access (extended programmes) to undergraduate degrees and diplomas in order to address these differences and prepare students adequately for mainstream studies (CHE, 2013:24-25).

This sparked a collective concern by government and HEIs across South Africa. They need to ensure that student retention, progression, and completion rates do not worsen as student numbers and diversity increase. Asmal (2001:2-4) emphasises that HEIs should, in their academic planning processes, include deliberate efforts to improve success rates, as there are often negative consequences for students and their families as well as institutions and society when students leave before completing their target award. Indeed, there is a range of economic and ethical arguments as to why institutions should be concerned about student retention and success. Thomas (2012:6-8) believes that, when an HEI admits students, it has an obligation to take reasonable steps to enable students to be successful in their studies.

2.2.1 Transformation challenges in higher education

Asmal’s (2001:5) vision was to increase access to universities for students of all races. He believed that such an initiative would build and enhance South Africa’s democracy and support transformation. The government acknowledged Asmal’s views and concurred that socio-political and equitable access to HE for all race groups was a necessity, and was crucial for social transformation in South Africa. The minister, however, cautioned that socio-political and equitable access needed to be dealt with

diligently (CHE, 2013:16-19, 25). The Select Committee of Education and Recreation stipulates that, “the socio-political challenges HE faced during the 1980s demonstrated a need to rethink the roles of universities in the transformation of society, particularly in advancing principles and values such as equality, diversity and representation” (SCER, 2006: 4).

As mentioned in Section 2.2, transformation and massification of HE have progressed steadily, however, students are even less prepared for higher education studies than before and massification needs to be accompanied by success. The White Paper on Post-School Education and Training (DHET, 2013:12) deliberately focuses on transformation within the HE sector, however, academic success of students has to escalate accordingly. The White Paper states that graduates leaving higher education should have the necessary skills and competences to be successful in their future studies. The White Paper (DHET, 2013) aims to change the enrolment pattern in the overall higher education system. This is to be done by strengthening the FET and secondary education sector, from enrolment of 500 000 students in 2011, to 4 000 000 in 2030, and increasing the participation rate in the university sector from 899 120 to 1 500 000 students in the same period. This means the student participation rate could increase between 20%-60% in years to come (DHET, 2014:6-15).

The government’s vision was informed by a growth in high-school graduates, with more school leavers qualifying for university entrance. Herbst’s (2007:85-86) research suggests that institutions face many transformation challenges that have an impact on the areas of governance, management and leadership. Accordingly, HE has had to prepare for massification and changes in curriculum structure to accommodate students’ diverse needs. The government recognised that the profiles of students in HE institutions vary significantly. Furthermore, the profile of students in an institution is shaped by a range of factors. which includes the institution’s mission, history, programmes offered, geographical location, reputation and demand, as well as the fees to be charged (Thomas, 2012:6).

The DHET (2013:13) suggested that HEIs groom underprepared students for mainstream studies, and should have structures in place in their curriculums that would train students adequately, so that the institutions could satisfy the changing socio-economic needs of the country. In the past decade, the higher education system

adapted to transformation at a much faster pace than the basic education system did. A concern raised by government is that a large number of the previously academically disadvantaged students completing the National Senior Certificate are endorsed by the basic education system as being academically prepared for higher education studies. To the contrary, many prospective students are not socially, academically, emotionally or intellectually prepared for higher education.

2.2.2 Access with success challenges within higher education

A way of realising access with success by fostering the potential of students from underrepresented groups and by providing adequate conditions for the completion of their studies is proposed by Piro (2016:56). In 2007 the National Audit Office in England undertook a review of retention in HEIs, and subsequently the topic was reviewed by the Public Accounts Committee in the House of Commons (House of Commons Committee of the Public Accounts, 2008). The review considered both student retention and success. It became evident in the review that students' success needed to be understood clearly. Hence, success in higher education studies, in fact, means helping all students to become more engaged and more effective learners, thus, improving students' academic outcomes and their progression opportunities after graduation. This understanding of success is underpinned by Thomas (2012:7): "a mainstream approach is a necessity to improving the retention and success of all students". It is emphasised by Thomas that it can be difficult to know which students are most likely to withdraw based on student entry characteristics alone.

Mainstream approaches attempt to reach all students, particularly those who are considering withdrawing, and enable each student to maximise their success (Thomas, 2012:10). These approaches could be supplemented by paying attention to the ways in which students integrate, behave and perform once they are in HE institutions, through a range of engagement indicators, and then an intervening process could be applied, if necessary. The findings of Tinto (1993:4, 2007:7) and Thomas (2012:8-9) present a compelling case that, in HE, belonging and acknowledgment of diverse needs is critical for student retention and success (Jones, 2008:3, 11, 17; Troxel, 2010:2). Still, many academic staff members at universities disagree and would readily accept this contention. Academics argue that the implications of attempting to address all the needs of different students are not always possible due to the fact that there are limited

resources available at the majority of HE institutions. Many academics argue that students are there to study, therefore the focus should be on their academic needs. This fact explains the failure to address students' diverse needs by institutional priorities, policies, processes and practices. To the contrary, HE institutions employ retention and academic success programme strategies to enhance student engagement. Unfortunately, the strategies often focus on narrow groups of students, and are situated outside of the academic domain, thus, fail to meet the needs of most students (Thomas, 2012:16).

In the South African context, the government's approach is different from the European and United Kingdom's higher education approach. Initially, the Department of Higher Education's focus was on promoting access with success for those citizens who wanted to pursue HE studies (DoE, 1997:1.14). However, it appeared that an increase in access (massification) is not always accompanied by success, as the failure rate of undergraduates increased and is ascribed to the underpreparedness of students upon leaving the basic education system (CHE, 2013:15-16, 18). To meet the human resource and knowledge needs of South Africa, HE needs to increase the number of students and produce graduates with the necessary academic, social and cultural skills and competences to succeed in the 21st century. Such skills would enable them to contribute to meeting South Africa's socio-economic challenges (CHE, 2013:26-27; DoE, 1997:1.14). In Section 2.1 I explain that the demands of the HE institutions and the needs of underprepared students coming from the basic education, FET and vocational education and training systems have caused an articulation gap that should be closed (CHE, 2013:27). The short-term solution would be for government to close the articulation gap, whereas the long-term solution would be to institute curriculum reform. Such a solution is likely to improve the equity of students' academic outcomes in higher education that are directly dependent on enhancing the quality of schooling (CHE, 2013:27; DoE, 1997:1.14). Bamber and Tett (2001:15) argue that, "[h]igher education must accept that the implications of offering access to non-traditional students do not end, but rather begin, at the point of entry".

The Education White Paper 3 (DoE, 1997) recognises that, in the long term, the Department of Education (DoE) has to make drastic changes to enhance the educational competence level of Grade 12 learners. The skills and competence of learners on social, cultural and education levels have to be improved. Improving these

skills will enhance the quality of outcomes of education across the tertiary education system (CHE, 2013:15-20). The Education White Paper 3 (DoE, 1997:4) states that, in order to address the problem in the short term, the identified shortcomings have to be addressed by HEIs and not by the basic education system. Higher education should use multi-faceted approaches, such as extended, foundation, bridging and introductory programmes, better known under the umbrella term “alternative access programmes” (CHE, 2013:35). Systemic changes in HE programmes are required, therefore, changes have to be made to the pedagogy, curriculum and curriculum structures of undergraduate programmes, in order to promote academic success of students (DoE, 1997:1.14). Tinto (2008:9) emphasises that, “access without support is not opportunity, thus, institutions recruiting students must put in place a strategy to support them to be successful”. However, the effectiveness of alternative access programmes in their current form as used by HEIs, has been constrained by their marginal status in the sector, which has negatively affected their design, staffing and reach. Extended programmes are not funded in the same way as traditional tertiary mainstream programmes. These programmes are offered as an extended add-on year to a traditional mainstream programme, and are therefore funded accordingly. Because there is limited funding for these programmes they can only be offered to a small proportion of the first-year intake. This means that the large numbers of underprepared students who manage to enter mainstream studies find themselves in a situation where they struggle with higher education demands and fail because they are not able to benefit from the extended programmes.

2.2.3 **Alternative access to higher education**

In Section 2.1 it is mentioned that the government faced many transformational challenges, however, its main focus is to address the equity of access (DoE, 1997:1.14). An increase in access has resulted in the “revolving door syndrome”, in which an increase in access is not accompanied by an increase in success but, rather, by high failure and dropout rates. The Education White Paper 3 (DoE, 1997:1.14) outlines the key strategic focus area, namely, to produce an increased number of graduates with the necessary skills and competence to meet the human, socio-economic and knowledge needs of South Africa. The discrepancy between access and success is caused by the mismatch of HE demands and the preparedness of students after

completing basic education, FET or vocational education and training (CHE, 2013:15-17). In 2012 the government acknowledged that improvement in equity of outcomes is dependent on the enhancement of the quality of the basic education system (CHE, 2013:16, 32). Therefore, it is very important for the basic and HE sectors to narrow the articulation gap. Government expects HE institutions to close this gap through implementing a multifaceted approach, which includes alternative access programmes.

An alternative method to widen students' access to higher education is to allow prospective students who do not meet the necessary or minimum admission requirements to enter higher education mainstream programmes to enrol for alternative access (foundation, bridging, extended or introductory) programmes. However, government stipulates that the entrance requirements of an officially ministry-approved programme cannot be lower than the statutory entrance requirements of higher education studies. Alternative access programmes have been introduced to offer alternative access pathways for students who do not meet the minimum required entrance criteria for mainstream studies.

The term "programme", according to the DHET (2012a:4), means a "purposeful and structured set of learning experiences that lead to a formal qualification". The term "foundation programme" is often used to refer to learning activities at the lower end of the HE band that are intended to enable students from disadvantaged educational backgrounds to acquire the academic foundations necessary to succeed in HE (DHET, 2012b:8-9). Analysis in a research study conducted by a task team appointed by the CHE (2013:8) on dropout rates reveals that the majority of students meet the minimum entry requirements for HE studies, nonetheless, they are academically underprepared (CHE 2013:15, 29, 33, 35-37). The high dropout rate of students in their first year of study is disconcerting for the DHET, which states that, "in cohort studies, students of a cohort or group who enrolled in a specific year are tracked throughout their studies until they graduate or drop out" (DHET, 2012a:1-2). Preliminary data analysis of the 2005 cohort of the university sector shows that the dropout rate of first-time-entering students in a three-year qualification is, on average, 26% in the first year, with a further 9% dropping out in the second year and 6% dropping out in the third year. For a four-year qualification, the average dropout rate of first-time-entering students is 15% in the first year, with a further 7% dropping out in the second year, 4% dropping out in the third year and 3% in the fourth year (CHE 2013:15).

However, the same kind of situation as outlined above can arise if the students admitted to an extended programme are substantially underprepared in relation to the programme concerned, and if, as is usually the case, a significant proportion of the mainstream intake is also at risk despite formally qualifying for entry. This scenario would again lead to unacceptably high failure and dropout rates in both the mainstream and the extended programmes, with the consequences outlined above. Therefore, in considering what categories of students should be placed in extended programmes, universities are advised to focus, first, on students who meet institutional admission criteria, but, due to their disadvantaged educational background, would have a low probability of succeeding if admitted directly to mainstream provision. This category of student stands to benefit substantially from foundational provision and extended programmes. It is advised by the DHET (2012) that institutions should have a process in place to identify students who are at risk before placing them in mainstream studies.

DHET (2012a:42) explains that students from the basic education, FET and vocational education and training systems who enter HE underprepared are the main reason for high failure and low success rates. However, various approaches have been used to support underprepared students to compensate for the articulation gap. Unfortunately, there is no clear evidence of the most successful route to enhancing success rates. Considering the low success rates, it is evident that students entering higher education for the first time find the transition from basic education, FET and vocational education and training to HE difficult. Universities are therefore encouraged to continue to assist underprepared students to make the transition to a successful university career.

Employing foundational provision and enrolling students in extended programmes could be key to addressing the articulation gap in the medium to long term. However, the various alternative access programmes should not address only the educational needs of students, but also their other needs, implying that social, intellectual and cultural needs should also be considered in extended programme curriculum design. Even if the subject matter is introductory in nature, foundational provision should ensure that academic demands on the students are met. Current extended programmes offered at HEIs are intended primarily to facilitate the academic development of university students whose prior learning has been adversely affected by educational or social inequalities. Depending on the preference the institution has, alternative access programmes can be offered in different models (DHET, 2012a:7-11), as will be

discussed in the following paragraphs. Alternative access programmes are offered as foundation provision alone, or a combination of foundation provision and mainstream modules.

Extended programmes are formal qualifications (degrees and diplomas) in higher education. DHET (2012a:10) requires that these programmes be approved by the Department of Higher Education, accredited by the CHE and registered with the South African Qualifications Authority (SAQA) (DHET, 2012b:75).

In the extended programme, foundation provision serves as an additional content and coursework for the curriculum of the formal programme. Thus, the duration of the three-year diploma or degree, or four-year degree, is extended by an additional year. The extended year consists of 60-120 credits, which are additional to the formal mainstream programme credits. The foundational provision is credit bearing and contributes to the total credits of the formal mainstream programmes (CHE 2013:18; DHET, 2012b:4). However, when the student graduates, he/she is endorsed with the same diploma/degree as the student who was enrolled for the mainstream programme initially (DHET, 2012a:11-13). Therefore, students following an extended programme are expected to do additional coursework and the institution indicates that the programmes are longer than the minimum set time for the regular curriculum of the specific programme. The foundational provision must be formally planned, scheduled, timetabled and regulated as an integral part of the extended programme and of the institution's formal teaching and learning activities (CHE, 2013:18; DHET, 2012a:4-5).

A compilation of extended curriculum models is used to present educational programmes in higher education institutions (CHE, 2013:16-20; DHET, 2012b:47-48). Alternative access programmes (foundation and extended programmes) help improve the completion rate of students. Both foundation and extended programme models have been used across the HE sector.

In extended programmes substantial foundational provision is incorporated via different models introduced by DHET (DHET 2012b:11). The components of the foundational provision form part of extended curriculum models in higher education (CHE, 2013:39, 70-89). Performance patterns over the past decade show that the most students entering higher education are at risk (DHET 2012a:1-3), even though their Grade 12 National Senior Certificates, endorsed by Umalusi, reflect that they have passed Grade

12 with the necessary skills and competences for admission to Bachelor's degree or diploma programmes. The four models commonly implemented at HEIs are:

- ***Model 1***: Fully foundational: the first year consists of foundation modules only (DHET, 2012a:8);
- ***Model 2***: Extended course: a combination of foundation and mainstream modules (DHET, 2012a:8-9);
- ***Model 3*** **"Longer first year"**: The regular first year is taken over two years with foundation provision integrated into the formal programme (DHET, 2012a:9); and
- ***Model 4***: Augmenting courses: this model is similar to Models 2 and 3, where the content of the regular first year is taken over two years, but it has a combination of augmenting and regular courses (DHET, 2012a:9-10).

The extended programmes that comprise a combination of foundational provision and mainstream modules are the preferred models for promoting alternative access to HE. All models facilitate the academic development of students. The models were developed to address students' lack of prior knowledge and/or academic competence, which had been compromised by social and academic inequalities (DHET, 2012a:5). Once they have acquired the necessary basic foundation skills, students are better prepared for mainstream studies. Development of underprepared students should lead to an increase in mainstream success, including student retention and lower dropout and failure rates. As mentioned in Section 2.1, research has proven that students are not only academically underprepared, but also socially and culturally underprepared (CHE, 2013:23, 97; Shandler, 2009:64; Thomas, 2012:4; Tinto, 2008:9). Therefore, this study attempts to explore the possibility of developing a flexible undergraduate curriculum structure that will assist in the development of undergraduate extended curriculum programmes and thus address the articulation gap.

2.3 ACADEMIC DEVELOPMENTS FOR AN IMPROVED HIGHER EDUCATION SYSTEM

Broadening of access to HEIs has become critical, as the demand for FET increases due to the popular belief that a formal university qualification is a key survival requirement in the age of knowledge. Many educators and academics caution that the

wide access needs to be accompanied by quality and useful education (Sutherland, 2009:30-31; Winberg, 2005:194). In this regard, Winberg (2005:196-197) recommends that higher education should not focus only on transmitting generic blocks of information, but on developing graduates who are independent, critical thinkers and problem solvers. Shandler (2009:21), Sutherland (2009: 31) and Van Wyk and Higgs (2004: 199-200) concur that higher education should develop competencies and skills that form the basis for new knowledge and information. The knowledge attained or created would be in different forms and have value in various ways. Therefore, it could be argued that HE should aim to enable students to use their intellectual, emotional and critical knowledge to solve social-economic problems and contribute to the national growth of South Africa (CHE, 2013:32-33; Sutherland, 2009:30-31; Winberg, 2005:197).

Informal interviews with lecturers at a traditional university and a university of technology identified that the challenges faced by first-year students entering HE studies were the same across the higher education sector (Shandler, 2009:23; Sutherland, 2009:61). They pinpointed key problem areas as lack of reading and writing skills; lack of numeric skills; lack of hands-on mathematics skills; incompetence in using technology (lack of hands-on skills in using a computer for basic applications due to constraints in the school system); lack of appropriate verbal English skills (CHE, 2013:17-19, 110; McFarlane, Sutherland and Vermeulen, 2002:3-5; Sutherland and Weatzel, 2005:2). Through these discussions it became clear that one of the reasons why students leave HE is that they experience a lack of “belonging” to the institution. A study done in the United Kingdom (the *What works?* Project, conducted by the Paul Hamlyn Foundation, Higher Education Funding for England, The Higher Education Academy and Professor Liz Thomas in concurrence with seven universities in the United Kingdom, each conducting an independent project) found that 8% of students leave HE during or after their first year of studies, and that between 37% and 42% of students think about withdrawing from HE (Thomas, 2012:8). Based on evidence from independent projects across HE institutions internationally, it is clear that a significant majority of students consider withdrawing and, thus, improving students’ sense of belonging should be a priority for all programmes, departments and institutions.

One university found that students who think about leaving are more likely to do so than those who have not considered withdrawing. At three of the seven universities students identified a range of reasons why they thought about leaving and most cited more than

one reason. At some of the universities, students gave an average of 2.2 reasons each. Survey data from three universities and qualitative research from another identified academic, social and cultural issues, feelings of isolation and/or not fitting in and concerns about achieving future aspirations as the primary reasons why students think about leaving (Thomas, 2012:4, 8). One university found that students who think about leaving are less satisfied with their university experience and appear to be less engaged with their peers and their institution, whereas students who did not think about leaving appeared to have a better understanding of university processes and were more likely to report a positive relationship with staff and students. Students are particularly likely to consider leaving, (a) after their first semester, or (b) during their last semester (Thomas, 2012:10). This university's project supports the wider evidence that the majority of students who leave do so during the first year. Students who withdrew had the lowest rates of satisfaction with their HE experience in general, and their academic experience in particular. The projects examined alternative approaches to improving student retention and success by means of a range of methods. The evidence from the seven universities' projects and the *What Works?* Project firmly points to students having a strong need to belong, and requiring that their diverse social, cultural, intellectual and emotional needs be addressed in higher education. Meeting these needs can be achieved by engagement, which can be nurtured best through mainstream activities with an overt academic purpose that all students participate in (Thomas, 2012:12).

2.3.1 **A generic introductory undergraduate programme in higher education**

Sutherland (2009:38-39) suggests that higher education should develop a generic introductory undergraduate programme that has generic outcomes aligned with SAQA (SAQA, 2008:2) and National Qualifications Framework (NQF) requirements to address the lack of competence and skills of students entering higher education studies. This proposal recommends an extended programme with foundation provision that incorporates generic modules in all approved mainstream programmes. Some of the modules would be compulsory and others would be electives, depending on the specific programme the student is enrolled for. Such a programme structure would also allow for diverse implementation of teaching and learning methodologies (Sutherland, 2009:39). This generic undergraduate programme hopes to address the skills that

students entering universities for the first time are lacking. However, the problem with this generic undergraduate programme is that HE assumes that all students are equally underprepared for mainstream studies. Actually, some students might be underprepared for a specific programme, and need specific skills and competencies to succeed therein while, for another academic programme that requires different skills and competencies, the students might be adequately prepared. Therefore, students should not be seen as equally underprepared for higher education.

2.4 CURRICULUM AND CURRICULUM DESIGN

A curriculum is a planned sequence of learning experiences, an intellectual "journey" for students (Toohey, 1999:2). It is a series of experiences that will result in learning whatever the curriculum designers intend to be learned (Tanner and Tanner, 1980:32, 117). Experiences that promote learning include attendance of lectures and classes, work in small groups, private study, preparing work for assessment, practical work, experiments and preparation.

Curriculum design can be viewed as a comprehensive plan for an educational programme, so that it offers new and/or improved manpower to fulfil the changing needs of a dynamic society globally (Pillai, 2011:2). The curriculum supports the teaching and learning needs of the students, academic staff, management and the vision and mission of the institution in a form that can be communicated to those associated with the learning institution.

At the Higher Education Summit in April 2010, Minister Blade Nzimande of the DHET suggested that the solution for underpreparedness of students should be based on curriculum reform and the expansion of student support services (CHE, 2013:29; DHET, 2012b:2; Sutherland, 2009:24; Tinto, 2008:7). According to the minister, curriculum reform is the only solution for the challenges experienced by students who find transition from basic education, FET and vocational education and training to higher education difficult. His hope was that reform of the curriculum would enhance access and academic success in higher education (CHE, 2013; DHET, 2012). However, curriculum reform is a long, tedious process that needs to be planned carefully, and consider all stakeholder inputs.

Curriculum reform involves a reconsideration of the development and design of curriculum structures. An in-depth curriculum analysis informs stakeholders about how a curriculum could change to support and prepare students for transitions for which they as students are differently prepared. It is clear that HEIs make assumptions about prior learning as it relates to entry-level students who face the articulation gap. The curriculum for undergraduate programmes should be revised regularly, be open to critique, and should be in a form that is readily transformed into practice (Tinto, 2008:17). However, curriculum reform does not happen overnight and recurriculation of approved programmes could take up to three years to be approved by DHET and accredited by CHE before it is registered by SAQA.

2.4.1 **Curriculum**

If a curriculum is defined more broadly than a syllabus or course of study, then it needs to contain more than mere statements of content to be studied (Billing and Halstead, 2009:5). Important elements that should be considered in curriculum design are the outcome and/or the objectives of the programme; content of the programme; the teaching and learning strategies that would be used; the assessment processes that would be implemented, and evaluation and reflective processes that would be used during the course of the programme (Prideaux, 2003:269). The process of defining and organising the elements into a logical pattern is known as curriculum design (Prideaux, 2003:269).

The curriculum of any institution is often contested and problematic and does not always cater for the diverse shortcomings of students entering higher education. The values that underlie the curriculum should establish a sense of belonging, enhance graduate success and address the needs of student learning. The challenge facing education regarding undergraduate curriculum design is that the curriculum must be responsive to changing values and expectations in education if it is to remain useful (Prideaux, 2009:3). However, it seems that curriculum changes cannot keep up with the ever-changing higher education environment (Prideaux, 2009:5; Tinto, 2008:7-8). Literature suggests that students should experience a sense of belonging, social inclusion, cultural and traditional understanding and academic inclusion in support of their higher education studies (O'Neil, 2010:9; Thomas, 2012:12; Tinto, 2008:8).

2.4.2 **Curriculum design and curriculum design models**

Ornstein and Hunkins (2009:15, 78) maintain that curriculum design encompasses the way a curriculum is planned, implemented and evaluated, as well as what people processes and what procedures are involved. In developing a quality and comprehensive curriculum the following must be considered: what is planned for the students; what is delivered to the students; and what are the students' experiences (O'Neil, 2010:10; Prideaux, 2003:268)? The curriculum is underpinned by a set of values and beliefs about what students should know, and how they come to know it. Hence, a diagnostic analysis process of undergraduate students entering university for the first time should be implemented to determine the level of skills and competence and prior knowledge they possess. The findings from the analysis could form a foundation from which remedial work should commence (Tinto, 2008:14).

Curriculum design is based on curriculum structures and models used in education. Ornstein and Hunkins (2009:16) explain that "curriculum models help designers to systematically and transparently map out the rationale for the use of particular teaching, learning and assessment approaches". They also suggest that curriculum development models are technically useful, however, the models often overlook the human aspect, such as the personal attitudes, feelings, sense of belonging and values involved in curriculum-making. They believe that it is important to use professional and personal judgement on what is a good curriculum design approach to develop, encourage and enhance learning (Ornstein and Hunkins, 2004:207). Figure 2.1 describes two polarised curriculum models used in education. Between authors and educationists these models are better known as the Product Model and the Process Model (Neary, 2003a in O'Neill, 2010:3). The Product Model focuses on "emphasizing plans and intentions" whereas the Process Model focuses more on the "activities and effects" of curriculum design. Figure 2.1 compares the Product Model and the Process Model.

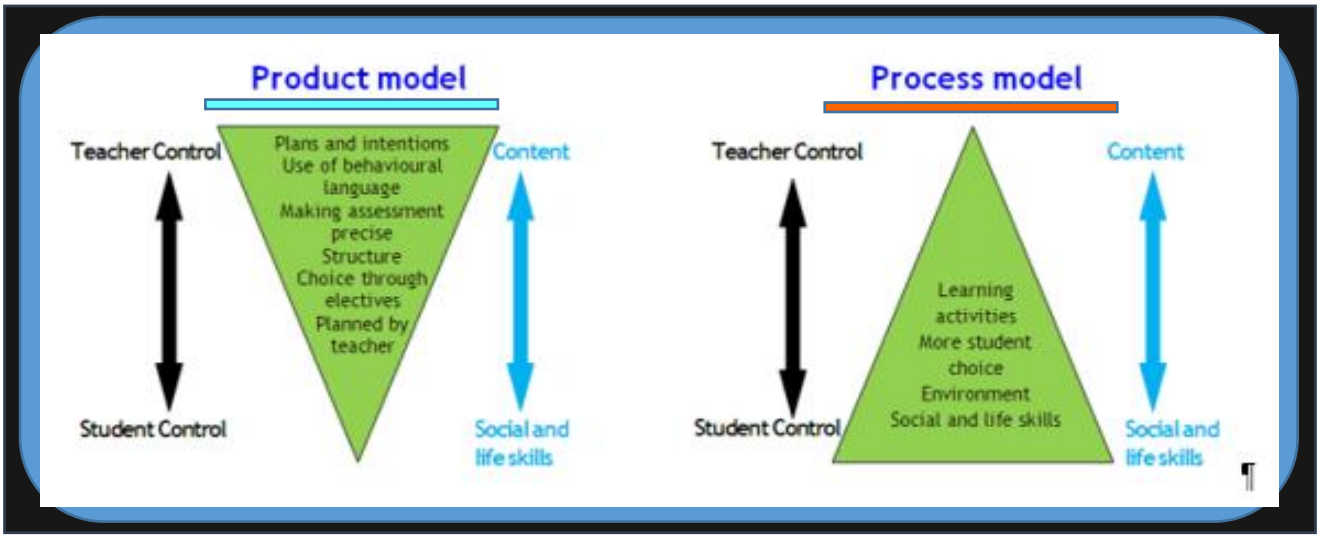

Figure 2.1: The product and the process of curriculum development

Source: O'Neill (2010:1)

The Product Model was grounded and developed in the Tyler Curriculum Model Design (1949). The Tyler Model has influenced curriculum development in America, the United Kingdom and Europe since the middle of the 20th century (O'Neill, 2010:4). The Tyler Curriculum Model shares some elements with the ADDIE Model. Well-known curriculum models that are spinoffs from or variations of the Tyler and ADDIE Models are, to name a few, the Instructional Systems Design Model, and the Dick and Carey, and the Kemp Instructional Systems Design Models. In addition to the Process and Product Models, there are a range of more specific models that could, individually or collectively, suit different programme designs. Some of the curriculum models have grown out of different educational contexts, such as higher and adult education. However, many are transferable across the different areas, some are described as "models" and as they become more specific they may be referred to as "designs", i.e. subject-centred designs.

In O'Neill (2010:2), Popham and Baker's (1970) model of curriculum design was criticised by academics for its overemphasis on learning objectives, which were viewed as employing a very technical means-to-an-end reasoning. In the European HE context, which has been strongly influenced by the 1999 Bologna Declaration (Higher Education in Europe, 2009), curriculum designers use a model similar to Tyler's (Forest, 2014:2; O'Neill, 2010:3-4). O'Neill explains that, "the product model, however, has been valuable in developing and communicating transparent outcomes to the student population and has moved emphasis away from lists of content". Recent literature in this area suggests that, when using the Product Model, care should be taken to avoid

being overly prescriptive when writing learning outcomes (Gosling, 2009:4; Maher, 2004:47).

Neither model is superior to the other, however, no one model will suit a programme fully. Therefore, being consistent in applying these models in curriculum design will help designers to establish cohesion and clarity in their programme development approaches. Literature emphasises that learner centeredness and student engagement are very important in a holistic approach towards teaching and learning (Fink, 2003:117; O'Neil, 2010:11).

2.4.2.1 ADDIE Model

The ADDIE Model allows curriculum to develop and be designed according the programme objectives (Fink, 2003:120). The ADDIE and Tyler's model for curriculum design are similar in many aspects. The ADDIE Model is often used by instructional designers to develop sound curriculum and training material aligned to specific requirements. The model uses five phases, namely, 1. Analysis, 2. Design, 3. Development, 4. Implementation, and 5. Evaluation. It represents a dynamic, flexible guideline for building effective curriculum structures/programmes (Forest, 2014:2). The ADDIE Model is the most commonly used model amongst instructional and training designers. However, the model has some weaknesses that have led to a number of spinoffs or variations. Some models worthy of mentioning are the Instructional Systems Design and the Dick and Carey, and Kemp Instructional Systems Design models (O'Neill, 2010:11). One commonly accepted improvement of the ADDIE Model is the use of rapid prototyping, which involves receiving continuous or formative feedback while instructional materials are being created. This model attempts to save time and money by "catching" problems while they are still "easy" to fix (Culletta, 2013:1).

Fry (1999:117) suggests that curriculum design should consider the aims, course outcomes, intended learning outcomes of modules, syllabi, learning, teaching methods, assessment approaches and strategies. It involves ensuring that the curriculum is accessible and inclusive, i.e., that students with disabilities, and students from all backgrounds, can participate in it with an equal chance of success.

2.4.2.2 The Tyler Model

The Tyler Model, as mentioned, is often referred to as the “objective model” (Durbin, Ford, Hunter and Tyler, 2010:2-4). The Tyler Model, developed by Ralph Tyler in the 1940s, is the quintessential prototype of curriculum development according to the scientific approach (Durbin *et al.*, 2010:4).

The Tyler Model’s focal points are the nature and structure of knowledge; the needs of society and, most importantly, the needs of the student. These are essential elements when designing foundation provision and extended curriculum (Durbin *et al.,* 2010:6). According to Tyler, the purposes of curriculum design should be derived from the needs, features and interests of students in contemporary life (outside the educational institution), and what subject disciplines have to be offered (to students outside of specialties).

The Tyler Model consists of four steps.

1. Determine the institution’s purposes (objectives);
2. Identify educational experiences related to the purposes;
3. Organise the experiences, and
4. Evaluate the purposes (Durbin *et al.,* 2010:14).

Step 1: Determining the objectives of the institution by asking the question*: What do the students need to do in order to be successful?* Each module has natural objectives that are indicators of mastery. All objectives need to be consistent with the philosophy of the institution, a point that is often neglected in curriculum development.

Step 2: Developing learning experiences that help the students to achieve Step 1.

Step 3: Organising the experiences: *Should the lecturer demonstrate first, or should the students learn by participating immediately?* Either way could work and preference is determined by the philosophy of the lecturer and the needs of the students. The point is that the lecturer should determine a logical order of experiences for the students.

Step 4: Evaluation of the objectives. The lecturer assesses the students’ abilities through multiple assessment methods. There are many ways to do it, for example, the lecturer could have the students write a report without assistance. If they can do this, it provides evidence that the students have achieved the objective of the lesson.

As mentioned in Section 2.4.1, there are many spinoff models from the ADDIE and Tyler Models, however, the Tyler Model is still considered by many educationists to be the strongest model for curriculum development (Darrin, 2014; Prideaux, 2003:11). The main reason that the Tyler Model was selected to serve as the basis for the study (the design of a conceptual model for a flexible undergraduate curriculum structure) is that the model focuses on learner centeredness, which means that the model aims to address the unique needs of students, enable students to practise their skills through a variety of assessment methods.

2.5 EVOLUTION OF ACADEMIC DEVELOPMENT IN SOUTH AFRICA

In the early 1980s academic development was introduced in the South African higher education arena. Academic development suddenly gained momentum due to the perceived needs of, at the time, small numbers of black students entering historically white liberal universities (Boughey, 2010:4). Enrolments by all students to higher education increased, in particularly enrolments by black students at liberal, traditionally white universities. Academic development at higher education institutions progressed according to three phases, as explained by Volbrecht and Boughey (2004:7). These phases are broadly termed a) academic support, b) academic development, and c) institutional development. However, the phases identified were not distinct, but are indicative more of dominant discourses constructing what is appropriate as student support, than actual periods of time (Boughey, 2010:4). Following Chouliariki and Fairclough (1999:7), “these formulations are understood to give rise to ‘conjunctures’ or relatively stable sets of social practices around specific projects (in this case student support)”. This is an important point as, in many respects, the student support practices that have characterised each phase (or each discursive formulation) have co-existed in many cases and, in some, continue to do so alongside dominant practices (Boughey, 2010:4-5). The definition of academic development as “an open set of practices concerned with improving the quality of teaching and learning in higher education” offered by Volbrecht and Boughey (2004:58) attempts to capture this phenomenon with the word “open”, signalling that the student support practices that partly constitute contemporary academic development work often stem from very different ideological and discursive positions.

2.5.1 Three phases of academic development in South Africa

Academic support programmes were developed in line with North American minority programmes, to support underprepared students in an unchanging education environment. In South Africa, these programmes were easy to implement in “white” universities during the apartheid era, because they were grounded and based on the implementation of the government’s apartheid policy (Boughey, 2007:2). Academic development approaches have progressed through three phases of development since 1980. Phase 1 focused on the introduction of academic development programmes, which will be discussed in Section 2.5.1.1.

2.5.1.1 Phase 1, Introduction of academic development programmes

During the late 1980s to early 1990s these implementation approaches were challenged by academia and higher education governing bodies (Scarfe, 2004:3; Wilcox, 1997:31-33). In their views the focus had to be on student learning across the HE sector, and not only on teaching in the so-called white universities. Scarfe and Wilcox challenges the current approaches to learning in higher education. They emphasised that students of all races faced academic challenges, and more students entering HE were underprepared for tertiary studies, irrespective of their race, culture, educational and/or socio-economic backgrounds. Boughey (2007:3) states that the total learning experience is a combination of teaching and learning, and the entire student experience is influenced by it. Scott, Yeld and Hendry (2007:6) claim that the approach of “fixing the student, fixing the teacher” does not affect the underpreparedness of students entering higher education. HEIs need to change the way they accommodate underprepared students. Addressing underprepared students’ diverse needs necessitate a change in the way academic development in conducted in HEIs, and how academic development tackles the transformational challenges set by government (Fraser and Killen, 2003:253-255; Shandler, 2009:23-24).

As mentioned, academic support programmes were implemented with the intention of “fixing” underprepared black students who had gained entrance to historically white universities. Academic support programmes were used as intervention solution to prepare these black students for an unchanging higher education environment (Jacobs and Miller, 2002:84-87). The programmes were found to help students in so-called white universities, but not in the majority of black universities, where more students were, in

fact, educationally disadvantaged due to their diverse backgrounds (Shandler, 2009:25).

2.5.1.2 Phase 2, Changing focus in academic development

In the early nineties, South African higher education went through a second phase of academic development, during which the academic development approach had a more progressive and positive connotation, whereas “support for students” focused on student remediation and inferiority (Scott *et al.,* 2007:1). During this phase, as Jacobs and Miller (2002:85) explain, HEIs had to focus on how their academic staff, management, academic approaches and practices were to change to address the ever-changing higher education environment: “how to deal with the needs of non-traditional students” (Jacobs and Miller, 2002:86). The question at that time was aimed at figuring out how these students would gain access to the universalisation of the higher education environment, and how their needs would be accommodated by HEIs.

After the attainment of democracy in South Africa the number of non-traditional students entering traditionally white universities continued increasing (Study SA, 2007:1-5). The Higher Education Act 101 of 1997 (DoE, 1997:14, RSA, 1997) states that HE had to develop and devise measures to support the needs of students. Boughey (2007:11) and Shandler (2009:25) support the Higher Education Act, by confirming that changes in curriculum teaching and learning methodologies are of substantial importance if government wants to enhance student access and success in HE mainstream studies. It was during this phase that academic development intervention programmes became integrated into mainstream courses. This lead to the third phase in academic development.

2.5.1.3 Phase 3, Institutional development

The South African government instituted policies and legislation to accommodate changes in South Africa’s democracy. In the late 1990s the government introduced outcomes-based education (OBE), the National Curriculum Statement and the NQF, thereby hoping to increase student numbers in schools and increase student access to higher education. The government trusted that the intervention would increase the total throughput rate in basic education and higher education for all race groups, in particular, previously disadvantaged students (De Kadt, 2008:2; Shandler, 2009:25-26). The

implementation of OBE, NCS and NQF forced HEIs to scrutinise and recurriculate their existing programmes. Government demanded that HE institutions focus on academic, social and socio-economic skills development, and academic competence and skills that would promote lifelong learning opportunities. The aim was to equip students graduating from HEIs with the necessary skills and competence to fulfil South Africa's socio-economic needs. During this time, many HEIs focused on academic development and curriculum development, and staff in these positions gained more recognition. HEIs focused on establishing departments, centres or units especially for academic development. Curriculum in tertiary institutions gained momentum and restructuring of programmes was in full swing. Academic programmes and modules accredited by the CHE and SAQA were integrated into recognised degrees, diplomas and professional certificates. Integrating social-economic, academic, and cultural elements in the conceptual model for a flexible extended undergraduate curriculum structure could address the underpreparedness of students attempting HE studies for the first time. Designing modules that would develop the social, cultural and intellectual skills of students would inevitably enhance their intellectual skills, which, in turn, would prepare them better for their studies and promote lifelong learning (De Kadt, 2008:4-6).

2.6 THEORETICAL FRAMEWORK: APPRECIATIVE INQUIRY IN EDUCATION RESEARCH

As change is an adventure, we seek to take new directions to encourage change through a "positive revolution" (Cooperrider and Whitney, 1998). AI is an action research process with little self-reflection and critique, and is used to effect change within a range of organisations and institutions (Shuayb, Sharp, Judkins and Hetherington, 2009:4). AI challenges the problem-oriented approach, and the research method focuses on the positive attributes of an organisation. The positive attributes open possibilities for change (Cooperrider, 1997:4). AI gives researchers the opportunity to take a new direction when they conduct research (Barrett and Fry, 2005:2). Through the AI approach a more positive mind-set towards the study is cultivated.

Humans tend to focus easily on "correcting the problem", and searching to find solutions for those problems. AI gets much better results than seeking to solve problems; it is a complex science designed to make things better. AI is based on the simple premise that we, as humans, ask questions, and these questions are usually directed to where we

would like to go. Thus, it could be said that human systems grow in the direction we ask questions and focus our attentions on (Donnan, 2005:2). AI has its foundation in the conceptual and ontological position of social constructionism (Cooperrider and Whitney, 1997:14). It is based on the premise that action, language and knowledge are linked.

Appreciation means to know or take consideration of, and connecting with what others value at that moment (Merriam-Webster, 2016:5). Appreciation develops and promotes a deeper understanding of, in this case, the diverse needs of students. However, HE could make a positive contribution to influencing cultural, social and socio economic/political issues in South Africa by addressing those needs within the curriculum. AI is based on constructionism, simultaneous, poetic, anticipatory and positive principles (Bushe, 2012:88). What we believe to be true influences the way we act (Grant and Humphries, 2006:411). Our present behaviour is influenced by the future we anticipate (Donnan, 2005:2). The more positive the questions used to effect change during the AI process, the longer lasting and the more effective the change will be (Grant and Humphries, 2006:413). Cooperrider and Whitney (1997:4-5, 2005:4-6) suggest applying the 4D cycle/stages (Figure 2.2), namely, Discovery, Dream, Design and Destiny in AI.

- ***Discovery*** – A process of finding out the best and the most positive experiences of all stakeholders;
- ***Dream*** – A way of thinking critically and creatively about how the future should look like, or how we would like the future to be;
- ***Design*** – a phase of developing plans for the future that reflect all stakeholders' and participants' views of good practice and vision. Cooperrider and Srivastva (1987:131) explain that "this phase involves producing provocative propositions, which are statements about what the participants want to achieve", and
- ***Destiny*** – a phase during which the energy of the research and implementation move towards action planning. The stage involves working out what will need to happen to realise the provocative proposition (Cooperrider and Whitney, 2005:3-4; Cooperrider *et al.*, 2008:137; Donnan, 2005:3-4). Figure 2.2 explains the process followed in the AI research approach.

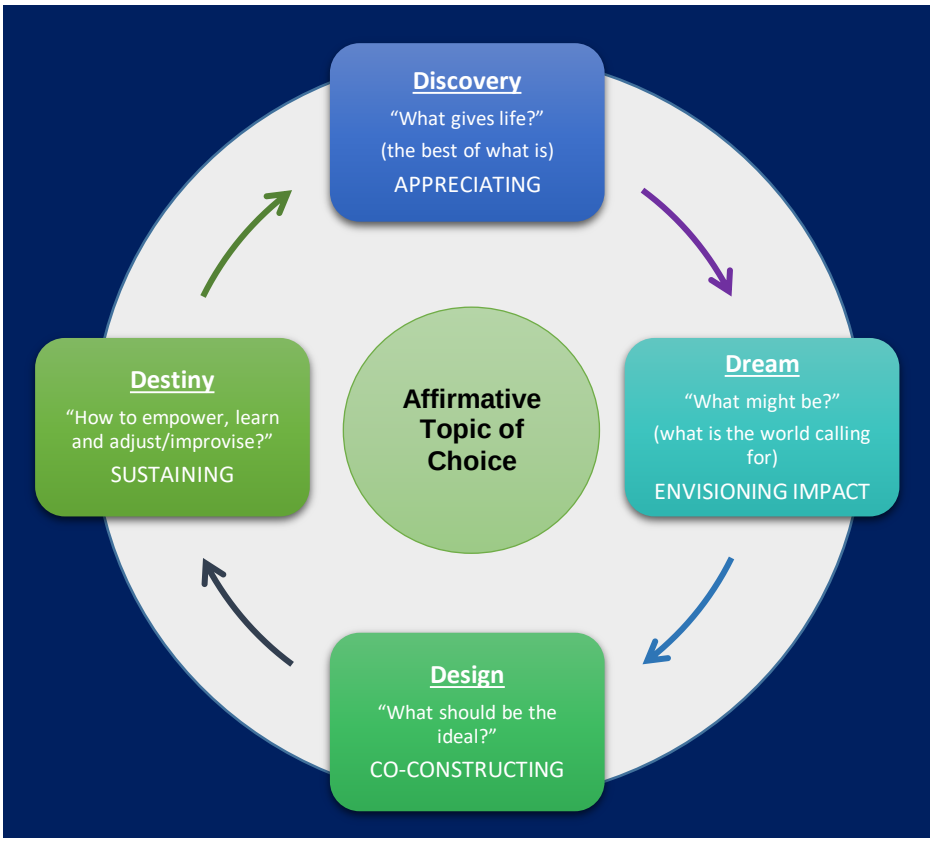

Figure 2.2: The Appreciative Inquiry 4-D cycle

Source: Cooperrider and Whitney (2005:4) and Shuayb *et al.* (2009:7-9).

Chapter 1 reported that individual and focus-group interviews were used to collect data. The AI research approach and application of the 4D stages/cycle suggested by Cooperrider *et al.* (2005:4-11) provided the framework within which research questions were applied, and encouraged the participants to participate and tell their stories through subsequent discussions.

From participants' responses to the interview questions, I identified what was good in the organisation and what was "working well", thus, focusing on the positive and not the negative. By focusing on the positive a researcher can build a platform from which to move towards new actions (Shuayb *et al.*, 2009:9).

2.7 CONCLUSION

In Chapter 2 the literature reviewed informed me about challenges faced by the higher education sector and students entering its institutions for the first time. I argued that higher education needs to adapt to transformation and reform to address the ever-changing demands of the South African socio-economic environment. However, it was

claimed that students coming from the basic education system are often underprepared for higher education studies (CHE, 2013:16). The literature review addressed distinct focal areas, namely, transformation of higher education, transformation within tertiary academic programmes, curriculum models, curriculum processes and alternative access programmes used in the higher education sector. Alternative access programmes in higher education and the access with success drive formed the core of this chapter.

An overview of the higher education academic development environment in South Africa was provided and explained. The underlying principles of curriculum development, which have an influence on the development of alternative access programmes, were also explained. There was a discussion on the different curriculum design models used in higher education. The Tyler Model was mentioned as the basis of most curriculum design approaches across the higher education sector. This, in turn, informed me about the processes that needed to be followed to develop a comprehensive and applicable conceptual model for a flexible extended undergraduate curriculum design that would address underprepared students' needs. Lastly, the discussion reviewed the AI research approach and the reasons why AI was chosen as the theoretical framework for this study.

In Chapter 3 the research design and methodology, data collection methods and approaches, and the design stage of the conceptual model will be discussed.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

> *Appreciative Inquiry begins an adventure. Even in the first steps, one senses an exciting direction in our language and theories of change an invitation, as some have declared, to a positive revolution* (Cooperrider, 1997:1).

This chapter presents a discussion on how an empirical inquiry was conducted to address the third research question of the study, i.e., *How could a conceptual model for a flexible undergraduate curriculum be designed to develop academic competency skills in students in order to reduce the articulation gap between basic education (senior education) and HE (tertiary education)?* The chapter, therefore, reports on and describes the nature of the research design followed, as well as the research methods employed in the investigation. I created a plan to guide me in the execution of the research study (Creswell, 2002:42; Denzin and Lincoln, 2005:17; Merriam, 2002b:15). The action plan consisted of the following set of guidelines:

a) Select the most appropriate and applicable research design;
b) Select the theoretical framework that would be used for the study (AI and the Tyler Model of curriculum design were selected as relevant frameworks to guide the study);
c) Collect data using individual and focus-group interviews;
d) Analyse the data, code data into understandable and descriptive themes;
e) Interpret the data (make meaning of the data);
f) Describe data based on interpretation and findings;
g) Give feedback to respective stakeholders; and
h) Develop a preliminary conceptual model for a flexible extended undergraduate programme structure at VUT based on Tyler's Design Model (Durbin *et al.,* 2010).

The chapter ends with an account of what makes this study trustworthy as well as the ethical measures taken into consideration to place the study at an acceptable professional standard.

3.2 RESEARCH DESIGN

The research design is a journey that the researcher follows to move from the "here" *(now)* to the "there" *(future),* where the "here" is represented by the research questions and the "there" the responses of the participants (Fouché, Delport and De Vos, 2011:143; Shuayb *et al.*, 2009:4). However, Blaikie (2000:21) defines research design as an "integrated statement and or justification for the more technical decisions involved in planning a research project and a process analogous to the activities of an architect designing a building". Babbie's (2007:112) definition is similar to Blaikie's (2000), and states that "a research design involves a set of decisions regarding what topic is to be studied among what population with what research methods for what purpose". Therefore, a research design is the process of focusing your perspectives for the purpose of a particular study. Thus, from these definitions it could be said that a research design focuses on the end product and all the steps in the process to achieve the outcome anticipated (Fouché *et al.,* 2011:143).

Due to the nature of the research questions that were to be addressed, it was decided that an explorative case study research design with a qualitative approach would be followed (Mouton, 2001:54). The research sought to explore how the articulation gap between basic education and higher education could be closed by designing a flexible extended undergraduate curriculum design. In qualitative research, the researcher is more concerned with understanding, rather than explaining naturalistic observations (De Vos *et al.,* 2011:308). Researchers of qualitative studies often develop their own design as they go along, using one or more of a variety of strategies as guidelines (Schurink, Fouché and De Vos, 2011a:308). Patton (2002:118) reminds us that a major strength of the qualitative method is the inductive, naturalistic inquiry strategy of approaching a setting without predetermined hypotheses (De Vos, 2010:5).

My aim as a researcher was to gain an understanding of the participants' responses (Maree, 2007:59). The rationale for employing this approach was grounded in a constructivist research paradigm. Babbie (2007:32) explains that a paradigm is a fundamental model researchers use to organise research observations and reasoning. Hence, Thomas Kuhn's (1970) work implies that *scientific activity is shaped by paradigms (*Delport, Fouché and Schurink, 2011:298). Within the constructivist paradigm, I addressed the processes of interaction among individuals (Creswell,

2014:80). Therefore, I relied a great deal on the responses of participants during the interviews. I used participants' views to construct meaning about the subject of investigation (Creswell, 2014:80). Thus, the participants became co-constructors for the development of the preliminary conceptual model design (Smit, 2013:551).

The research method for the study is shown in Figure 3.1. AI inspires the constructivist style of investigation, whereby I engaged with the stakeholders (participants) throughout the stages of designing the preliminary conceptual model. Figure 3.1 illustrates the steps I used throughout the research process. AI is based on social constructionism in which the role of language used is also emphasised.

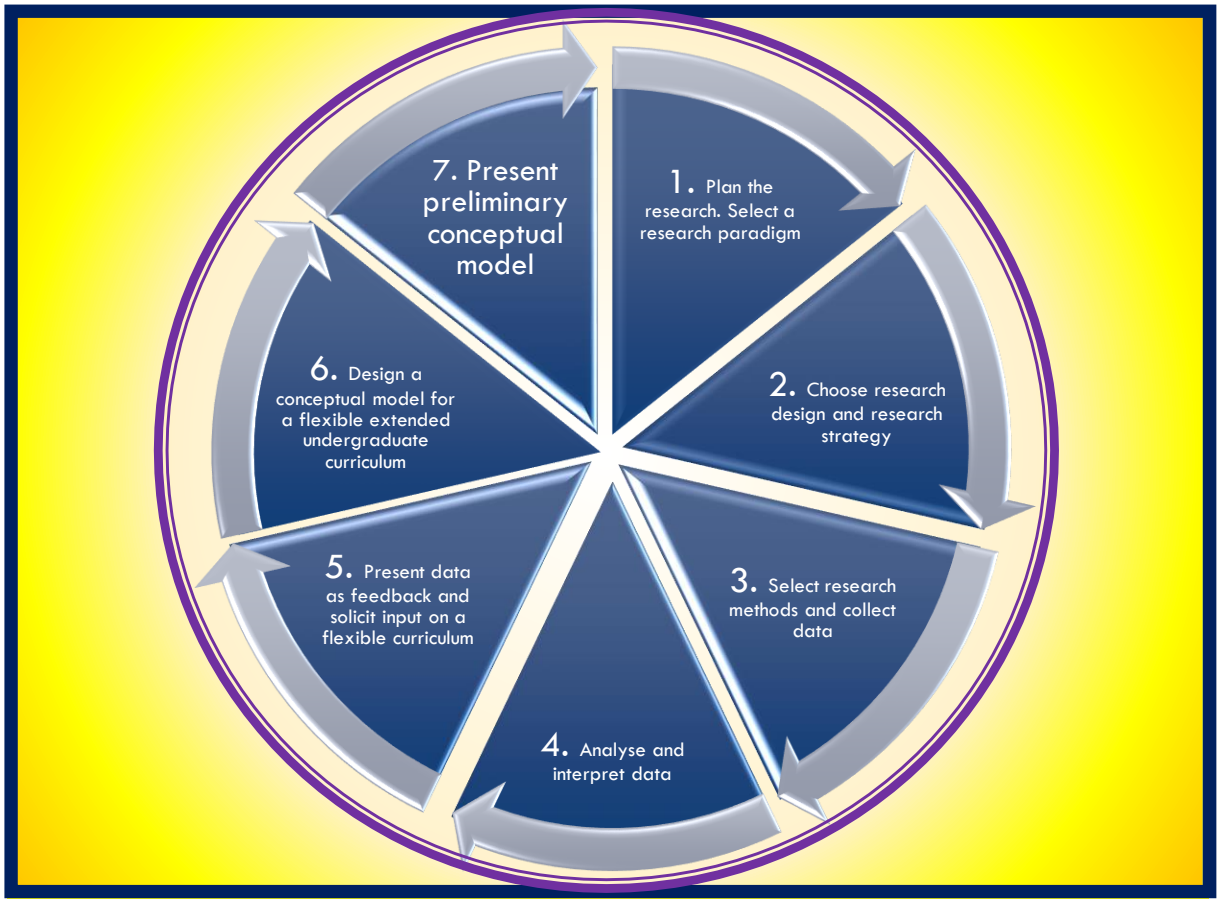

Figure 3.1: The research design plan

The first step in the research process is to plan the research and select the appropriate paradigm to follow. During this step the literature informed the research design of the study. During the second step the AI research method and the theoretical framework was selected for the research design. Thirdly, a research method was chosen to collect and analyse data. Data was collected using individual and focus-group interviews. As

soon as a point of saturation of data was achieved I moved to the fourth step. The fourth step was to analyse the data thematically. The data were organised into manageable "chunks" and then grouped and placed into applicable categories and themes. Step five involved describing the findings, and interpreting the findings so that the findings could be understood and interpreted for meaning making. The sixth step was about giving feedback to the participants on the research findings. During this sixth step, I realised that the participants became co-constructors for the design of the proposed conceptual flexible extended undergraduate curriculum design. The preliminary conceptual model is presented in this dissertation for scholars to view and it will be shared with the research participants afterwards by means of discussions. The model will also be shared through presentations at academic conferences and colloquiums, as well as through publications in academic journals.

3.2.1 Framework for research design - appreciative inquiry

AI was used as the research strategy and a conceptual framework to guide the study. AI is a collaborative and participatory approach relying on interaction and action in both group and individual discussions, which, in turn, allow a researcher to identify good practice for possible change that could be introduced to a system (Shuayb *et al.*, 2009:4). Considering that this study was guided by the AI's 4D cycle, the process followed was informed by the social constructionism paradigm (Cooperrider, 1987:11). AI uses language and words as the basic building blocks of social reality. For these reasons interviews are seen as the most important aspect of AI. Positive questions are asked during AI to strengthen the organisation's capacity to identify, anticipate and heighten positive potential (Calebrese and Cohen, 2013:197). All the research questions asked during the study had a definite logic – aiming to uncover, discover and/or interpret the positive opinions, views and perceptions of all stakeholders. AI interviews differ from traditional interviews in a sense that "AI interviews seek examples, stories and metaphors" (Shuayb *et al.*, 2009:3). The purpose of AI is to find the best moments, events and stories, rather than to solicit facts and opinions or problems (Shuayb *et al.*, 2009:4).

AI distinguishes itself from critical modes of action research by its deliberate affirmative assumptions about people, organisations and relationships (Calebrese and Cohen, 2013:199-200). It focuses on asking the unconditional positive question to ignite

transformative dialogue and action within human systems (Ludema, Cooperrider and Barret, 2001:189). AI is based on the premise that organisations move in the direction of what they study (Ludema *et al*., 2001:190).

AI consists of four phases and each phase has a definite purpose. The first phase, Discovery, searches for highlights in the organisation – *what works well, what gives life* to the organisation, identifies and values the *best of what is* to build a better future for the organisation (Shuayb *et al.*, 2009:4). AI creates enough uncertainty about the dominance of deficit vocabulary to allow for possible change. The second phase, Dream, focuses on *what could be*. As alternative voices from members enter the conversation, new ways of understanding emerge from perspectives of participants that are elicited by asking unconditional positive questions (Shuayb *et al.*, 2009:4-5). By asking positive questions, the interviewer guides the discussion to creative and constructive thinking, which, in turn, describes and envisions social and organisational reality, and invites new and positive alternatives for an organisation (see Figure 3.2). Discussion during the Dream phase points to what the organisation could and should become, and liberates members from the constraining power of existing negativity and supports the construction of positive guiding images of the future (Barret *et al.,* 2001:190).

The third phase is to Design the future through dialogue. Barret (2001:191) expresses that, “the key to this phase is to create a deliberate inclusive and supportive context for conversation and interaction”. Cooperrider (1987:17) explains that Design is a process of finding common ground by sharing discoveries and possibilities, dialoguing, debating and finally getting to the point where everyone can agree on the ideal or vision; allowing all members, through dialogue, to evolve through organisational discourse and individual ideals to become co-constructors of the organisations’ vision. Destiny, the fourth and final phase, focuses on constructing the future through innovation, creativity and action. AI accomplishes destiny by including ever-broadening circles of participants to join the conversation. Each participant brings additional linguistic value (resources) to help build a common language that creates broader and deeper possibilities for action (Barret *et al.,* 2001:192).

3.3 RESEARCH METHODS

Research methods encompass all forms of data collection, analysis, and interpretation that researchers propose for their studies (Creswell, 2014:295). Research methods include processes by which information is gathered. Through qualitative research methods the researcher attempts to gain an understanding of the underlying reasons and motivations for actions and establish how people interpret their experiences and the world around them (Creswell, 2009:173, Smit, 2013:552-554). Although some authors do not agree with this approach, Creswell (2009:171-173) and Smit (2013:551-554) clarify that is the preferred approach to qualitative research, and it enables the researcher to structure his/her study.

Qualitative data collection methods provide insights into the setting of a problem, generate ideas to be collected, and analyse data (Creswell, 2009:173). Qualitative methods provide results that are usually rich and detailed and inform the research study. They can describe how people feel and what they think, but cannot tell how many of the target population feel or think in a specific way, as quantitative methods can (MacDonald and Headlam, 2009:35). Therefore, qualitative methods move our research from an idea to an outcome as we connect the *"what"* to the "*why"* of theory (Creswell, 2009:212). Hence, the aim of research methods is to find a solution to the research problem (Creswell, 2009:214).

The data collections methods used in the study were semi-structured individual and focus-group interviews. Field and Morse (1995:67) refer to semi-structured interviews as open-ended or guided interviews. The reason for using individual and focus-group interviews was based on Kumar's (2005:195) research, and his explanation that a huge amount of data can be collected in a short space of time. By using interviews all participants can be interviewed in the environment they are comfortable and familiar with.

Research findings were shared with the participants after the data was analysed and conclusions were reached. During the feedback sessions to representative small adjustments were made to the development of the preliminary conceptual model.

3.3.1 **Selection of research participants**

In order to collect detailed, in-depth information from individual and focus-group interviews, all participants needed either to be part of the extended programme at VUT (2015), or students who had completed the extended programme in 2014. Permission to conduct the study at the university was obtained from the deputy vice chancellor: Academic and Research. Further, a request to approach academic staff and students for interviews was made to the Executive Dean: Engineering and Technology. After receiving permission from the authorities, I contacted three heads of department of the Engineering Faculty, nine staff members and 25 students to set up face-to-face meetings. Although some researchers express the view that it is not a good idea to involve students in evaluating a programme, my belief is, however, that students are just as important as the academic staff involved in the programme (Greeff, 2011:346). I personally invited the students and VUT staff to participate in the study. Three heads of academic departments and nine academic staff members, consisting of a programme coordinator and curriculum designers, were selected for interviews. The criteria used for selecting the participants for the individual interviews were that the individual needed to be, a) involved in teaching in the extended programme, b) part of the curriculum development of the extended programme, and c) involved in coordinating academic activities for the extended programme.

A number of aspects need to be considered when sampling for focus groups; however, in this study the primary goal was to bring people of similar backgrounds and experiences together (Patton, 2002 in De Vos, 2010:391). In this case, students who were currently in the extended programme and those who had completed the extended programme in 2014 were requested to participate in focus-group interviews about specific issues that affected them and that related to the research questions (Patton, 2002:236). These issues might be, but are not limited to, academic, social or cultural issues. It could also include financial or religious issues, but to name a few topics. Purposive sampling was used as a technique to collect data, because the researcher needed participants who were familiar with the aspect being investigated, and the participants were, thus, information-rich participants (Strydom and Delport, 2011:392).

In total 15 students who had completed the extended programme in 2014 (2014-Cohort 1) and 10 students (2015-Cohort 2) who were still in the extended undergraduate

programme in 2015 accepted the invitation to voluntarily participate in focus-group discussions. Denzin and Lincoln (2000:370) mention that there are no rules for sample size in qualitative inquiry. Sample size depends on what we want to know, the purpose of the inquiry, what is at stake, what will be useful, what will be credible and what can be done by the available time and resources?

Cohort 1 and Cohort 2 were equally represented by male and female students of diverse cultural backgrounds. Samples were selected to comprise students of different social, cultural and economic backgrounds. The reason for the selection was to determine, by means of the investigation, if the current extended programme considers cultural and social issues of students, and how the curriculum addresses the challenges students face regarding curriculum design. Many of the students in this study were from poor socio-economic geographical areas. Some were from farm schools and others from township schools, where the schooling system differs from those in cities, especially regarding the way the schools are resourced. Lack of resources include scarcity of adequately qualified teachers, insufficient infrastructure to accommodate the learners, and outdated or no reading material. Learners from rural village and township schools are at a disadvantage compared to their peers in urban schools (the latter attend Model C schools and private schools), Sutherland (2009:71-72). In non-urban areas the teaching competencies of teachers are sometimes questionable, and the schools differ, especially in the way teaching and learning is conducted. Obasi (2011:141) writes about Nigeria, “it is not uncommon to find in some of the urban secondary schools an over concentration of qualified graduate teachers, students of the same subject in rural schools are compelled to make do with either unqualified teachers or none at all. It is generally believed today that students in urban schools perform better than rural counterparts in school certificate examinations”.

The students of both cohorts were also representative of local, national and international communities. 2014-Cohort 1 included five international students. Two male students were from Ghana, one female student was from Kenya, one male student was from Ivory Coast and another from Angola. In 2015-Cohort 2, only five students were from the local community, i.e. students who grew up in the Vaal Triangle; the others were from different provinces in South Africa.

3.3.2 Data collection

The data collection process employed the 4Ds (Discover, Dream, Design and Destiny) of the AI model to obtain data through qualitative research methods. The exploration that was followed, included the processes illustrated in Figure 3.2.

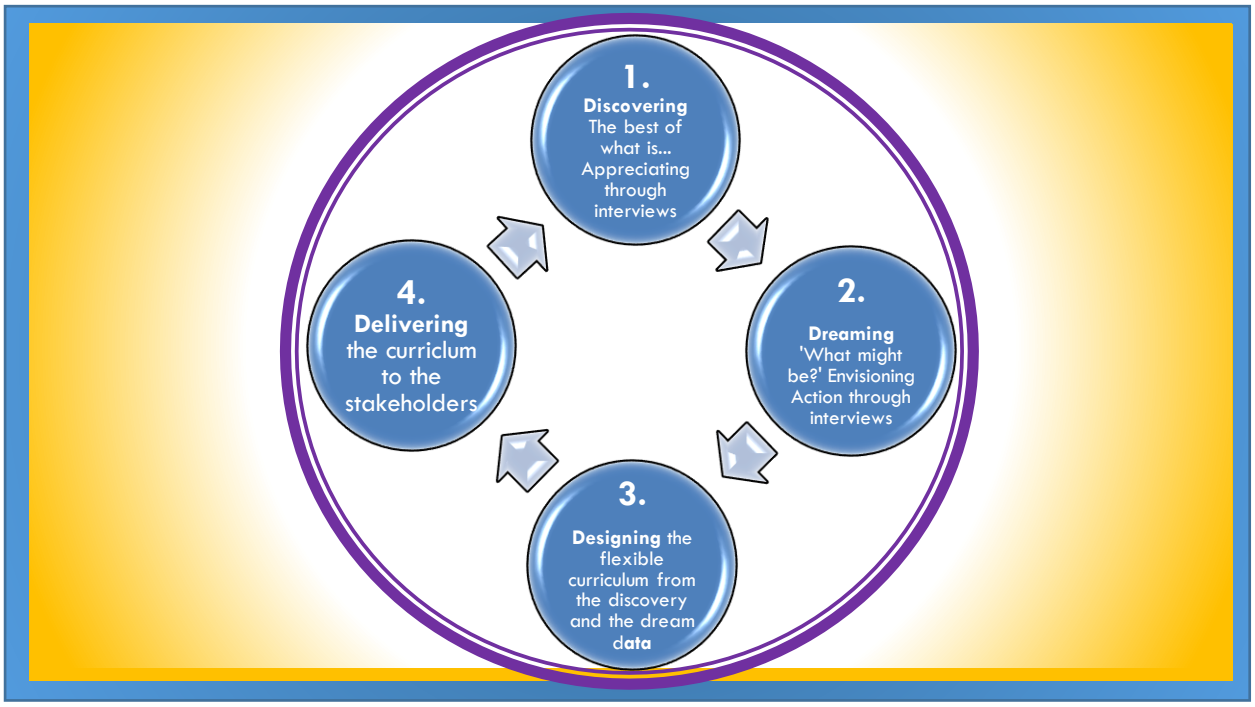

Figure 3.2: Modified delivering appreciative inquiry cycle

Source: Cooperrider *et al*. (2008:3-6); Shuayb *et al*. (2009:4)

Stage 1: Discover – During group and individual interviews the researcher attempted to establish ***what is good*** in the current undergraduate extended programmes (Shuayb *et al.*, 2009:4).

Stage 2: Dream – Through individual and focus-group interviews (i.e. discussion sessions) and a feedback workshop session (individual participants and representative of Cohorts 1 and 2), the researcher and participants identified participants' ***aspirations*** and ***what*** they would like to achieve regarding a flexible undergraduate curriculum structure, thus envisioning the future.

Stage 3: Design – The researcher coded, compared, integrated and grouped the data collected from the participants into categories into themes and subthemes. Based on the analysis of the data the researcher could then design a preliminary conceptual

model for a flexible extended undergraduate curriculum structure at VUT, using the Tyler Model of curriculum design as the basis of the conceptual model design.

Stage 4: Destiny/Delivery – The proposed conceptual model for a flexible extended undergraduate curriculum programme will then be presented to the interviewed stakeholders after it had been submitted in fulfilment of the Master's degree requirement.

A detailed account of data collection follows.

3.3.2.1 Discovery stage – Interviews

An interview is a social relationship between the interviewer and the interviewees, designed to exchange and share information. The main task of interviewing is understanding the meaning of what the interviewee(s) says (May, 1991:191). Therefore, an interview is a conversation with a specific purpose (Greeff, 2011:347), that is, to collect large amounts of data at one time. The researcher asked participants semi-structured questions, followed by probing questions, where necessary. The interviews were audio-recorded to allow the researcher to listen to the recordings later and collect data as accurately as possible. The researcher transcribed each interview and collected the data needed for the research (Monette, Sullivan and DeJong, 2005:178).

a) Individual interviews

In order to set up interviews, a meeting was held to arrange a venue, date and time convenient for each prospective interviewee. The researcher explained the purpose of the research study and the interview informed-consent forms that had to be signed and submitted (see Annexure D: Informed consent form for individual group interviews). The preparatory face-to-face meeting enabled the researcher to introduce himself to all the participants and to establish rapport with the participants. He discussed the aim of the research and the interview process without influencing participants' responses during the actual interviews.

On the dates set for the interviews, the researcher conducted face-to-face individual interviews of 45-60 minutes each with three heads of departments, three curriculum developers who were also lecturers in the programme, two programme coordinators and four lecturers of the Engineering Department at the VUT. The interviewer encouraged the participants to respond without fear of intimidation, and clarified

possible misunderstandings and unclear areas that could arise during the interviews (Patton, 2002:385-388). Participants were informed that all the interviews were to be voice-recorded and transcribed to ensure that conversations were preserved for analysis (Mouton, 2001:105). Should the researcher miss a cue, it could be captured from the recordings. The researcher used strategic and focused field notes to “capture the participants’ own language” (Patton, 2002:383). An experienced research assistant was appointed to help the researcher in taking field notes in the process.

The following interview questions were asked:

2.1 What encouraged your department to develop an extended undergraduate curriculum programme?

2.2 What situations or circumstances created within your institution encouraged the development of extended undergraduate curriculum programmes?

2.3 In your experience, what are the benefits of the extended undergraduate programmes?

2.4 What student needs are addressed in extended undergraduate programmes with respect to **academic, social and cultural** aspects?

2.5 In your opinion, what aspects of the extended undergraduate programme are working well at VUT, and why?

The data collection instrument used was flexible enough to pursue a relevant point that needed to be explored in more detail. The researcher was able to use detailed, focused and probing questions to explore the topic or point he wanted to pursue further. The probing questions he asked ensured that he obtained the “richest” possible descriptions from the participants (Merriam, 1998:79-81; Mouton, 2001:105). The challenge during these interviews was to remain neutral in the discussions and avoid reacting to anything said. It was important to suspend judgement during the interviews without prejudice towards any conversation or participants (Bogdan and Taylor, 1984:95). The key was to guard against discussions that deviated from the topic, while observing silently and being attuned to non-verbal behaviours.

b) Focus-group interviews

Focus-group interviews were chosen as a data collection method because of its strengths and advantages. Group interviews have the ability to produce concentrated amounts of data on precisely the topic of interest. Their success relies on the quality of interaction between group members to produce data (Greeff, 2011:360-363). Careful planning went into selecting research participants. As stated in Section 3.3.1, they had to be part or had been part of the extended programme. The researcher followed the four basic steps suggested by Morgan and Krueger (1998:9-12). The steps are planning, recruiting, conducting the group discussion, and analysing, and reporting. A focus-group interview needs its own planning process, which consists of:

i. Defining the purpose and the outcomes of the project;
ii. Obtaining permission from the applicable stakeholders where research is to be conducted;
iii. Developing the timeline of the project;
iv. Determining who the participants in the project will be and who will be used to collect the research information from;
v. Writing questions in the question guide;
vi. Developing a participant recruitment plan and determining the location, time and data; and
vii. Designing the analysis plan (Morgan and Krueger, 1998:9-12).

The environment and questions to be asked were crucial in conducting the focus-group interviews (Greeff, 2011:364; see Annexure C: Informed consent form for focus-group interviews). During focus-group interviews some participants might change their views on certain topics. This process allowed participants to think beyond their frame of reference and revisit the benefits mentioned by the group. Although some participants were initially intimidated by the group and were shy to express their views; as soon as the group identified some aspects/topics they could relate to, they seemed to find it easier to have their ideas confirmed during the group discussions (Fontana and Frey, 2000:651-652; Krueger, 1994:8; Shandler, 2009:73-75).

However, many critics and researchers have given their opinions about the limitations of using focus-group interviews to collect information (Greeff, 2011:373). Critics argue that the limited number of questions asked during semi-structured focus-group

interviews, and time constraints during interviews, do not allow sufficient time for individual responses. Participants' views, interpretations and opinions need to be heard and taken into consideration (Greeff, 2011:373)

The decision I took to continue to use focus-group interviews regardless of critical views; was influenced by Fouché *et al.* (2011: 320-322) and Greeff (2011: 342-346, 360-373), who argue that most individuals need company to give them the confidence to speak out. They feel more secure in sharing and elaborating on a specific topic when they are in a group. Mack, MacQueen, Woodsong, Guest and Namey (2005:51) mention that focus-group interviews push the interpretive process beyond the boundaries of individual memory and expression, to explore the collective memories of the participants.

The face-to-face focus-group interview with 10 students still enrolled in the extended programme (2015-Cohort 2), was conducted first. The second focus group interview was with 15 students (2014-Cohort 1) who had completed the extended programme in the 2014 academic year, and who had at least one year of mainstream study experience.

The focus-group interviews were especially meaningful since the researcher explored the thoughts and feelings of the participants. Below are the interview questions asked during the focus-group interviews.

1.1 In your experience, what are the benefits of the extended undergraduate programme at VUT?

1.2 What is the most meaningful feedback you received from the extended undergraduate programme or lecturer?

1.3 Describe a situation where the extended undergraduate programme addressed the diverse needs of the students with respect to the **academic, social and cultural** aspects.

1.4 What skills have you learned in the extended undergraduate programme?

1.5 In your opinion, what aspects of the extended undergraduate programme are working well at VUT, and why?

During the focus-group interviews the researcher prevented some participants from dominating the conversation, and encouraged reluctant participants to participate in the conversations. He was able to ensure that the focus of the conversation did not deviate from the topic. He listened intently to all the participants, so that the probing and follow-up questions could flow from what had already been said and the participants remained on topic (Fox, 2006:7; Shandler, 2009: 77).

3.3.2.2 Dream phase – Feedback to interviewed participants and envisioning action

A workshop was held to give feedback on the research findings from the interviews to all the participants. The workshop was attended by representatives from Cohort 1 (2 representatives) and Cohort 2 (3 representatives), as well as 3 representatives of the interviews with whom individual interviews were conducted.

The purpose of the meeting was two-pronged. Firstly, it was to provide feedback to the research participants on the findings of the ***Discovery phase***, and secondly, to discuss the participants' visions and dreams for the future of extended programmes at the VUT. The contents of the dreams and the findings from the Discovery phase form the basis of the Design phase. The participants collaborated with me in generating ideas for designing a preliminary conceptual model for a flexible undergraduate curriculum that could address the articulation gap (Creswell, 2014:9). The Discovery phase entailed the vision for the future curriculum. All proceedings of the feedback session were audio-recorded to facilitate the data collection process.

3.3.2.3 Design phase – Designing a preliminary conceptual model

As soon as the strategic focus of the "dream" had been articulated (a vision of a better VUT extended programme, a new purpose and a compelling statement of strategic content), attention moved to creating an ideal extended programme, "a design of a system in relation to its world'' (Cooperrider, 1999:8). AI allows for future images to emerge through grounded examples from an organisation's positive past. Therefore, the good news (*what works well in the current extended programme*) was used to graft possibility propositions that bridge to *what might or can be (how the extended programme can be improved*). Therefore, AI was used as a planning methodology to explore how an extended programme could be designed to maximise the positive core and accelerate the realisation of the "dream".

During the design phase the data were interpreted to enable meaning making. The design for the proposed conceptual model began after the research findings had been shared with the participants' representatives. During this collaborative session, the researcher allowed the participants to confirm the findings (Shuayb *et al.*, 2009:6*)* and make minor changes to the conceptual model before the initial design phase of the proposed conceptual model commenced.

From the research findings, the researcher could understand and make meaning of *what is working well* and what the shortcomings were in the current extended programme.

The process followed in the designing of the model was to, first, interrogate the different curriculum design models and then select a model that best fits the curriculum design approach for VUT. The research findings directed the researcher to the selection of a curriculum design model. After an intensive literature consultation, the Tyler Model was selected. This model focuses on student and society needs, the philosophy of teaching and learning, and instructional and programme objectives. The Tyler Model is the foundation on which many other curriculum models are built on, and is one of the most widely used models in curriculum design. The participants in this study then became co-constructors in the designing of the model by their contributions during the discovery and dream phases. It was on the basis of the findings from these two phases that the researcher designed a preliminary conceptual model for a flexible extended undergraduate curriculum at VUT.

Figure 3.3 explains how the researcher used the Tyler Model (Section 2.4.2.2) to guide and develop a preliminary conceptual model for a flexible extended undergraduate curriculum. The Tyler Model is the quintessential prototype of curriculum development using the scientific approach (Madeus and Stufflebeam, 1989:11). Curriculum models are based on a body of theory about teaching and learning. They target needs and characteristics of a particular group of learners. These models give insight into the outline approaches, methods and procedures for implementation. The linear presentation (Figure 3.3) of this preliminary conceptual model determines the nature and structure of knowledge the student needs to be successful in HE. The model considers not only the diverse needs of the student, but also the needs of society.

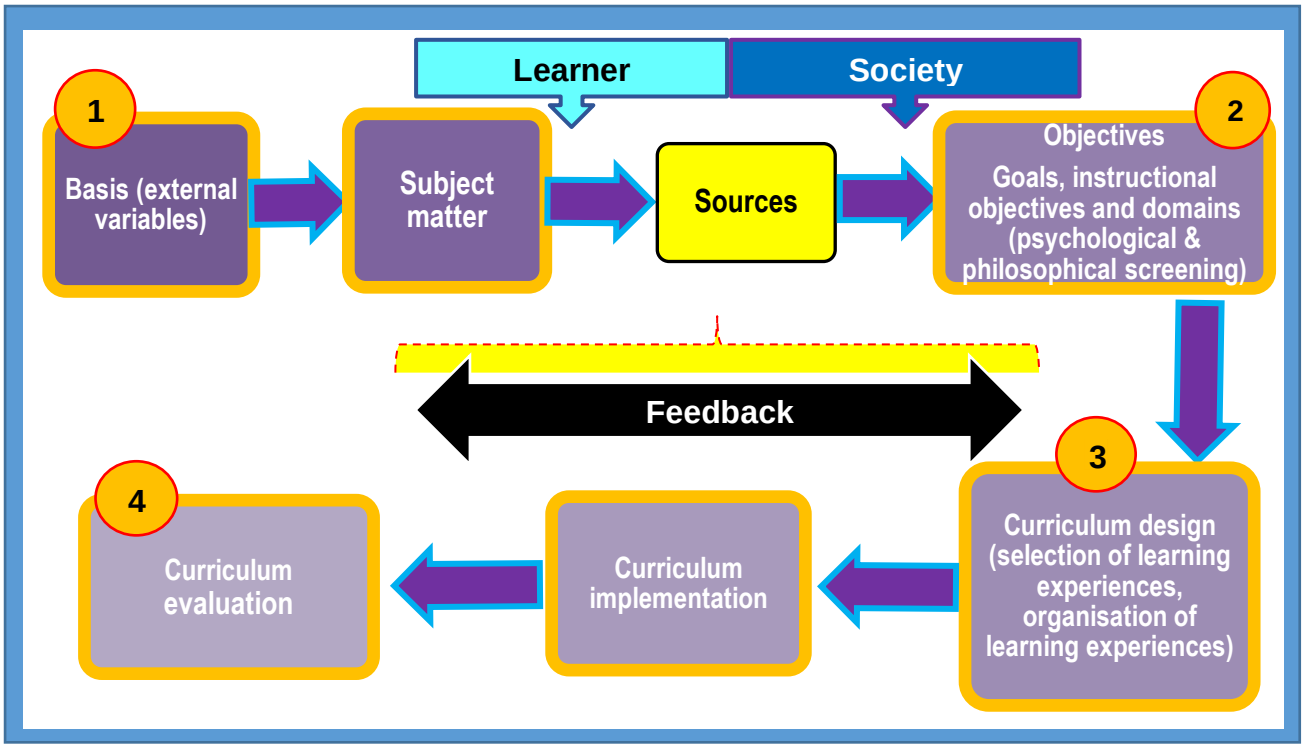

Figure 3.3: Linear representation of the conceptual model for an extended flexible undergraduate curriculum design, based on Madeus and Stufflebeam (1989)

The following discussion is based on the four steps discussed in Section 2.4.2.2 that were used for the design of the preliminary conceptual model.

- Due to the fact that many *external variables* influence the design of a curriculum model, the model considers these variables and the impact they have on the student and society.
- The curriculum content (subject matter) the curriculum developer selects should address the pre-identified needs of the student. The criteria for the selection of curriculum content are according to its a) relevance, b) importance, and c) priority. The curriculum content in the model is selected according to specific criteria, namely, a) how much curriculum content should be selected, and b) how deeply should the curriculum content focus on the specific needs?
- The concentration of the curriculum will determine the depth of the knowledge that the student needs to have to be successful in the workplace.
- Lastly, the curriculum must be hierarchically structured according to levels of complexity.

Therefore, the curriculum designer should determine if the curriculum that has been designed, is aligned with the purpose of the programme design. The organisation of the curriculum is essential and the model determines the curriculum focus:

- on broad educational fields or disciplines;
- on whether the programme design will consist of core modules or whether the modules should be interdisciplinary; and
- on specific skills or processes, and whether it should be structured as theory, projects and different activities.

Only once these questions have been answered can the curriculum objectives (relation to the learning outcomes), goals, instructional objectives and domains (psychological, philosophical screening) be determined and developed. The curriculum is then designed (learning and assessment experiences identified, organisation of learning and assessment experiences selected) and implemented. Feedback from stakeholders is then received, and the curriculum is adjusted accordingly.

Lastly, the model provides the curriculum with an evaluation phase, which informs the curriculum designers about the alignment of the curriculum with the educational purposes for which it was designed. Only then could the Destiny stage in the AI process be fulfilled.

3.3.3 **Data analysis**

To analyse means to study, examine or unpack something in detail in order to understand, interpret, explain and or make meaning of it (Grief, 2011:359-360). Analysis begins by going back to the purpose of the research, because the depth and intensity of analysis is determined by the purpose statements discussed in Chapter 1.

Krueger and Neumann (2006:123) advocate that data analysis begins with a comparison of words, trends and similarities used in the answers that were given to the interviewer by the interviewees. Therefore, data analysis is the process of making sense of data (Merriam, 1998:78). Henning, Van Ransburg and Smit (2004:127) explain that “when data is analysed it becomes a continuous, ongoing, emerging and interactive or non-linear process”. During this process, I continued to rearrange data, structure the

data in manageable chunks, and interpret data by organising, regrouping, reducing and describing the data.

After the first two individual interviews and the first focus-group interview the researcher immediately started to analyse the data. The researcher placed himself into the interpretive frame of mind during data analysis by initially considering only for *what had been said* by the participants by looking for similar words, trends, patterns or keywords that reappeared across the range of responses (Shrink, Fouché and De Vos, 2011b:402). All participants' feedback during the interviews was then grouped, and similar data were placed into categories and themes (Merriam, 2002:14). The research findings (themes and sub-themes) derived from this study correlate with the research literature on related studies (CHE, 2013:16; Sutherland, 2009; Tinto, 2008).

After completing the remaining individual and focus-group interviews the data were placed into existing categories that had been created previously from the data of the first two individual and focus-group interviews. If the data gathered from the remaining interviews could not be grouped in the existing categories, a new category was created from existing categories (see Chapter 4). Ragin (1994:93) claims that this process of data analysis helps develop and refine the selected categories according to common themes. A defining characteristic of the approach used during the data analysis stage is that it allows for major categories to emerge from the data. When data becomes saturated – meaning that all the data fits into the created categories (De Vos, 2011:376) – the data analysis stage is nearing completion. Once the data collection process was completed I could build the "bigger picture" – I could apply my interpretation and understanding of all the participants' feedback and perceptions of the phenomenon (Merriam, 2002:38).

As Draper (2004:644-646) and Shandler (2009:79) suggest, the aim during the data analysis process indeed was to search for concepts and/or themes in the data collected, rather than to force the data into predetermined categories. Throughout the interviews, data collection and data analysis stages I made concerted efforts to avoid analysing the data with preconceived ideas of what I thought to be important during the research.

3.4 TRUSTWORTHINESS OF THE STUDY

The quality of a qualitative study is evaluated in terms of its trustworthiness. The term comes from Lincoln and Guba (1985, mentioned in Patton, 2002:546), who view trustworthiness of qualitative studies as parallel to the rigour in quantitative studies. Therefore, trustworthiness may be described as the extent to which the research is accurate or true. Criteria for trustworthiness include credibility, transferability, dependability and confirmability (Babbie and Mouton, 2006:277; Mertens, 2010:255; Patton, 2002:546). The research methods used in this study were rigorous enough to warrant trustworthiness.

3.4.1 **Credibility**

Credibility is the believability of the study; it is about the truthfulness of the study (Maree 2007:80). It parallels internal validity in quantitative studies (De Vos *et al.*, 2005:346; Mertens, 2010:256). In this study credibility was built into the research design, in that the purpose of the Dream and Design phases was double-pronged, involving member checks and debriefing the participants during the feedback workshop for the stakeholders (Mertens, 2010:257). Triangulation of data sources and research methods was another strategy used to ensure credibility. Data on the same issues were collected from students through focus-group interviews and from staff members through individual interviews (Denscombe, 2007:136; Mertens, 2010:258). Furthermore, a purposive sampling method was used, as participants were information-rich by virtue of their involvement in the extended programme. Also, thick descriptions were used in some areas to denote emphasis and clarity of data, thus promoting credibility (Shenton 2004:69).

3.4.2 **Dependability**

Dependability is known to be a qualitative parallel to reliability (De Vos *et al*., 2005:246; Mertens, 2010:259; Patton, 2002:546). According to Babbie and Mouton (2001:278) dependability or reliability is determined by the credibility. Lincoln and Guba in (Shenton 2004:71) emphasise that a demonstration of credibility ensures dependability and vice versa. To enhance dependability of the study the researcher maintained a detailed recording of data collected and all the research processes. The process can be publicly described, tracked and inspected (Mertens, 2010:259) if the need arises.

3.4.3 Transferability

Transferability is an alternative to external validity or generalisability of the research findings, according to Lincoln and Guba (1986 in Mertens, 2010:259; De Vos *et al*., 2005:346; Patton, 2002:546). Since this is a case study, findings are not generalisable to other situations. However, it provides an example from which other universities may learn. The details of the conceptual model can stimulate thought and discussion on the topic.

Thick descriptions of the researched phenomenon give readers a fuller understanding of it, enabling them to make decisions about transferability to other sites (Babbie and Mouton, 2001:277; Mertens, 2010:259; Shenton, 2004:70). The sample of participants used, has been described in great detail – its context as well as the research methods used in the investigation and the findings thereafter.

3.4.4 Confirmability

Confirmability is the qualitative alternative to objectivity of the researcher (De Vos *et al*., 2005:347; Patton, 2002:546). It relates to the degree to which the findings accurately reflect what the study focused on primarily (Babbie and Mouton, 2001:278).

An audit trail demonstrating that the research findings "are the result of the experiences and ideas of the informants, rather than the characteristic of and preferences of the researcher" (Shenton, 2004:72), promotes confirmability. Shenton further concludes that triangulation increases the chances of confirmability and reduces the effect of researcher bias (Mertens, 2010:260). In the study an audit trail to promote confirmability and dependability included the following:

- Conducting a literature review guided by the first research question;
- Conducting interviews using questions designed on the basis of research questions 2 and 3, as well as insights from literature;
- Using three different data sources (staff members, former students and current students) to obtain similar/related information; and
- Using findings from the Discovery and Dream phases to *design* a conceptual model for a flexible extended curriculum.

3.5 ETHICAL CONSIDERATIONS

Ethics refers to moral standards in society. These standards provide a guide for what is socially acceptable. Thus, ethics in research is a “set of widely accepted moral principles” adopted by people to guide their behaviours towards research participants and/or other interested role players (Strydom, 1998:24). It was the researcher’s responsibility to follow research ethics. I obtained written permission from the deputy vice chancellor: Research and Academic, and dean: Engineering and Technology to conduct the research in the faculty (see Annexures F and G). Academic staff (heads of academic departments, curriculum developers, programme co-coordinators) and students who were in the extended programme in 2015 (Cohort 2) and those who completed the extended programme in 2014 (Cohort 1), were all invited to participate in the respective interviews (see Annexures C and D). The academic staff participated in the individual interviews and Cohort 1 and Cohort 2 of students also participated in focus-group interviews. I then applied for ethical clearance from the University of the Free State where I was enrolled as a student (see Annexure I). Both universities (VUT and University of the Free State) responded positively and I was allowed to commence my research project.

I considered the ethical obligations espoused by Creswell (2002) to protect all the participants from any form of physical and or emotional discomfort that might arise during the research (Creswell, 2002:63-65). Researchers often learn private details from the participants that are sometimes only highlighted during the interviews; this could include information about deviant behaviour, unpopular opinions, family life, relationships, and lacks in their socio-economic, educational and cultural backgrounds (Strydom, 2011:330-331). However, I made a commitment to keep all information confidential and the identity of participants anonymous (Babbie, 2007:27, 62-63; De Vos, 2010:116).

I followed Michael Patton’s recommendations for a full and complete disclosure (Patton, 2002:273). I met with all the participants beforehand. I explained the purpose and main objectives of the research and provided any other necessary information they required. Participants were made aware that all interviews would be audio-recorded during the discussions. Participants were assured that their responses would not be used for any purpose other than the research. No information, data or conversations would be made

available to anyone who was not involved in the research. I invited all the participants to pose any questions or raise concerns that they might have about the research. They were informed of how the research data would be used and that the research findings would be shared with them afterwards. I explained that their rights to privacy would be protected through anonymity. In the research they would be referred to as Respondents 1, 2, 3 and so on. All data gathered through the interviews would be kept under lock and key in a storage archive, and data in digital form would be saved in protected files – the research assistant and I would be the only two people who would have access to the archive (Ferguson, 2004:3).

Finally, I provided the participants with the informed consent form (full and complete disclosure – Annexures C and D). Participants were reassured that their identities would be withheld from any other person not involved in the research. Participants in the focus-group interviews were also informed that their identities, opinions and views were impossible to hide from the other participants within the focus group. However, they had the freedom to participate or refuse, with no fear of reprisals (Ferguson, 2004:5). After the research findings (data) were available I shared the results in a feedback session with only some of the research participants, and assured them that he would destroy all evidence (recordings) three to five years after dissertation acceptance by the University of the Free State.

3.6 CONCLUSION

The research design and methodology process explained in this chapter was firstly grounded in the AI research approach. AI's focus is on positive change in an organisation, rather than aiming to fix a problem. The AI approach enabled the researcher to move between the different stages of the 4D process in order to gain a better understanding of *what works well* and *what could be improved on*. In moving between the 4Ds the researcher uncovered the participants' experiences and identified their dreams. By identifying their dreams, the researcher could move to the third D, namely, Design, to develop a preliminary conceptual model for a proposed extended undergraduate curriculum structure, in the hope that the conceptual model would lead to the students' destiny. The purpose of the conceptual model is to close the articulation gap and build flexibility into the extended programme.

However, the model also had to address students' diverse needs. The researcher incorporated qualitative research techniques for collecting and analysing data to gain a better understanding and interpretation of the research. The design of the conceptual model was based on the curriculum underpinnings of the Tyler Model of curriculum design. The Tyler Model is grounded in a constructivist epistemology, whereby the learner is the centre of the learning experience. To reach the Destiny phase (fourth D), all the research findings and the Tyler Model for curriculum design were considered in order to design the conceptual model for a flexible extended undergraduate curriculum. The model's aim is to address the needs of the participants in the programme and achieve what is envisioned to be the best of the programme. The researcher considered all ethical rules during the research, to prevent physical and emotional harm to the participants.

Chapter 4 presents the data collected and the analysis thereof. The research findings that form the basis for the design of a conceptual model for a flexible undergraduate curriculum, are presented.

CHAPTER 4: DATA ANALYSIS AND DISCUSSION OF RESEARCH FINDINGS

4.1 INTRODUCTION

Chapter 3 described the empirical component of the study, while this chapter presents the data collected, analyses the data, presents the findings, and provides the preliminary conceptual model for a flexible undergraduate curriculum for addressing the articulation gap between basic education and HE. The discussion herein addresses the second and the third research questions of the study, i.e.

- How could a flexible undergraduate curriculum be designed to develop academic competency skills in students in order to reduce the articulation gap between basic education and HE?
- How may the ideas on designing a flexible undergraduate curriculum be organised to form a conceptual model?

Firstly, the context of the flexible undergraduate extended curriculum currently being implemented will be outlined. This will be followed by the presentation and detailed description of the data collected through the AI strategy, as reported in Section 3.3.2. The data will then be analysed thematically and the analysis in Section 3.3.3 punctuated by some degree of triangulation with literature. The analysis will be followed by the presentation of findings. Lastly, the preliminary conceptual model created on the basis of the findings will be revealed.

4.2 CURRENT UNDERGRADUATE EXTENDED CURRICULUM CONTEXT

South Africa has a desperate need for high-quality graduates who can contribute to meeting the pressing socio-economic and political needs of the country. Such graduates could take the lead in promoting aspects that impact social, economic and political development, and lead the country to a prosperous future. However, over the past two decades the South African HE sector has experienced high dropout rates and the government has uncovered major shortcomings that cause the high dropout rate from the HE system (CHE, 2013:15-17, 32). Shortcomings were identified in the following areas:

- Addressing students' diverse needs;
- Considering students' preparedness for HE studies;

- Equity; and
- The overall student numbers and the proportion of the student body that succeeds (CHE, 2013:15-18).

It is against this backdrop that HEIs started to implement extended curriculum structures/programmes, as an intervention strategy to grant students access to higher education and close the articulation gap. Higher education needed to reform and modify the current undergraduate curriculum structure, and to provide more time and curriculum space to promote the strengthening and enhancement of learning (CHE, 2013:68). The recommendations of the CHE (2013) emphasise that the focus of the intervention should be developing an undergraduate curriculum structure as a key element of teaching and learning processes, and academic programmes that are desirable, feasible and sustainable, to improve graduate outcomes (CHE, 2013:15).

Extended programmes and foundational provisions have been used in many South African universities, especially traditionally white universities, to grant admission to educationally disadvantaged students (CHE, 2013:1, 32, 39, and 108). As discussed in Section 2.2.3, an extended curriculum programme is an undergraduate degree/diploma programme in which substantial foundation, or a combination of mainstream/foundational provision, is prescribed in addition to the traditional mainstream coursework. Foundation modules focus on basic educational competences in mathematics, sciences, technology and languages. When students are admitted to the extended undergraduate programmes they are registered in the mainstream programme, the difference is that the extended mainstream programme will involve an additional year, compared to the traditional mainstream programme (DHET, 2012a:5-6). Foundational provision forms an intrinsic part of the extended programme curriculum, as it offers a set of learning activities that are designed to enable students from disadvantaged educational backgrounds to perform successfully in mainstream studies.

However, a lack of academic competencies and skills goes beyond academic underpreparedness. Students, irrespective of their diverse backgrounds, are not only academically underprepared, they are also emotionally, socially, culturally and intellectually underprepared (CHE, 2013:21; Wilcox, Winn and Fyvie-Gauld, 2005:708). These factors contribute to the articulation gap. HE needs to consider key aspects of

the secondary-tertiary articulation gap that involve not only academic knowledge and skills, but also the general knowledge base students have, such as, cultural and social background of students and approaches to self-study and contextual knowledge. The majority of students entering HE institutions for the first time are at a disadvantage, because they have multiple shortcomings and diverse needs.

Higher education in itself poses new demands that are different and more challenging for students than those of the basic education system. The shortcomings could be summarised by explaining that students struggle to take responsibility for their own learning. They find themselves in a system that poses extreme demands, and have to cope with congested workloads due to the high intensity of undergraduate courses. It is for this reason that students often find the transition between basic education and higher education difficult. Cultural and social preparedness for adult life is inadequate (Shandler, 2009:112). The majority of students were forced into a generic school system (basic education system) for 12 years, where choices were limited. Within this system their parents' guidance was limited, and parents were the people making all the decisions for learners. Consequently, many students find making decisions for themselves challenging. When they enrol for HE studies they sometimes make the wrong decisions as a result of peer pressure, which could lead to them failing their HE studies. It is for the above-mentioned reasons that the majority of these first-year students lack certain critical skills that would enable them to be successful in HE studies (Tinto, 1997:623). Only a minority of first-year students have the skills and competencies needed to deal with HE demands.

Therefore, extended programmes have been introduced to enhance the learning experiences of the majority of students at universities (CHE, 2013:16-19). The following discussion explores means of designing a preliminary conceptual model for a flexible undergraduate curriculum using the AI approach

4.3 PRESENTATION OF DATA

Research questions were formulated to guide the data gathering process in an attempt to address the research problem of how to close the articulation gap. Furthermore, the research questions were expressed in a way that addresses the development of a curriculum model that would consider the diverse needs of students**.** The researcher

has an obligation to monitor and report on the investigative procedures he used in this research work (Patton, 2002:434). Thus, this section presents a detailed discussion on the data gathered.

Data were collected using the 4Ds of the AI approach as a strategy (Section 3.3.2). Information gathered through the Discovery and Dream phases from selected staff members in various capacities and selected students who had either been part of the university's extended programme or who were current students (during the data collection period) in this university programme is displayed and explained below.

4.3.1 Discovery phase

Participants in the research study were asked to reflect on and discuss the best aspects of the current extended undergraduate curriculum offered at the VUT. This was the object of inquiry in the Discovery phase of AI (Kessler, 2013:3). In order to fulfil the objective, individual interviews were conducted with members of staff, and focus-group interviews were held with two groups of students; one group consisting of 10 students who were currently in the extended programme (Cohort 1) and 15 students who had gone through the extended programme (Cohort 2). Questions asked in the interviews are listed in Appendix A.

4.3.1.1 Individual interviews

Twelve individual interviews were conducted with three heads of departments, two curriculum developers (lecturers), two programme coordinators and five lecturers. Each participant was subjected to the questions of the interview schedule.

a) Question 1: What encouraged your department to develop an extended programme?

Interviewees gave different answers to the question, which are summarised as follows.

- A desire to close the articulation gap, as described by the CHE (2013:19-23, 32-35) and DHET (2012a:1.);
- A realisation of the underpreparedness of first-year students as a result of poor academic performance and a lack of basic academic skills; and

- The need to widen access to higher education for students who do not meet the minimum university entry requirements for specific disciplines or programmes.

From the participants' responses it is understood that the greatest concern that gave rise to the development of the extended programme at the research site was the realisation of the existence of the articulation gap between basic education and higher education. This idea was strongly supported by other factors brought forward, which was underpreparedness or non-readiness to embark on HE studies. It was also clear from the discussion that students experience difficulty comprehending critical disciplinary concepts. Government encouraged HEIs to widen access through extended programmes even though students don't meet the necessary entry requirements of a programme (CHE, 2013:16-23). However, it was revealed that even those students who met the minimum entry requirements experienced the transition from basic education to higher education as difficult.

b) Question 2: What situations or circumstances created within your institution encouraged the development of extended curriculum programmes?

Interviewees' responses to the question are summarised as:

- The need to address the articulation gap as described by the CHE (2013:16, 9);
- Widening of access for students to higher education studies, especially those students who come from previously disadvantaged academic backgrounds;
- High dropout and failure rates of first-year students; and
- The need to enhance undergraduate academic success.

The decline in the academic success rate is a symptom of the high dropout rate of students in the higher education sector. Students found that the higher education system has higher demands than the basic education system, thus, they find transition from basic education to higher education troublesome. The site where the research took place is attempting to widen access through extended and foundation undergraduate programmes for students, even though most of the students entering the HEI are underprepared for higher education mainstream undergraduate studies. Thus, the institution's focus is on closing the articulation gap by addressing the academic underpreparedness of the students.

c) Question 3: In your experience, what are the benefits of the extended programmes?

Interviewees gave a variety of answers to the question. Responses can be summarised as follows:

- The programme seems to address the *academic* articulation gap between basic education and higher education;
- The programme develops students' basic academic competencies and skills they lack from the basic education school system;
- The programme creates an alternative pathway to higher education studies; and
- The programme enhances undergraduate academic success.

From the data provided, the perceived benefits of introducing an extended programme into an HEI's programme qualification mix include granting students an alternative opportunity to enter tertiary education, and to enhance their learning. However, the extended programmes offered at VUT focus only on foundational provision and the enhancement of learning in the extended year, and not on a combination of foundation and mainstream modules. Therefore, if a student fails any module in the extended year he/she is not allowed to progress to first-year mainstream studies – the student has to repeat the extended year or drop out. Extended programmes are designed to give academically underprepared students a strong foundation for mainstream studies, because students entering university for the first time appear to lack foundational skills.

d) Question 4: What student needs are addressed in extended programmes with respect to academic, social and cultural aspects?

Interviewees indicated that English language proficiency is addressed by the extended programmes. However, they acknowledged that:

- Students needed guidance on how to deal with higher education demands and expectations, in general;
- Cultural and social needs of students should be considered in programme design; and
- More time should be spent on developing student learning, as well as imparting management skills.

From the data, it was clear that the current extended programme focuses only on the academic development of students who show elements of underpreparedness. All participants mentioned that the extended programme does indeed improve students' communication and literacy skills in English. This helps them communicate with diverse cultural groups. Participants also indicated that students have cultural and social needs that have to be addressed, as cultural and social skills could influence student academic success in higher education. Some participants reported that there was an outcry from students, who believed that more of the programme's time should be allocated to learning, independent study and assessment preparation.

In the interview discussions it was stated that, due to a lack of time in the extended programme, no social or cultural needs of students are addressed by the extended programme. It is expected that students attend social and cultural activities (extramural activities) outside the normal class hours of the programme. Curriculum developers in the existing undergraduate programme opined that the social and cultural activities offered on campus should compensate for the lack of material related to meeting social and cultural needs in the extended programme. However, they concurred that students are socially, emotionally and intellectually underprepared for higher education studies and it is essential to address and develop these needs within the design of the flexible extended undergraduate curriculum.

e) Question 5: In your opinion, what aspects of the extended programme are working well at VUT, and why?

Interviewees gave various answers to the question. Responses are summarised as:

- The programme addresses the academic underpreparedness of students entering mainstream studies.
- Access for students who did not meet the undergraduate programme admission requirements should be widened. However, students concurred that although they did not meet the minimum admission requirements to the traditional mainstream programmes of their choices, they acquired the basic academic skills and competences within the current extended programme, which prepared them for mainstream studies. It was evident that the extended programme built up a basic academic foundation for students.
- English language proficiency has improved.

Most of the staff members interviewed described the extended programme at VUT as a well-organised programme that enables students to obtain a solid, basic academic foundation for mainstream studies. One interviewee actually said that it is a “well organised programme with good leadership”. The extended programme creates an opportunity for students to access HE studies, although first-time-entering students did not meet entry requirements of their discipline of choice. Academic foundation provision within the extended programme model ensures that the articulation gap is addressed (CHE, 2013:91).

4.3.1.2 Focus-group interviews

The first focus-group interview was with 10 students (Cohort 1) who were in the extended undergraduate programme at the time of the interview. The second focus-group interview was with 15 students (Cohort 2) who had completed the extended year the previous year (2014) and who had at least one years’ experience in mainstream studies. The data gathered from the focus-group interviews were merged and then grouped into the following preliminary themes:

- Benefits of the extended undergraduate programme at VUT;
- How the extended undergraduate programme addresses the students’ diverse needs with respect to **academic, social and cultural** aspects;
- Skills developed in the extended undergraduate programme; and
- What works well in the extended programme?

The responses to the focus-group interviews are discussed under the following themes:

a) Theme 1: Benefits of the extended undergraduate programme at VUT

Some participating students were in agreement that the extended undergraduate programme at VUT has helped them, because the programme focused on the basic academic elements that were missing from the basic education system. The curriculum design process at VUT involves consultation with all relevant stakeholders. Students appreciated that the programme takes students as far back as Grade 8, through to Grade 10 academic content, in terms of laying the foundation for certain competencies.

Participants mentioned that they had learned a lot about the English language and accounting from the programme. They concurred that the fact that they speak English

on campus was helping them to practise using the English language. Some explained that development of English proficiency and communication skills in the programme helped them to cope with reading, writing and communication, especially communicating with international students. They acknowledged that the focus of the programme was on building an understanding of knowledge, hence, it was good preparation for their mainstream studies. They also unanimously agreed that there were efforts made to stimulate student motivation, which was often lacking from their basic education phase.

Although the programme was deemed to be beneficial to the students, it was also reckoned that it had a few areas of weakness. For instance, it was congested by many assessment activities. During the discussion, it became clear that the participants were in agreement with the respondent who stated, "…the programme is good, however it is packed, we struggle with time management, [and] we struggle to find information". The fact that there are few computer labs they could use to search for information, was a hindrance. The problem was compounded by the library's limited opening hours and some research resources not always being available in the library.

Participants expressed that, although there are challenges in the programme, the programme is good and well managed. The opinion shared throughout the interviews is that there are too many assessments and the programme should have a flexible component built into the curriculum design, where students could be exempted from doing certain modules or assessments. In addition, the modules deemed unnecessary could be replaced by more time self-study and learning.

b) Theme 2: Addressing students' needs in the extended programme

Data revealed that, although the extended programme focused on the basic academic skills needed to succeed in HE studies, social and cultural needs of students were not addressed in the current extended curriculum. For instance, the participants of one group were of the opinion that students' traditions and cultures should be respected, however, this was not always understood by the VUT. This area of weakness was prominent throughout the interviews with both staff and students. Since the programme focused solely on the academic development of students, and neglected their social, cultural, emotional and intellectual development, participants recommended that future extended curriculum models should incorporate these aspects.

Participants concurred that some students needed more support than others, for instance, international students in the programme needed support in social and cultural areas. They believed that international students were isolated from South African students, and they took a long time to reach a point of “belonging”.

In addition, there was a revelation that students in the extended programme perceived that they were victimised by fellow students, who made them feel excluded from mainstream student activities, thus, they felt like outsiders. It was explained that, in some cultures, women are not allowed to speak their minds in the presence of their male counterparts. As soon as female students speak out, the male students overpower them verbally. There seems to be tension between students who originate from Venda and their counterparts from other regions in South African. The only explanation I can suggest is that the Venda students are very traditional -- the men, especially, seemed to dominate class discussions. Venda women will not talk or participate in discussions if they do not have permission from the Venda men. International students mentioned that they are still intimidated by xenophobia, which is still consciously present in HEIs. Furthermore, the students expressed a deep need for intellectual and emotional support and guidance to cope with the demands of higher education.

c) Theme 3: Skills developed in the extended undergraduate programme

The participants were in agreement that time management skills were an integral part of achieving success in the current extended programme, and a great deal of emphasis is placed on the work that must be completed within the year. Some participants explained that, although they were taught some time management skills, the content of the programme seems to be too much to cover in the short time available. They further clarified that they were assessed too frequently: “too many assignments and assessments, one week theory, next week assignments and tests, it is too much work”.

Because the programme is congested, too little time is available to prepare for assessments and develop new skills, such as research and computer skills. Students acknowledged that their literacy and communication skills had improved since they started the programme. Lack of resources seemed to be a concern. For instance, not all students had access to computers at their homes. Some could not visit the library after office hours. At the time of the research study the library was open until 18:00, and extended programme classes ended at 17:00. Reflecting on the responses, it can be

said that first-year experiences should play a major role in orientation programmes that inform students what is expected of them on entering HE, and how to cope with HE demands.

d) Theme 4: What works well in the extended programme?

The students acknowledged that the communication modules of the programme developed the language competence of students, further, it also improved the way students communicate with other students from different cultural backgrounds. The majority of the participant students expressed that the time spent on the core modules (English, mathematics, science and accounting) of the programme was time well spent in preparing them for the future. Participants who had completed the extended programme in 2014 admitted that they would not have been able to succeed in their traditional mainstream studies if it wasn't for the academic foundation they had received in the core modules of the programme.

However, some students mentioned that there were modules in the programme they believed to be unnecessary and a waste of time. They complained that some content in these modules was at a very low cognitive level and that it had been covered in Grade 8 at school. Their concerns were also that if one failed a module in the extended year, that student had to repeat the entire year and could not proceed to the traditional mainstream programme. This was confirmed by the various academic representatives in the individual interviews. The majority of the academic staff agreed that, if a student failed a module, they should be allowed to continue with their studies. However, this was not the case and the students were required to repeat the entire year. Students stated that, if they failed one module, it was a year wasted. They believe there should be flexibility built into the programme to allow them to continue with their studies even if they failed a module of the extended programme. Another suggestion from the discussions was that, if a student could prove his/her competence prior to commencement of a module via a baseline competence assessment, he/she should not be expected to do the module. It is against this backdrop that I believe the programme needs some form of flexibility incorporated into the curriculum.

4.3.2 Dream phase

During this phase the focus was on asking positive questions in the hope of receiving positive responses. When I asked, *what is working well in the current programme?* I critically analysed the responses to establish if the current extended programme does indeed address the articulation gap as expressed by the participants. Through analysis the shortcomings in the programme were identified without requiring me to ask a deliberate question, like *what is not working well in the programme?* All the participants were requested to share what their "dreams" were for the extended programme.

From the data, it was clear that the current programmes had many positive elements that attempted to address the articulation gap. Students received foundation knowledge and skills in the programmes, which should prepare them for future studies. During the Dream phase, I was able to gain an understanding of what the needs of the students and academic staff were. I could capture their "dreams" and their perceived views on how the "perfect" flexible undergraduate curriculum should look like. The findings suggested that students had diverse needs and required different forms of support and guidance. I established that the dreams of the participants involved a programme that is designed in such a manner that it not only addresses students' academic needs, but also contains strategies to support a range of diverse student needs. The design should include soft skills development, because such skills are an integral part of developing students holistically for HE studies. Transformation in higher education as a whole deserves to be addressed in the programme, however, it should be approached differently from the way it was in the apartheid era. The "dream" was that the curriculum would change according to the needs of the student community at the VUT and the current political and socio-economic environment. In this way students would be adequately prepared for the world of work and they would find integration into the environment much easier.

Academics and students alike saw a "dream" programme that nurtured the articulation gap and addressed the emotional, intellectual, social and cultural development of students. Lastly, it was clear that, in order to fulfil their "dream", the programme should also include or allow for flexibility within the programme. Flexibility could relate to enhancing progression and/or could mean flexibility to exempt students from assessment of content had already been assessed at school or at other prior

educational levels. Although shortcomings in the programme were of concern and students' diverse needs had to be addressed in future curriculum design processes, the current curriculum remained a well-designed structure, with many positive attributes that supported skills development.

4.3.3 Design phase

The data from Discovery and Dream phases were analysed. The findings informed the researcher on the way to design a process or a model to address the second "D – dream" of the AI process: in this case the way the researcher should design the conceptual model for a flexible undergraduate curriculum that enhances the positive elements of the current extended programme and address the shortcomings that exist. The findings pointed to a student centred curriculum. In Chapter 3 I identified the Tyler Model of curriculum design as the foundation for developing a preliminary conceptual flexible extended undergraduate curriculum model. I interrogated the Tyler Model intensively and I established that the model was best suited for my design – It aligns with the positive elements and shortcoming identified in the research. Tyler asked the following important questions:

a) What educational process should the institution follow in developing an academic programme?
b) How could the learning experiences of the programme be enhanced to meet the programme objectives?
c) How can the learning experiences be organised for effective instruction?
d) How can the effectiveness of the learning experience be evaluated to meet the outcomes of the programme design?

Tyler's questions inspired me to rethink the way I would respond to the research findings and design a flexible conceptual curriculum model for extended programmes at the VUT.

4.4 DATA ANALYSIS

Data analysis is a very important part of a research process. The analysis process involves the summary and interpretation of the qualitative data collected (Section 4.3) and the representation of the data in a way that answers and communicates the

research questions. Different types of data collection and analysis methods can be used in qualitative research (Greeff, 2011:359-363; Henning *et al*., 2004; Merriam, 1998; Schurink, Fouché and De Vos, 2011b:405). The interpretive-descriptive approach I selected suited the study. This approach is not only descriptive; it also presents an explanation of the phenomenon of interest. In Chapter 3 and Section 4.3 I discussed how data had been collected and how the data had been grouped into manageable "chunks". I searched for patterns and organised the data into categories and themes (Bogdan and Biklen, 1982 in Shandler, 2009:85).

I employed various methods and strategies in the analysis process to determine what information was important. The data analysis process is an evolving, emerging, repetitive and simultaneous activity, therefore, I began analysing data from the first couple of interviews to avoid dealing with masses of data simultaneously. The daunting aspect of analysing the data was reducing the data to a manageable form. The preparation of the data involved transcribing the recordings, typing notes, and editing and producing them in workable formats (Hancock, 2002:21-22). Data was identified by using content analysis strategies to classify verbal (oral) interview data with the intention of categorising, summarising, interpreting and displaying the results in a visual format (Hancock, 2002:22). Employing this strategy meant that I had to work through the transcripts several times (Henning *et al*., 2004:104-106). By working through the transcripts repetitively, I could identify extracts of data that were relevant information, and I sifted through data that contained silent or hidden messages through the process of open coding (Henning *et al*., 2004:104). Open coding involves implementing an inductive analysis strategy to identify "core consistencies and meanings" that emerge from data (Shandler, 2009:87). I placed the data in an Excel spreadsheet and colour coded similar data groupings (labelled). Data labels were grouped into pockets of data that had similar meanings. Data manipulation was the last step; it was done by sorting the colour-coded labels into categories and themes and rearranging them into findings. Table 4.1 provides the data coded into themes.

Table 4.1: Data with coded themes

Themes					Grouping of responses	1	2	3	4	5	6	7	8	9	10	11	12	%	Across themes
	1 access success				Desire to widen access to HE studies	x	x	x			x	x			x	x		58.3	2
2 under-prepared			2 student needs		Students coming from the basic education system are at a **disadvantage.** (Students entering university for the first time **lack basic academic skills.**)	x	x			x	x	x	x	x	x		x	75.0	3
3 under-prepared					Many prospective students are **underprepared** for mainstream studies.	x	x	x	x	x		x	x		x	x	x	83.3	2
4 under-prepared		4 methodology	4 student needs		Lack of **English language** skills and understanding by the students.	x		x		x			x	x		x		50.0	4
5 under-prepared		5 methodology	5 student needs		Students experience difficulty **comprehending critical disciplinary concepts** and terminology.	x	x	x	x	x		x	x	x		x		75.0	4
6 under-prepared		6 methodology	6 student needs		The identified extensive **articulation gap** between school and university (academic, social and cultural needs gap).	x	x	x	x	x		x	x	x	x	x		83.3	4

Themes					Grouping of responses	1	2	3	4	5	6	7	8	9	10	11	12	%	Across themes
7 under-prepared	7 access success		7 student needs		Students met minimum statutory entry requirements to HE studies. However, students do **not meet the minimum entry requirements** for mainstream studies.	x	x		x	x	x	x		x	x	x	x	83.3	4
8 under-prepared	8 access success		8 student needs		Students experience **transition** from basic education to higher education difficult.		x							x				16.7	4
				9 others	HE seems to chase only student numbers. (During first-year enrolment many students are referred to the extended programme.)				x	x								16.7	2

During the first stage of data analysis I created preliminary categories. I collected data from the remaining interviews and grouped them in the preliminary categories until I was left with data that could not be grouped. That prompted me to create new categories and eliminate categories that contained only a few insignificant pieces of data. I used Maykut and Morehouse's (1994:126) advice to do constant comparisons with the explanatory notes taken during the interviews. I was then able to group all 67 similar sub-codes into 10 categories. I then prioritised the 10 categories into seven main categories (see Table 4.1). The categories were chosen on the basis of words and phrases that shared the same meaning. However, the categories that stood out from the beginning did not form any kind of relationship or grouping with other categories. Merriam (1998, in Shandler, 2009:87) points out that, "the process of data analysis is highly intuitive and… it is sometimes difficult for a researcher to explain where an observation came from or how connections between data were recognised".

After the categories were created I refined them into four themes, namely, a) ***underpreparedness,*** *b)* ***access and success,*** *c)* ***curriculum,*** *and d)* ***student needs***. Ambiguities arose from constant refinement to determine whether categories could, in fact, be included into the selected themes. I revisited all the transcripts once again and concluded that the themes selected reflected the data collected. I considered the implications of the themes and I concluded that they would provide the extended programme department and students with a degree of optimism for the future by availing additional options and opportunities, thus enabling students and staff to reach their dreams. The result is the preliminary conceptual model for a flexible undergraduate extended curriculum design that would close the articulation gap, widen access and promote a teaching and learning pedagogy with sound instructional objectives.

4.5 DISCUSSION OF CATEGORIES AND THEMES

The themes derived from the study confirm that the majority of students entering HEIs for the first time are underprepared and differently prepared for HE studies. It was evident that the articulation gap increased yearly and students lacked fundamental academic skills. Although the programme was implemented to widen access to higher education, it needed to promote success too.

From the analysis stage it was clear that time management was an urgent problem, and that students do not know how to deal with the academic workload in their respective programmes. The curriculum focused on basic skills, however, it was deemed overloaded with too many modules and allegedly unnecessary content. The research findings suggested that too many assessment activities (test and exams) were scheduled, resulting in very little time available for students to do self-study or assignments. The major concern that arose was that the curriculum focused only on the academic underpreparedness of students, even though there was a need for social, emotional, cultural and intellectual skills development. Nevertheless, the programme proved, to some extent, to be successful and it was well managed by the extended programme department. The mainstream academic success rate had improved over the past few years and students had opportunities to access HE studies.

Sound qualitative research should have a balance between the description, analysis and interpretation of the data components (Shandler, 2009:90). Description refers to the facts of the case, and analysis to the process of breaking down and regrouping the data to enable the researcher to manage and see the data in different ways (Sandelowski, 1998:376). I documented and explained the way I analysed the data in Table 4.1. I started to interpret the data by creating new meaning and understanding from the data I worked with.

4.5.1 Theme 1: Underpreparedness

This theme is a relevant starting point, since it deals with students' academic underpreparedness for HE studies. Students entering HE find the HE environment both daunting and unfamiliar. When asked whether HE was demanding, the majority of students concurred that it was very demanding and very different from the school system. They expressed their views that, initially, they found it very difficult to become accustomed in the "way things are done" at university level. They mentioned that, at the beginning of their extended year, they saw themselves as outsiders, because they didn't meet the minimum admission requirements of mainstream studies. I received mixed reactions when I asked the students if they believed they had been underprepared for mainstream studies. Some students agreed, others disagreed. It could be said that the institution should not label all the students as the same. Some students are differently

prepared or more underprepared than others, and therefore they should be treated as individuals and not as a group of “underprepared students”.

Indeed, the current extended programme addressed the academic underpreparedness of students and aimed to close the articulation gap. The programme focused on basic academic skills that were lacking after students had passed through the basic education system. Students were of the opinion that the programme had given them fundamental skills they didn’t have before. However, some concerns were raised by staff and students. On the one hand, some staff members complained that there were students in the programme who should not have been there, because they lacked “too much” basic academic knowledge and skills to ever succeed in mainstream studies. They believed that some students were at the point of no return, meaning they were going to fail no matter what remedial processes were put in place. On the other hand, some students felt that the institution was setting them up for failure by making it difficult for them to meet the expected pass standards.

Students maintained that they were never informed of what was expected of them when they enrolled for the extended programme. A few students explained that they were never informed about the requirements of their subjects and therefore they believed they were set up for possible failure in the programme. Others even went as far as saying that they were never told of faculty rules and regulations, especially assessment rules and regulations. They reported that they were informed that the programme was fully packed with academic content and activities, and time management was very important, consequently, they experienced that they were over-assessed by lecturers on the programme. However, they admitted that they learned how to deal with the workload and pressures of the programme, as not all work was covered by the lecturers in class. Some staff members trained students to attend to the work that had not been covered in class. Students were of the opinion that the programme had benefited them by preparing them for mainstream studies, in spite of some of its challenges.

The findings suggest that the students’ English and communication skills had improved. The new-found confidence regarding the English language, and in academic ability, had changed their mind sets and had motivated them to succeed in future studies. Students reported that “taking responsibility for your own learning” has contributed to “growing up” and being accountable for the future. Students were of the opinion that this was one

of the most important benefits of the programme. In conclusion, the students maintained that the extended year was challenging, nevertheless, it gave them an opportunity to be part of a tertiary institution.

4.5.2 **Theme 2: Access and success**

The National Development Plan 2012 (Zarenda, 2013:2) and the CHE (2013:20, 27) state that HE institutions should widen access to higher education studies. However, widening access should go hand-in-hand with academic success. The existing extended programme has shown that it promotes access and some success. Statistical data from the past five years of the extended programme suggest that many students who completed the extended programme are successful in mainstream studies (Sutherland, 2009:92, 109). However, students do not face only academic challenges, they are faced with many other challenges on a daily basis. Widening access for students who did not meet the minimum admission requirements demands a lot of money and resources, which most HEs do not have. Staff and students alike agreed that the extended curriculum widens access, but does not guarantee success. I am of the opinion that widening access for the sake of chasing student numbers is unethical. Widening access comes with many responsibilities and needs careful planning and consideration. Widening access must be accompanied by academic success.

4.5.3 **Theme 3: Curriculum**

Curriculum design is the bridge that determines *where we are* and *where we would like to be*. Many positive curriculum elements were identified during this study. The research suggests that the current extended curriculum is a well-designed curriculum and that the programme is well managed. The academic staff offering the programme is well trained and suited to present the extended curriculum. The curriculum does develop fundamental skills that students lack. The curriculum focuses on closing the articulation gap and offers alternative pathways for students to enter higher education studies. However, some shortcomings were identified, which, in my opinion, are critical and should be discussed.

Students are labelled as equally underprepared, and the curriculum is overloaded with unnecessary content. Students were concerned that some of the content in the curriculum had been covered at school, and they asked why they should do it again and

be assessed on content for which they have already proven competence. Students believed that if they had completed Grade 12 successfully they were competent and possessed the basic educational knowledge required for HE studies. The basic education content seems to congest the curriculum, which causes an overload of teaching and learning material. Students have to demonstrate their competence and they are assessed on a weekly basis. This has proven to be difficult, because students do not have enough time to do homework and prepare for assessments. They have six modules per semester that they need to complete and each module has its own workload and assessment. Complaints, such as, “I sometimes don’t go to class, I don’t have enough time to prepare for tests” were common during the focus-group interviews. However, one student added, “The programme is good, however, it is packed, we struggle with time management… the programme is too full [overloaded].”

In addition, the curriculum does not have any flexibility designed into it. Both groups, students and staff, were of the opinion that if they (students) could prove competence in certain disciplines or knowledge areas, then the students should be exempted from the module(s) covering that content area. The research findings suggest that, if the curriculum was flexible and some form of baseline assessment could be executed, it would widen access, decrease workload and reduce resource requirements. The baseline would determine where teaching and learning could commence, and students would not feel that they are being treated as equally underprepared. Flexibility could widen access and promote progression.

4.5.4 **Theme 4: Student needs**

In Themes 1 and 3 (Sections 4.5.1 and 4.5.3) I explained that the extended programme addressed the articulation gap and focused on providing the basic skills needed for academic progression. Although the academic needs of students are addressed, it is of some concern that the curriculum does not address the social, cultural, emotional needs of students. Intellectual and cognitive skills development happen on a very low level in the curriculum, although the students need more advanced intellectual and cognitive activities to develop these skills. Staff and students alike expressed their concern that limited social and cultural understanding and skills development take place in the programme. The institution recommended that, should students have a need for these skills, they could join or attend activities after hours. As stated in Themes 1 and 2 (4.5.1

and 4.5.2) students face many socially and culturally related challenges every day – these challenges are not only academic in nature. Both staff and students concurred that factors other than academics could cause many students to fail in tertiary education.

The students entering higher education since 1994 are different from those who entered in the time before South Africa attained democracy. The new dispensation opened up opportunities for many students who could not, up to that time, access higher education, due to discrimination by gender, race, disability and geographical background. The student profile has now changed considerably and, in addition, since technology was introduced to human existence, students learn differently. Young learners' needs have diversified and they need a variety of support structures for those needs to meet the challenges of the working world. The National Development Plan of South Africa, which informs the HE sector and massification with the aim of promoting success, is a critical focal point for government (DHET, 2012b:3). Therefore, the HE sector will keep on changing until it meets the national goals of government. It is for these reasons that HEIs have to change their curriculums accordingly, to prepare underprepared students for higher education studies (CHE, 2013:20).

4.6 DESIGNING THE PRELIMINARY CONCEPTUAL MODEL

The focus of this research study is designing a conceptual model for a flexible, extended undergraduate curriculum, as described in Chapter 1. This section presents a discussion of how the conceptual model was designed and the factors that contributed to its creation.

Pillai (2011:2) describes a curriculum as, "a comprehensive plan for an educational programme, training programme, and or academic course to offer a new and improved manpower to fulfil the rising needs of a dynamic society". This definition sheds light on the way the conceptual model for a flexible extended undergraduate curriculum should be created. Chapters 2 and 3 discussed the plan for the design of the conceptual model, which was guided by the Tyler Model, which was discussed intensively. In this chapter I demonstrate how I applied the principles of the Tyler Model of curriculum design.

In designing the proposed model, I focused, **firstly**, on the ***nature and structure of knowledge*** (Madeus and Stufflebeam, 1989:4). The proposed model indicates what the subject matter that should be selected and prioritised according to relevance and

importance. It determines the scope of the content that needs to be covered in the programme, the depth of coverage, and concentration of content. During this stage I reflected on and I addressed the research findings, ensuring that the model does not include unnecessary content or modules. The proposed conceptual model allows curriculum developers to develop content that is relevant and meets the specific objectives set by the institution. Thus, relevant curriculum content will be identified and a hierarchy will be established for content regarding importance and progression to complexity.

As stated earlier, the research findings imply that not all students are equally prepared or underprepared for higher education studies (Section 4.5.1), therefore the curriculum content should progress from low to higher levels of complexity. The proposed model allows for subject matter to be organised into discrete modules, focusing on the broad fields or disciplines the students are registered for and the discipline they plan to follow in future. It includes the grouping of relevant content in core and interdisciplinary modules and establishment of a sound curriculum that addresses not only academic needs of students, but also social, cultural, emotional, and intellectual needs. The aim of the conceptual model is not only to address academic needs of students, but a spectrum of needs. It encapsulates diverse skills and development of student competencies by incorporating interactive activities and projects.

The ***second*** element I considered was the ***needs of society*** (Madeus and Stufflebeam, 1989:4). In this element, literacy and vocational skills development became a priority that the future curriculum model should emphasise. Interpersonal skills development is critical for ensuring that students can function in the world beyond their comfort zones. The curriculum content aims to expose students to other traditions and cultures while respecting and honouring each culture and/or tradition's values. As a recommendation, creativity and innovation are other critical components, as they contribute to students' cognitive and intellectual development on a higher level. Students are challenged to use the skills learned from the curriculum to be creative and innovative. Figure 4.1 illustrates elements emanating from the research findings that guided the design of the conceptual model.

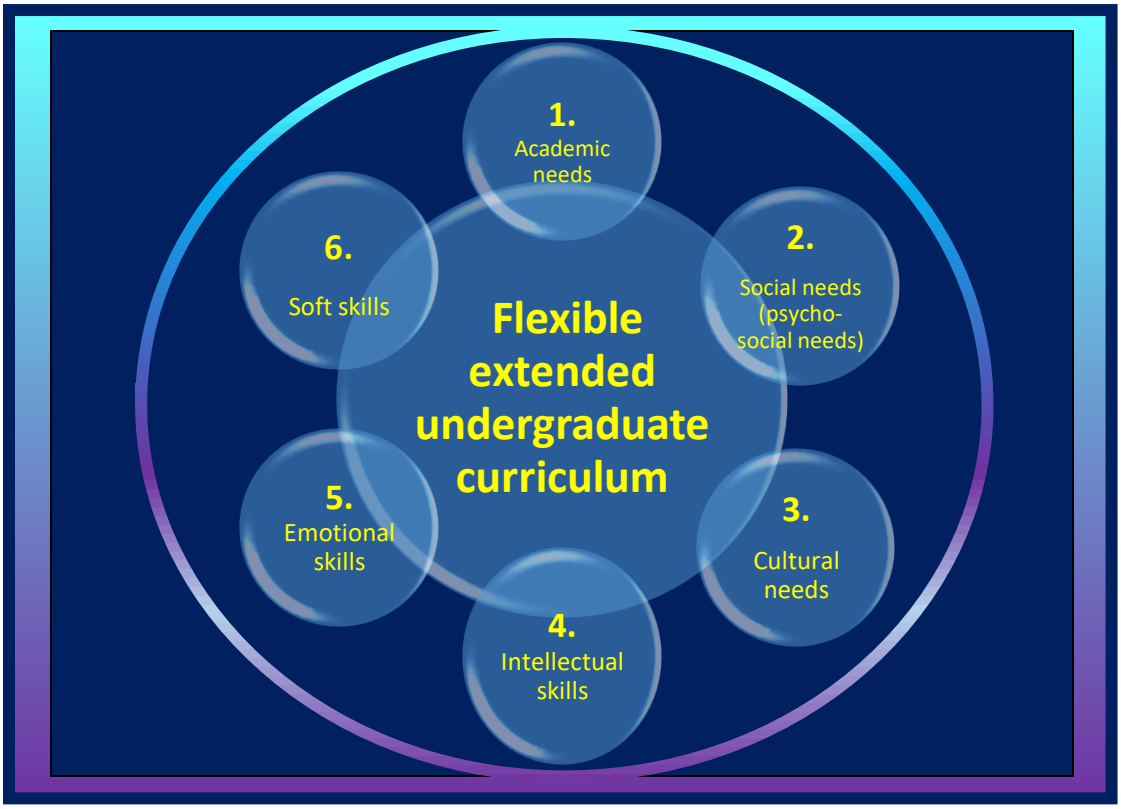

Figure 4.1: Elements influencing the design of the conceptual model

In designing the conceptual model for a flexible extended curriculum, I employed the Tyler Model to inform its development. The four steps used by Tyler were also used to guide the conceptual model design; the steps are:

1) Determine the institution's purposes (objectives);
2) Identify educational experiences related to the purpose;
3) Organise the experiences; and
4) Evaluate the purposes (Durbin *et al.,* 2010:14).

4.6.1 Step 1: Educational purpose

The pertinent question to be answered is: What educational purposes should the VUT seek to attain?

This question links directly to the research problem posed in Chapter 2 and the challenges stated by the CHE (2013:17, 32).

The extended programme department at VUT should develop an extended programme that widens access and promotes success for lifelong learning (CHE, 2013; 16-19, 25-27). It should not be assumed that students entering higher education studies are all

the same (Section 4.1). The programme must be designed in a way that it can address a wide range of students' and communities' diverse needs. Students enter higher education with diverse pre-knowledge and skills, which should not be judged as being the same for all. However, students do not only lack academic foundation, they lack social, emotional, cultural and intellectual skills, as well as literacy competence (refer to data in Table 4.1). Therefore, flexibility in the curriculum design will offer students the opportunity to make choices according to their needs and encourage them to progress faster in the programme. It will also allow students to prove competence in respect of some modules or learning content. They should therefore be allowed to progress and choose traditional mainstream programmes that they can continue with, thus, enhancing progress in and access to the programme. Alternative assessment strategies should be incorporated in the programme to determine students' competencies and levels of skills development.

4.6.2 **Step 2: Educational experience**

The question to be answered in this step is: What educational experiences can be provided that are likely to attain these purposes?

From the research findings, it became clear that the current model used by the institution is not addressing the diverse needs of the students (Section 3.3.2). The curriculum design should incorporate interactive learning strategies through a variety of learning approaches and assessment methods to enhance the educational experiences of students. Flexibility offered by using multiple formats for presenting learning content, in giving students options to demonstrate their knowledge, and providing the options for engagement, addresses the diverse characteristic needs of students (CAST, 2011:2). Thus, each student can participate actively in activities of choice. Flexibility and inclusion regarding learning experiences could be accomplished by the use of activities, such as debates, public speaking, writing lab activities, games, simulations, and experiments. Therefore, clear learning and instructional objectives should be determined.

4.6.3 **Step 3: Organisation of educational experiences**

The question to be answered is: How can these educational experiences be organised effectively?

To answer the question, Biggs' (2002) Backward Curriculum Alignment process is used to guide the structure of the curriculum. By developing clear institutional and learning objectives the curriculum is informed regarding what the students need to know to meet the predetermined course outcomes. Therefore, effectively organising instructional objectives will inform approaches to the teaching and learning process, such as the selection of subject matter and assessment strategies.

Educational experiences should be designed accordingly, to allow for adequate time to attend classes, do independent work and prepare for assessments.

4.6.4 **Step 4: Evaluation of the curriculum**

This step seeks to resolve the question: How can we determine (evaluate) whether and to the extent to which these purposes are being attained?

This step affords stakeholders the opportunity to evaluate the curriculum through internal and external processes. HEIs need to adhere to internal and external criteria when a new academic programme is developed. The process of designing curriculum is guided by national and institutional policies (documentation on admission and registration processes). The internal process includes consultation with all the stakeholders in the field of interest (individuals, governing bodies, industry and the private sector).

Due to the nature of expectations and demands from outside the institution curriculum design should also involve consideration of all the inputs from external stakeholders. The curriculum design and programme accreditation process of an institution is informed by policies and quality assurance processes before the programme is presented to the curriculum committee and senate for approval. The application for approval (programme structure) is then forwarded to the DHET and scrutinised against Higher Education Qualification Sub-Framework (HEQSF) criteria. As soon as DHET grants approval, the programme is refined and the curriculum purpose, content and outcomes are developed by faculty. After the curriculum is developed the institution

submits the DHET approved programme to CHE via an online accreditation process. As soon as the CHE accredits the programme, the programme is sent to SAQA for registration. After the programme is registered on the SAQA database the programme is positioned in the institution's programme qualification mix. Once the programme appears in the institution's programme qualification mix it can be offered and students can be registered to pursue it.

These internal and external processes ensure that the curriculum is evaluated and that it meets the criteria set out by governing authorities of the higher education sector.

The four steps presented in this section outline the requirements of designing a preliminary, conceptual, flexible, extended undergraduate curriculum model based on Tyler's Model for curriculum design. These steps are shown in the graphic presentation of the model in Figure 4.2.

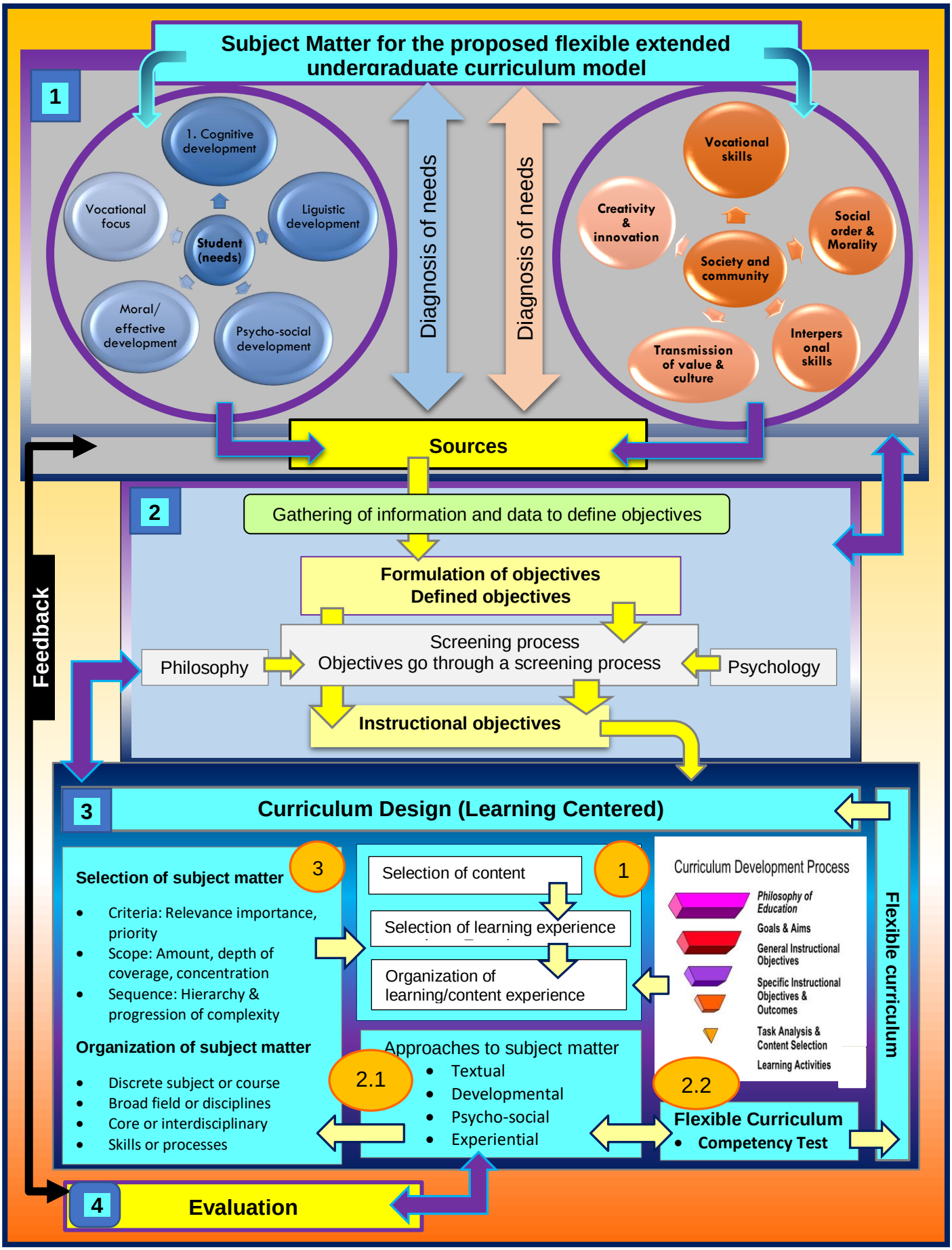

Figure 4.2: Proposed conceptual model for a flexible extended undergraduate curriculum

4.7 DESTINY PHASE

Since this is a research study conducted in partial fulfilment of an academic qualification, I did not have the opportunity to proceed further to disseminate the findings of the study and follow up the field testing of the proposed model. The research findings and recommendations will be shared, in the form of a research report, with the relevant stakeholders at the university where the research was conducted. These include the deputy vice chancellor, research participants and the dean of the Faculty of Engineering. A copy of the dissertation will be deposited with the VUT library. Furthermore, a conference paper and a journal article based on this investigation should be written and published.

4.8 SYNTHESIS

In this chapter I provided an in-depth explanation of how data were analysed during the individual and focus-group interviews. I explained how the data were collected and analysed according to the convention of qualitative research. Constant comparative methods were used during the examination and organisation of the raw data into codes, categories and themes. Throughout this chapter I attempted to understand and make meaning of how the articulation gap could be addressed through the extended programme offered at the VUT. Participants in this study became co-constructors of the proposed conceptual model for a flexible extended undergraduate curriculum.

Chapter 5 presents a synthesis of the research findings. It also provides recommendations for further research into curriculum design of extended programmes at higher education institutions.

CHAPTER 5: CONCLUSIONS, SYNTHESIS OF FINDINGS AND RECOMMENDATIONS

5.1 INTRODUCTION

The extended programme at the VUT was designed and implemented to broaden access through alternative admission, to accommodate students who are underprepared for studies in higher education. The creation of the extended programme was based on the notion that, although many students are underprepared, there are some students who have the potential to succeed if they are guided properly and supported by the institution (DHET, 2012a:2).

In order to justify the development of the proposed conceptual model for a flexible extended undergraduate curriculum design, this study involved a literature review, empirical data collected by means of semi-structured interviews as well as the research participants' workshop and analysis of the data. The empirical study was undertaken with the intention of designing a preliminary conceptual model for a flexible undergraduate curriculum that could possibly be utilised by the VUT and could serve as a guide to other HEIs.

The following primary research question was asked during the study:

How may a flexible curriculum structure for an undergraduate programme be designed in order to address the articulation gap between basic education and higher education?

Subsidiary research questions were as follows:

1. From literature, what are the theoretical underpinnings of a flexible undergraduate curriculum design?
2. How could a flexible undergraduate curriculum be designed to develop the competency skills of students in order to reduce the articulation gap between basic education and higher education?
3. How may the ideas on designing a flexible undergraduate curriculum be organised to develop a conceptual model design?

Chapter 1 dealt with the introduction and orientation to the study, introducing the relevant background information relating to the identified research problem. Chapter 1 also outlined the structure and provided an overview of the dissertation. Chapter 2

provided a broad literature review, conducted to obtain perspectives on the higher education environment in South Africa. Theoretical underpinnings of undergraduate curriculum were investigated. Several curriculum design models were discussed in Chapter 2 and in Chapter 4. However, the Tyler Model for curriculum design was selected and formed the basis for the development of the proposed conceptual models for a flexible undergraduate curriculum design. Chapter 3 discussed the research design, methodology and data collection procedures. The AI research approach was used to guide the research process. Chapter 4 discussed the qualitative data for the empirical study and presented the proposed conceptual model.

Investigating the social phenomenon of transformation in higher education (see sections 2.1, 2.5), the articulation gap, extended curriculum and the needs of students from diverse angles and perspectives, permitted triangulation of the comprehensive literature with the empirical data that were obtained (CHE 2013:16-25). This enabled the researcher to elaborate and shed light on the findings, to accomplish the rationale of the study, which was the design of a preliminary conceptual model for a flexible undergraduate curriculum. This chapter deals with the synthesis of the study, and provides the conclusions reached and recommendations emanating from the study.

5.2 SYNTHESIS OF THE FINDINGS

The majority of students entering higher education studies are academically underprepared. However, it was discovered that the students cannot be labelled as “all the same”. This is mainly due to their diverse academic, social and cultural backgrounds. They mostly lack communication, numerical, literacy, time management and learning skills. To be more specific, they lack a variety of social, cultural, emotional and intellectual skills (see Sections 2.2.1, 2.2.2 and 2.2.3). The proposed preliminary model considers the diverse needs of students without compromising the quality of education. The Tyler Model was introduced to guide the design of the preliminary model in a quest to ensure that, when utilised in curriculum design, it would guide the designer to develop a sound curriculum that would close the articulation gap, and it would consider the students’ diverse needs without compromising the quality of education, which would eventually assist in providing quality graduates who can contribute positively to the socio-economic challenges facing South Africa (2.4.2.2).

The study was contextualised within the course design domain (Tight, 2012:65-69) (1.6, 2.4, 2.4.1 and 2.4.2), hence, the literature review included brief discussions on transformation of HE, transformation within tertiary academic programmes, curriculum models and curriculum processes used in the higher education sector since 1994 (1.1, 2.1, 2.2, 2.2.1, 2.2.2 and 2.2.3). This study was conducted in a university environment. The findings informed the recommendation for a conceptual model of a flexible undergraduate curriculum. In addition, the study described AI as one of the theoretical frameworks chosen for the development of the conceptual model (Cooperrider *et al*., 2008; Shuayb *et al.*, 2009:11) (see Section 2.6). An overview of the higher education landscape in South Africa (see Section 2.2) highlighted the notion of transformation as a process of establishing a higher education system that is planned, governed and funded as a single coordinated entity (CHE, 2013:16; DHET, 2013:4 (see Section 2.1). It was established that HEIs are required to widen access to higher education studies for previously disadvantaged students. However, massification needed to be accompanied by academic success.

Literature reveals that the success rate of graduates in the sector is declining (CHE, 2013:17-20). I explained that not all applicants are academically prepared for higher education studies, even though they meet the minimum institutional admission requirements of a programme (2.2.1 and 2.2.2). Tinto (2008:3) and Thomas (2012:11) emphasise that students have diverse needs that have to be considered when institutions design curriculums. For instance, the institution has to focus on establishing a sense of belonging for students entering HEIs for the first time. The fact that students are differently prepared means that they should be supported differently by the curriculum design, and not be categorised as all being the same. It can be concluded that inequalities within the school system have a profoundly negative impact on academic performance of students in higher education and that the responsibility to overcome these inequalities has been transferred to HE institutions. The preliminary conceptual model for a flexible extended undergraduate curriculum design (see Section 4.6 and Figure 4.2) provides the necessary flexibility and inclusivity needed for the students to progress through mainstream undergraduate programmes.

Data obtained for the empirical phase of the study were studied and analysed. From these processes the findings were drawn and can be summarised as follows (3.3.2):

- The majority of students entering university is academically underprepared for higher education studies, even though they meet the minimum admission requirements;
- Most first-year students lack social, cultural, emotional and intellectual skills. These elements have to be considered when a curriculum for undergraduate programmes is designed;
- The current extended programme focuses on academic development and students acquire the necessary basic academic foundation skills to traverse their mainstream studies;
- Students' communication and literacy skills improve during the extended year;
- The extended programme is overloaded with unnecessary content, with too many assessments and not enough time for students to do self-study and prepare for the assessment activities;
- The current extended programme mainly focuses on only the academic development of students, and does not sufficiently consider the diverse needs of students;
- The progression rule does not favour students who are slow in closing the articulation gap. It implies a financial burden that is perceived by the students as a stressor that influences their academic success; and
- Students find it difficult to adjust to the higher education environment, because its demands are challenging. Some students are failing to cope with the higher education environment, mainly due to problems experienced with study methods, time management and an excessive workload.

5.3 IMPLICATIONS

During the Dream and Design phases of the AI process the following discoveries were made. These discoveries form the basis of recommendations for further study into the findings summarised above. The conclusion of this chapter (5.2) also forms part of the basis for identifying the implications of this study.

- The English communication module should be continued, since it has yielded positive results. The communication module enhances students' vocabulary and promotes interaction between different cultural groups.

- The number of assessment activities should be reduced. Some of the assessment activities must be reduced, to free up time for academic, social and cultural support that students desperately need.
- The flexibility of the curriculum design should be considered in order to enhance progression and articulation through the undergraduate programmes. However, progression rules and regulations must be adhered to.
- Social and cultural aspects should be incorporated in the curriculum to help students deal with higher education demands.

5.4 RECOMMENDATIONS FOR FURTHER RESEARCH

> *Curricula refer to both individual and collective learning experiences. The growing recognition of professional fields as well as the attendant expansion of professional education has fostered curriculum adaptation and evolution* (Sutherland, 2009:229)*.*

The problems of the relation between massification and academic success at HEIs seem to pose considerable challenges. Massification involves the admission of a huge number of underprepared student to higher education studies. Closing the articulation gap is an increasing concern, and all efforts should be made to close the ever-widening gap. Further research is needed to establish how the curriculum could be reformed to enhance academic success of students, and how to increase throughput in HEIs. Curriculum reform in HEIs needs to be driven to support and address the increasingly diverse needs of students.

5.5 SIGNIFICANCE OF THE STUDY

Curriculum designers and lecturers will benefit if they could implement and evaluate the preliminary conceptual model as the foundation for their curriculum design. The proposed models consider the diverse needs of students without compromising the quality of education, which would eventually lead to the academic success of students.

Students could benefit from the findings of this study, especially those who come from previously disadvantaged backgrounds. They would have alternative options to access higher education. Extended programmes that are designed on sound curriculum principles would widen access to further studies and maximise the learning experiences

of students so that they can achieve lifelong learning. Consequently, universities would achieve their educational purpose of widening access while ensuring success.

5.6 LIMITATIONS OF THE STUDY

The following limitations of the study should be highlighted

- The study has limited generalisability, since it was a case study, however, universities could learn from it, especially on making learning flexible for a diverse student population.
- Since this is a research study in fulfilment of an academic qualification, and therefore has a limited duration, the investigation could only be done at one institution and there was not enough time to let curriculum designers at other South African universities evaluate the proposed conceptual model.

5.7 CONCLUDING REMARKS

The research findings clearly indicate that the articulation gap between the school education and further education and training and HE higher education systems is problematic and needs to be closed. The fact that HEIs assume all students as equally underprepared complicates the process of developing a flexible extended undergraduate curriculum that could address these shortcomings.

From the research findings it was also clear that students need support from the institution in many areas. Although admission to higher education studies are based on students' prior academic achievements at school level, students' diverse needs have to be addressed within the undergraduate curriculum to improve the throughput of student rates in higher education. Students enter higher education and face many challenges that they need to deal with. These challenges include financial, accommodation, cultural, social and academic challenges. To assist students in dealing with these challenges HEIs should focus on special support structures to assist students, and alternative pathways should be considered to accelerate students' progression and academic success. HEIs should seek flexible extended curriculum programmes that will enhance academic progression. Thus, widening access should go hand-in-hand with academic success.

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APPENDIX A

RESEARCH INSTRUMENTS

INTERVIEW SCHEDULES

1. Focus group interviews

Description

Face to face interviews of 45-60 minutes with two groups of students, one in current undergraduate extended programmes and the other group consisting of students who have completed the undergraduate extended programmes. Ten students will be invited to participate in each group.

Questions

1.1 In your experience what are the benefits of the extended programme at VUT?

1.2 What is the most meaningful feedback you received from the extended programme?

1.3 Describe a situation where the extended programme addressed the diverse needs of the students with respect to the **academic, social and cultural** aspects.

1.4 What skills have you learned in the extended programme?

1.5 In your opinion what aspects of the extended programme are working well at VUT and why?

2. Individual interviews

Description

Face –to-face individual interviews of 30 minutes with three heads of departments, three curriculum developers and three lecturers, one from each of the Engineering Departments at the Vaal University of Technology (i.e. Civil, Electrical and Mechanical).

Questions

2.1 What encouraged your department to develop an extended curriculum programme?

2.2 What situations or circumstances created within your institutions encouraged the development of extended curriculum programmes?

2.3 In your experience what are the benefits of the extended programmes?

2.4 What student needs are addressed in extended programmes with respect to **academic, social and cultural** aspects?

2.5 In your opinion what aspects of the extended programme are working well at VUT and why?

APPENDIX B

REQUEST FOR PARTICIPATION IN A RESEARCH STUDY

Department of Programme Accreditation and Curriculum Development (PACD)

Study leader's contact details:

Dr. Charity N. Ndeya-Ndereya
Centre for
Teaching and
Learning
University of the
Free State
P.O. Box 339
Bloemfontein 9300
Telephon

20 May 2015

Dear Sir/Madam

RE: Request for participation in a research study

I am a student pursuing an M.A. degree in Higher Education Studies at the University of the Free State. Part of my degree programme involves a research paper on a subject of my choice. My research topic is: ***An Appreciative Inquiry into the Design of a Conceptual Model for a Flexible Undergraduate Curriculum.*** The purpose of the study is to explore means of designing a conceptual model for a flexible undergraduate curriculum in order to address the FET-HE articulation gap.

I am kindly requesting for an opportunity to interview you as a member of a departmental Focus Group for about 45-60 minutes on your perceptions about and experiences of the VUT extended programmes. You are also invited to participate in a follow-up research workshop to discuss the possible development of a flexible extended undergraduate curriculum that would enhance the preparation of underprepared undergraduate students entering mainstream studies. The interviews will be held in the boardrooms of the Faculty of Engineering or Department: Programme Accreditation and Curriculum Development on days that your department and I will agree on. The interview proceedings will be recorded using written notes and a digital voice recorder. All the material from the interviews will be kept confidential. You will be free to withdraw from this research study at any time and for whatever reason without affecting your relationship with the researcher or VUT.

Please note that this study has been approved by the Dean of the Faculty and by the Director of PACD.
Should you need more information about the study, please do not hesitate to contact me or my study leader (research supervisor) who will readily respond to your inquiry.

Thank you for your participation into the research study of extended undergraduate programmes at a Higher Education institution

Yours faithfully

APPENDIX C

INFORMED CONSENT FORM FOR FOCUS-GROUP INTERVIEW

INFORMED CONSENT FORM

Title of the research study: ***An Appreciative Inquiry into the design of a conceptual model for a flexible undergraduate curriculum.***

If you agree to participate in this study, I kindly request you to sign this consent form. This does not stop you from changing your mind if you wish to withdraw from the research study.

Confidentiality

1. I agree

- to the interview as a member of a focus group to be audio recorded;
- to participate in the research workshop that will be held after the interviews.
- that my name and information that may identify me will be kept completely confidential;
- that all the information collected from me will be stored on a password protected file and will only be available to you, me and your research supervisors;
- that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.

2. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reasons.

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature

APPENDIX D

INFORMED CONSENT FORM FOR INDIVIDUAL INTERVIEW

Vaal University of Technology
Your world to a better future

INFORMED CONSENT FORM

Title of the research study: ***An Appreciative Inquiry into the design of a conceptual model for a flexible undergraduate curriculum.***

If you agree to participate in this study, I kindly request you to sign this consent form. This does not stop you from changing your mind if you wish to withdraw from the research study.

Confidentiality

1. I agree

- to an individual interview that will be audio recorded;
- to participate in the research workshop that will be held after the interviews.
- that my name and information that may identify me will be kept completely confidential;
- that all the information collected from me will be stored on a password protected file and will only be available to you, me and your research supervisors;
- that my data gathered in this study may be stored (after it has been anonymised) in a specialist data centre and may be used for future research.

2. I confirm that I have read and understood the information sheet for the above study and have had the opportunity to ask questions.

3. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reasons.

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Researcher	Date	Signature