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STRATEGIES USED TO CATER FOR STUDENTS WITH DIVERSE ACADEMIC BACKGROUNDS IN THE PROVISION OF TEXTILE, CLOTHING AND DESIGN PROGRAMMES: A CASE STUDY OF TWO UNIVERSITIES OF TECHNOLOGY IN ZIMBABWE

By

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A thesis submitted in fulfillment of the requirements of the degree of Doctor of Philosophy in the School of Further and Continuing Education Faculty of Education

At the

UNIVERSITY OF FORTHARE

Supervisor

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2017

Declaration

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of referenceshas been given.

Chimbindi Felisia

Signed: Date:

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I, Felisia Chimbindi student number 201415370, hereby declare that I am fully aware of the University of Fort Hare's policy on plagiarism and I have taken every precaution to comply with the regulations.

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Abstract

Universities admit students from diverse backgrounds and have an obligation to accommodate all the students in various educational programmes to ensure that they acquire relevant skills and knowledge. The provision of Textile, Clothing and Design programmes to students with diverse academic backgrounds in universities of technology in Zimbabwe has led to various concerns raised by the textile and clothing stakeholders. The concerns include poor performance of students, high student failure rate, high student drop out, late completion of programmes by students, and other problems emanating from curriculum implementation approaches used by the lecturers. This study therefore, sought to find out how students with diverse academic backgrounds are catered for in the provision of TCD programmes in the two sampled universities of technology in Zimbabwe, with a view to assist the students and to enhance the quality of TCD provision.

The study adopted a post-positivism paradigm and used a mixed method research approach that integrated concurrent qualitative and quantitative procedures in data collection, analysis and interpretation. A questionnaire, interviews and document analysis were used to collect data from respondents. Purposive sampling procedure was used to select 36 TCD lecturers, 2 universities' quality assurance directors, 2 TCD faculty deans of studies, and 2 department chairpersons. Collected data were analyzed using statistical and non-statistical procedures.

The study revealed that catering for students with diverse academic backgrounds was practiced in the two universities despite the absence of a curriculum implementation policy to guide the provision of TCD programmes to students with diverse academic backgrounds at university level. It emerged that catering for students with diverse academic backgrounds in implementing TCD curricular at the two sampled universities was faced with various challenges that include lack of lecturer training with regard to catering for students from diverse academic backgrounds and inadequate lecturer training in depth TCD subject content knowledge and ICT teaching technology packages. The study also revealed that there is not enough university and stakeholder participation with regards to supporting and monitoring curriculum implementation process to cater for students with diverse academic backgrounds.

Although there were challenges encountered in catering for students with diverse academic backgrounds, the study reveals that there are pockets of good practice in some curriculum implementation strategies implemented by the two institutions such as use of student centered teaching and instructional approaches, university support and lecturer commitment to assist the students. The study findings conclude that although catering for TCD students with diverse academic backgrounds was being practiced in the two universities of technology, there are

very critical issues observed over the programmes implementation process that include absence of curriculum implementation policy, lack of training of lecturers and inadequate participative TCD stakeholder involvement. Based on the study findings and reviewed literature, the researcher suggests an alternative curriculum implementation framework for catering for students with diverse academic backgrounds that may help improve effectiveness of university programmes implementation.

Dedication

This work is dedicated to God the Father, the son and the Holy Spirit. "For he shall give his angels charge over thee, to keep thee in all thy ways" (Psalms 91:11) Thank you Lord for the success of this work. You have helped me climb yet another ladder in the education area. I ascribe all the glory to you, Lord!

Acknowledgements

My foremost appreciation goes to God Almighty; the only source of my inspiration, wisdom and strength for making this study a success. Lord, I am indebted to you. Thank you Lord!

I sincerely thank you Supervisor, Professor Symphorosa Rembe, for your expertise, guidance and patience. Thank you for your commitment and the time invested in this work to make it a success.

I also want to thank the Faculty of Education, in particular the school of Further and Continuing Education at the University of Fort Hare, for offering me the opportunity and support to pursue my study.

My sincere thanks go to theuniversity management ofthe two universities of Technology in Zimbabwe that authorized the study, and to the entire quality assurance directorate, faculty deans, chairpersons and lecturers who shared information with me to make this study possible.

I wish to express my profound gratitude to my husband Stephen Tariro Chimbindi for his support all the way. You deserve special thanks for your patience and understanding.

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CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 Introduction

Globally, universities admit students from diverse backgrounds namely, financial backgrounds, traditional setting backgrounds, private and public school backgrounds and those with different academic backgrounds. The universities have an obligation to accommodate all the students in various educational programmes and ensure that they acquire relevant skills and knowledge (ATF, ILO & UNESCO, 2012; Charema, 2010; Kimura, 2013; Machteld & Naomi, 2016). The provision of Textile, Clothing and Design (TCD) programs with regards to students with diverse academic backgrounds in universities of technology in Zimbabwe has led to various concerns being raised by the textile and clothing stakeholders. The concerns include poor performance of students, high student failure rate, student drop outs, late completion of programs by students and problems emanating from curriculum implementation approaches used by the lecturers. This study therefore, sought to find out how students with diverse academic backgrounds are catered for in the implementation of TCD programs at two universities of technology in Zimbabwe.

This chapter presents the background of study, statement of the problem, research questionsand objectives, purpose of the study, significance of the study, delimitation of the study, limitations of the study, and definition of terms.

1.2 Background of the study

In response to industrial demands, most developing and developed countries shifted their focus from provision of technical education programmes that were inclined towards labour specific craftto technical education programmes of a general naturewhich include education and training through new approaches to content,

technologies and skills provision (Afeti, 2014; Mumbengegwi, 2001; Felder & Brent, 2005; Catts, Falk & Wallace, 2011). These new approaches enhance and encourage students' creativity and innovation in solving industrial problems and developing better ways of carrying out job tasks. The new approaches were also adopted in Zimbabwe to ensure that the changes in the Technical and Vocational Education (TVE) programmes are in line with the global trends (UNESCO & ZIMDEF, 2005).

Before the changes, TVE programmes in Zimbabwe were aimed at changing peoples' social, political and economic world outside the institutions (Mupinga, Burnet & Redmann, 2005; Kennedy, 2013). Their purposes ranged from narrow skills training that provided individuals with occupational skills for specific jobs, to enhancement of general education. In line with the global improvement of technology, industrial operations have shifted from emphasis upon manual skills to industrial man-controlled but-system operated machinery (Afeti, 2014; Coltart, 2012; UNESCO & ZIMDEF, 2005). This means that there is now less manual work in industries as it has been replaced by technologically advanced machinery that requires very few workers to operate. Employers now require vocational and technical graduates with additional soft non-technical skills that include competences in reading, writing, computation, effective listening and oral communication skills. The graduates are also expected to display high adaptability skills through creative thinking and problem solving, personnel management with strong self-esteem and initiative, interpersonal skills, ability to work in teams or groups, and leadership effectiveness (Ofsted, 2014; Mupinga et al., 2005; Woyo, 2013). The tertiary institutions, therefore, need to train students to meet the industry requirements by effectively attending to their diverse academic needs.

In line with the global changes in TVE provision, teacher education in Zimbabwe has been reviewed in order to match the changes (Mupinga et al., 2005 & Woyo, 2013). Most teacher training institutions have shifted to the new TVE package of educational content, new skills and new delivery methodologies (UNESCO, 2013; Majumdar, 2012). The Technical and Vocational Education teachers are being trained in line with the new demands of the new TVE programmes that are linked to industrial operations, for them to deliver the right content and skills that match the knowledge society.

In order to manage tertiary education programmes, many statutory bodies were introduced to monitor and regulate the provision of higher education in Zimbabwe (UNICEF & UNESCO, 2005; UNESCO, 2013; Gwati, 2014). The bodies address various issues that include quality assurance, identification of training and research needs, regulating workers' committeesand monitoring occupational standards including the TVE transformation mentioned above. The National Manpower Advisory Council (NAMACO) has sectorial committees that determine TVE curriculum content to ensure that the courses offered meet national needs relating to industrial operations (UNESCO & ZIMDEF, 2005). The Zimbabwe Council for Higher Education (ZIMCHE) established in the early 2000 monitors and regulates the quality of qualifications being offered by private and public institutions of higher learning within the country. The board also sets minimum qualifications for students who enter these institutions of higher learning.ZIMCHE further ensures that the institutions of higher learning link the programs they offer to the economic and developmental needs of the country (UNESCO & ZIMDEF, 2005; Gwati, 2014). The body also ensures implementation of the country's inclusive education policy that spells out the inclusion of children with special education needs into the mainstream classes as a moral obligation and the children's right (Charema, 2010; Kimura, 2013).

1.3 Textile, Clothing and Design Programmes

Textile, Clothing and Design (TCD) is a component of Technical and Vocational Education. It refers to all programmes that are related to fabric, clothes production and creation of patterns on fabrics and clothes, aimed at developing theoretical knowledge and skills in students (Rutherford, 2009; Chiripanhura, 2010). The knowledge and skills enable the students to function well in the textile and clothing industry. For instance, the primary school Pre-Vocational Certificate, (PVC), secondary school National Foundation Certificate, (NFC) and college National Certificate, (NC) curricula are designed to lay a strong knowledge base that keeps abreast of developments in modern science and technology (UNESCO & ZIMDEF, 2005; Afeti, 2014). Such basic TCD programmes include Garment Construction, Pattern Making, Interior Decoration and Dyeing and Printing. These allow students to follow different careers as they can further train as textile designers, production line managers, fashion designers, pattern

makers and clothing factory managers, in technical colleges and polytechnics right up to universities (UNESCO & UNICEF, 2005). Some of the TCD programmes offered by most colleges include Industrial Clothing Design and Construction, Textile and Clothing Technology, Clothing Technology, Textile Technology and Fashion Design. Universities also choose to offer TCD programmes that are linked to those offered by colleges such as Clothing Fashion Design, Fashion Marketing and Retailing, Apparel Manufacturing, Textile Engineering and Clothing Technology.

The university TCD programmes have been designed to train textile and clothing industry company directors, managers and supervisors (Chinhoyi University Technology Academic Bulletin, 2012- 2014).

Progression levels in TCD provision begins with primary school Pre-Vocational Certificate (PVC), secondary school National Foundation Certificate (NFC), National Certificate (NC), National Diploma (ND), Higher National Diploma (HND), university Bachelor of Technology Degree, Master of Technology and Doctor of Technology Degree (Coltart, 2012).

The entry requirements range from normal entry(students with "A" level Certificate), mature entry (students with NC, ND, Diploma in Education & HND) and special entry (those with at least five Ordinary ("O") level passes and a minimum of two years working experience in TCD industry). The students from these diverse academic backgrounds are placed together and learn in one class. The maturity levels of the candidates vary since students from Technical and Vocational Education colleges have completed their high school education levels a long time ago and have had time to pursue their tertiary education. Furthermore, the students with TVE college level qualificationshave had more exposure in TCD education at higher education, in theoretical knowledge and practical skills through on job attachment during their certificate and diploma courses, while those from secondary schools have no experience of tertiary level knowledge and skills (UNESCO & UNICEF, 2005; Nguku, 2013). Those with Diploma in Education Certificates have wider experience obtained through tertiary level education and in teaching the TCD subjects. Those with only "O" level certificates have the basic knowledge and skills in the TCD acquired in the Prevocational Certificate and National Foundation Certificate programmes that are far below the Advanced level and Diploma level students.

Some of the students with "A" level qualificationshave no exposure to any TCD education in secondary schools. These may have the greatest knowledge gap in the area since they do not possess any basic knowledge and skills in TCD (Coltart, 2012; Jones, Coetzee, Bailey & Wickham, 2008; OECD, 2008). Combining these students, who have wide knowledge gaps, to learn in one class potentially disadvantaged some students. For instance, some would take the college route to university and obtain a degree in nine years of tertiary education while others who moved from "A" level to university obtained degrees in four years of tertiary education (UNESCO & ZIMDEF, 2005). Besides, students with "A" level qualifications without any exposure to TCD knowledge and skills would face challenges in grasping concepts at a higher level since they lack the basic content and skills in the area, that is usually taught at secondary school and college levels (Woyo, 2013; OECD, 2008; UNICEF & UNESCO, 2005).

The TCD students in colleges and universities sit for both practical and theory examinations and have a coursework mark accumulated during the course of each period of study for each qualification level. The coursework for college TCD programmes is 40% and the examination mark is 60% (Ministry of Higher and Tertiary Education, 2005). The students go for a minimum of eight months on job attachment in textile and clothing manufacturing industries. The university level coursework is 50% and examination is 50% as well. The students also go for a minimum of eight months on job attachment in the textile and clothing manufacturing industries. In teaching this course, lecturers do not recognize those students who have been exposed to attachment during their college education and those going for attachment for the first time. The students are attached to clothing and textile industries where they are taken through the whole industry from one department to the other. Given student diversities, it is not clear how they are prepared and how placement in industries is organized so that all students benefit.

Lecturers who teach TCD degree programmes are supposed to have specialized in the area of Textile and Clothing to a higher level above the degree level, (UNESCO & ZIMDEF, 2005; Gwati, 2014). Moreover, they should also possess a teaching qualification (Muzenda & Duku, 2014; Mutepfa, Mpofu & Chataika, 2012). They are supposed to have been exposed to various teaching methodologies and assessment techniques that can be used to cater for students' diversity. It is assumed that if one

has a teaching qualification, one may be able to cater for student diversity by using appropriate teaching and assessment methodologies (Chessman, 2007; Mather & Muchatuta, 2011). The teaching methodologies should include group discussions, problem based learning, forum discussions, project based learning, simulations and peer tutoring (Jones, Ceotzee, Bailey & Wickham, 2008). The modes of assessment that may be used to cater for the diverse students should be continuous assessment and summative assessment. The questions that should be structured to cater for students' diversity are open ended questions that do not limit students' abilities. Provision of a wide range of questions where students choose to answer questions they are comfortable with, may also be used as a way of catering for students' diversity).

Various concerns have been raised pertaining to the provision of TCD programmes at tertiary level in Zimbabwe. Some TCD stakeholders have raised concern that performance of students in the TCD program has been unsatisfactory, resulting in high failure rate in some courses and poor performance in others, in the universities of technology (Muzenda & Duku, 2014; OECD, 2009). For instance, the students' graduation rates from the universities ranged from 68% to 70% in 2010, 62% to 66% in 2011 and 60% to 62% in 2012 due to student drop outs and failures (Directorate of quality assurance and graduate studies Report, 2013). It has also been observed, through the media, that there have been high dropouts and that students take longer than expected to complete the TCD programme (The Financial Gazette, 2003; The Sunday Mail, 2013; Coltart, 2012).Eighty percent of those who did not graduate in TCD programmes dropped out during the course of the four year programme duration. These did not have any Textile, Clothing and Design subjects or courses in their prior levels of education before entering university (Nguku, 2012; UNESCO, 2012; UNESCO & ZIMDEF, 2005). Twenty percent of them failed some courses in their first, second or third year. Ninety six percent (96%) of those who failed some courses did not have any TCD background subjects/ courses. Four percent (4%) of them had done Fashion and Fabrics at "O" level (Nguku, 2012; UNESCO, 2012; Coltart, 2012; UNESCO & ZIMDEF, 2005). It is not clear how the students with diverse academic backgrounds are catered for in the programme.

Concerns have also been raised by stakeholders that despite the training received by university lecturers, it is not clear whether they are using the delivery strategies that

cater for students' diversity in the implementation of the programmes, given that most of those who are not performing well are trained teachers (The Sunday Mail, 2013; Coltart, 2012; UNESCO, 2012; UNESCO & ZIMDEF, 2005). The same stakeholders have also raised concerns that the performance of students with qualifications such as NC, "O" level and "A"level does not meet the expectations of industrialists during their attachment, as they lack the required skills (The Sunday Mail, 2013; Coltart, 2012; Jones, Coetzee, Bailey & Wickham, 2008; OECD, 2008; McInnis, 2003; Dettmer, Thurston & Dyck, 2005). It is therefore, not clear whether lecturers are using curriculum implementation strategies to ensure that students with diverse academic backgrounds are catered for in the implementation of the TCD programme. Inclusive education entails a practice of curriculum implementation that takes into account the students' diversity through development of effective methods of learning and teaching that support all types of students in the classroom, regardless of physical ability, gender, cultural background, religion or beliefs, orpolitical affiliation (Mathar & Muchatuta, 2011; Dalton, Mckenzie, & Kahonde, 2012). This study differs in that it seeks to establish differentiated curriculum implementation strategies that cater for every student in a class that comprise students with diverse academic backgrounds. Diverse students respond and understand the academic world differently due to their different cultural backgrounds and prior learning environments (Rizvi, 2014; Ely & Thomas, 2001). Culture and tradition influence the way in which students think, express themselves and interact in the classroom. Teachers should ensure that alternative methods of demonstrating and assessing the competences of students are developed to allow full participation of students from diverse backgrounds and those with various personal attributes (Jones et al., 2008; Brand, Favazza & Dalton, 2012).

Studies carried out globally on students with diverse backgrounds reveal that most universities employ content integration and content adaptation to cater for students with diverse backgrounds (Zepke & Leach, 2007; Akamobi, 2005; ACARA, 2013; Dettmer, Thurston & Dyck, 2005; McInnis, James & Hartley, 2005; McInnis, 2003). Content integration is whereby a number of courses' contentis combined into one course. The students acquire basic knowledge in the combined courses within the limited time provided for the course. Through content adaptation, the institutions categorize programme content and create foundation, breadth and depth courses (ACARA, 2013; McInnis, 2003; Dhillon, McGowan & Wang, 2006). Foundation courses

provide students with fundamental concepts and tools for pursuing their studies at the higher level, breadth courses introduce students to different specialties in a given discipline, and depth courses offer specialization within each discipline (Nguku, 2013; Bandias, Fuller & Larkin, 2013; Felder & Brent, 2005). Catering for student diversity improves students' content retention, persistence and completion of programmes in higher education (Zepke & Leach, 2007).

In view of the above, this study sought to find out the strategies that are used by universities of technology in the provision of TCD programmes to cater for students with diverse academic backgrounds. Various studies carried out on catering for students with diverse backgrounds have focused on students with various disabilities, financial backgrounds, and traditional settings (Mutepfa, Mpofu & Chataika, 2012; Raj & Chireshe, 2013; Hockings, 2010; Nyoni, Marashe & Nyoni, 2011; Nguyet & Le Thu Ha, 2010). The studies that address learning needs are not based on students' various entry qualifications with wide knowledge gaps but rather on students' learning styles. Such studies have been done elsewhere in general without focusing on a specific educational programme (Akamobi, 2005; McInnis, 2003; McInnis, James, & Hartley, 2000). Studies by Muzenda and Duku, (2014) address the relationship between the Clothing and Textile curriculum and the world of work, and the skills that lecturers possess for delivery of the curriculum without focusing on catering for diverse academic qualifications of students who enter the TCD university programmes. The findings of the study guided the researcher in coming up with a curriculum implementation framework that may be put in place to cater for students with diverse academic backgrounds.

1.4 Statement of the problem

The Ministry of Higher and Tertiary Education in Zimbabwe, through universities of technology, is continuously expanding the provision of TCD programmes despite the challenges that are being faced by the implementers and the students. Muzenda &Duku (2014), OECD (2009) and most TCD stakeholders raise concern that the programme implementers have failed to cater for variance in students' academic qualifications which has impacted on the performance of students resulting in high

students drop outs, student failure in some courses, and poor performance in other courses in the TCD programmes in universities of technology. The Financial Gazette (2003); The Sunday Mail (2013) & Coltart, (2012) note that the performance of most students with qualifications such as NC, "O" level and "A" level (TCD) do not meet the expectations of industrialists. The textile and clothing stakeholders also raise concern, through ATF, ILO & UNESCO (2012) and UNESCO & ZIMDEF (2005), that, despite the training received by university lecturers, it is not clear whether the TCD lecturers are using the delivery strategies that cater for students' diversity in the implementation of TCD programmes.

It was not quite clear how university TCD programmes are being implemented to cater for students with diverse academic backgrounds. This study therefore, sought to find out the strategies that are used to cater for students with diverse academic backgrounds in the provision of TCD programmes. The findings of the study may inform the nature of curriculum implementation framework needed to cater for students with diverse academic backgrounds in universities of technology in Zimbabwe.

1.5 Purpose of the study

The purpose of the study wasto examine strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes, with the aim of developing an implementation framework to enhance the quality of TCD provision to accommodate the diverse students who enter the programme.

1.6 Main research question

What strategies are used to cater for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at two universities of technology in Zimbabwe?

1.7 Sub- research questions

(i) What is the capacity of university lecturers to deliver TCD programmes at university level?

(ii) How do lecturers adapt the curriculum content, including assessment, to ensure that students with diverse academic backgrounds are accommodated in the programmes?

(iii) How do universities support the provision of TCD programmes to ensure that all the various qualifications of students are catered for?

(iv)What curriculum implementation framework can be put in place to cater for students with diverse academic backgrounds?

1.8 Objectives of the study

The main objective of the study was to examine strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes at two universities of technology in Zimbabwe.

The study further sought to:

(i)   examine the capacity of university lecturers to deliver TCD programmes at university level,

(ii)   find out how lecturers adapt the TCD curriculum content and assessment to ensure that students with diverse academic backgrounds are catered for,

(iii)   find out how universities support the provision of TCD to ensure that all various qualifications of students are catered for, and

(iv)   come up with curriculum implementation framework that can be put in place to cater for students with diverse academic backgrounds.

1.9   Significance of the study

This study sought to find out the strategies that are being used to cater for students with diverse academic backgrounds in the implementation of TCD programmes in universities of technology. The few studies conducted on accommodating students with diverse backgrounds relate to students from diverse financial backgrounds and students with special needs (Mutepfa, Mpofu & Chataika, 2012; 2007; Raj & Chireshe, 2013; Hockings, 2010; Nyoni, Marashe & Nyoni, 2011; Nguyet & Le Thu Ha, 2010; Bhakat &O'Neill, 2011; Moore & Shulock, 2009; Bandias, Fuller & Larkin, 2013). Studies done in Zimbabwe have focused on TVE curriculum design and implementation in general, at school and college levels. Therefore, this study sought to fill in the gap of inclusion/ accommodative practices in the provision of TCD programmes in Zimbabwe by examining strategies used for students with diverse academic backgrounds in the provision of TCD programmes in universities of technology in Zimbabwe.

The findings of the study may lead to a debate among university TCD lecturers on strategies used for students with diverse academic backgrounds in the provision of the programmes, leading to sharing of ideas and information that may lead to development of curriculum implementation framework thatcan be used to cater for diverse students at institutions of higher education in Zimbabwe. Results from the study may benefit the lecturers as they may get appropriate strategies to handle students who enter university programmes with diverse academic backgrounds. The study may also benefit students in that the successful implementation of inclusive curriculum implementation approach may enable them to upgrade their skills and knowledge to meet Textile and Clothing Industry demands. The research may permit transference of students and lecturers from one institution to the other and may contribute to the economy of the country by contributing to literature and forming a basis for future researches in the area.

The findings of the study may also benefit the TCD programme designers, implementers and all stakeholders such as industry, students and guardians as the findings may necessitate revision of the current university TCD programmes' implementation strategies to come up with programmes that would put more emphasis on differentiated curriculum implementation approaches to cater for diverse students.

The study would also assist in coming up with a proposed TCD curriculum implementation framework that may be used in the provision of TCD programmes in universities of technology.

1.10 Delimitation of the study

The study was conducted in two universities of technology in Zimbabwe that offer TCD degree programmes. Participants comprised quality assurance directors, TCD deans, headsof departments, lecturers, and students from the two universities of technology.

1.11 Limitations

The researcher encountered some challenges in carrying out the study. However, the problems were minimized using some strategies that enabled smooth running of investigation procedures. The researcher anticipated that not all copies of questionnaire would be retained by the university lecturers. Therefore, frequent follow up measures were made with the lecturers from the two universities of technology. The researcher strictly adhered to communication channels to respect the hierarchical structure of universities' management personnel.

The study was a bit sensitive to some respondents that they may not have been free to disclose some information on the strategies used for students with diverse academic backgrounds in the implementation of TCD programmes. Multiple data collection methods were used in order to minimize the limitation.

The study was also limited by the financial state of the researcher to cater for materials and transport costs. The researcher made a financial budget that was intended to balance all the costs to be incurred in the study and also minimized travelling expenses by dovetailing processes. For example, the researcher distributed copies of questionnaire and carried out some interviews with the other respondents on the same day. The time for collecting data was limited as most of the respondents were busy with lectures and other university business. However, the researcher strictly adhered to appointments to avoid inconveniencing the respondents.

1.12 Operational definition of terms

The following terms are used in this study as defined below:

1.12.1 Strategies

It is a direction and scope of an organization which achieves advantage in a changing environment through its configuration of resources and competences with the aim of fulfilling stakeholder expectations (Johnson, Scholes & Whittington, 2005). In this study, it refers to methods employed in catering for students with diverse academic backgrounds in the implementation of TCD programmes.

1.12.2 Technical and vocational education

It is education that is designed at (usually) upper secondary and lower tertiary levels to prepare middle-level personnel (technicians, middle management) and at university level, to prepare engineers and technologists for higher management positions (UNESCO & ZIMDEF, 2005). In this study, technical education refers to general education that includes theoretical, scientific and related skills training while vocational education relates to practical skills that are aimed at training of specific skills in the general education.

1.12.3 Diversified curriculum implementation approach

Diversified curriculum implementation approach means a process of providing a curriculum that caters for students' entitlements that call for the adaptation of teaching, learning and assessment methods to ensure all students are able to experience success in education and achieve their full potential (Gravestock, 2009; Mutepfa, Mpofu & Chataika, 2012). In this study, it refers to a process of adapting, developing, and refining programs of study to minimize barriers that diverse students may face in accessing the curriculum, focusing on the core requirements of the programme.

1.12.4 Textile, Clothing and Design

Textile means any cloth or goods produced through various ways of fabric construction, clothing refers to all that is worn by an individual, while design means to create patterns (Rutherford, 2008). In this context, Textile, Clothing and Design refers to all university programs that are aligned to fabrics, clothes, production, and creation of patterns on clothes and fabrics, aimed at developing theoretical knowledge and skills in students that will enable them to function well in the world of work.

1.12.5 Diverse academic backgrounds

Diverse academic backgrounds mean characteristics of groups of people that refer to demographic differences of one sort or the other, among group members (Ely & Thomas, 2001; Mather & Muchatuta, 2011). Contextually, the terms refer to students possessing various levels of educational experiences demarcating gaps between each level.

1.12.6 Lecturer capacity

Lecturer capacity refers to lecturers' qualifications that enable them to deliver subject/course content in a class (Nguku, 2013; ACARA, 2013). However, in this study, lecturer capacity is viewed from a broader perspective in which it relates to subject content which the lecturer was exposed to during his/her training, years of experience in teaching the subject/course, the practical skills they possess that are related to the subject/course, the teaching methods they use in content delivery, their teaching performance as measured against university expectations, and their time responsiveness which refers to how fast they respond to the needs of students in curriculum implementation.

1.13 Organization of the study

The study is organized into six chapters as follows:

1.13.1 Chapter one: Background of the study

In this chapter, the researcher discussed the background information on the study problem. Various concerns and complaints raised by the textile and clothing stakeholders on catering for students with diverse academic backgrounds in the provision of TCD programmes at the universities of technology in Zimbabwe are highlighted. This section further discusses the statement of the problem, the purpose of the study, research questions, objectives, significance of the study, delimitations, limitations and definition of terms used in the study.

1.13.2 Chapter two: Literature review

In this chapter, the researcher discusses cultural capital theory, differentiated instruction theory and curriculum implementation models that are used to cater for students with diverse academic backgrounds. The chapter also discusses related literature under the headings, how university lecturers adapt TCD programmes content including assessment to ensure all students with diverse academic backgrounds are catered for, lecturers' capacity to deliver TCD programmes at university level, university support in the provision of TCD programs to ensure that all various qualifications of students are catered for, and catering for students with diverse academic backgrounds in the provision of TCD programs in universities of technology.

1.13.3 Chapter three: Methodology

The chapter presents and justifies the research methodology applied in the study. It also discusses the philosophical assumptions underlying the choice of the methodology used in the study.

1.13.4 Chapter four: Data presentation, analysis and interpretation.

In this chapter, the researcher presents analyzes and interprets the data collected through questionnaire, interviews, focus group discussions and document analysis. Frequency tables, pie charts and graphs are used to present the data for clarity and easy interpretation.

1.13.5 Chapter five: Discussion of findings

The findings of the study are discussed in this chapter. The findings are linked to the literature gathered in chapter two with the objective of bringing the findings into the fold of the existing knowledge oncatering for students with diverse academic backgrounds in the provision of TCD programmes in universities of technology.

1.13.6 Chapter six: Summary, conclusions and recommendations

The summary of the findings in relation to catering for students with diverse academic backgrounds is presented. The chapterincludes the methods used to collect data and how the findings relate to the research questions. The conclusions and recommendations are discussed as well as their implications on the curriculum implementers and on policy makers. The proposed further researches in the area conclude the chapter.

1.14 Summary

The background of the study discussed the concerns and complaints raised by the textile and clothing stakeholders on catering for students with diverse academic backgrounds in the provision of TCD programmes in universities of technology. Research questions, objectives, significance of the study, delimitations and limitations of the study have been presented in this chapter as well. In the following chapter, (chapter two) the researcher discusses the theories that informed this study.

CHAPTER TWO

LITERATURE REVIEW: THEORETICAL FRAMEWORK

2.1 Introduction

A theoretical framework consists of key concepts that form a strong basis for a study and provides support for the whole thesis (Vinz, 2016). It comprises relevant scholarly literature/theory that suits a particular study. It enables a researcher to demonstrate understanding of concepts that are relevant for the study topic and how they relate to the broad areas of knowledge under consideration (Swanson, 2013). Thus, the differentiated instruction and cultural capital theoretical frameworks guided the researcher to understand the strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes at university level. The discussion below shows the relevance of the differentiated instruction theory and the cultural capital theory in understanding the strategies used for students with various academic backgrounds in the provision of TCD programmes at university level.

2.2 Cultural capital theory

Bourdieu's (1986) theory of cultural capital base educational attainment on class inequalities and class reproduction in advanced capitalist societies. In this study, the class inequalities are equated to students who have various levels of academic backgrounds, who are in TCD classes at university level. The students are denoted by their qualifications such as those with Ordinary Level qualification, National Certificate qualification, Diploma in Education, Diploma in fashion design, Advanced Level etc. The qualifications can also be ranked in relationship to the level of knowledge and skills acquired. For instance those students with Diploma Certificates have acquired more TCD practical skills and tertiary level knowledge, those with "A" Level have got theoretical knowledge and less practical skills, students with "O" Level have basic knowledge and practicing skills in the area while those without "A" Level and "O" Level

TCD have no knowledge and skills in the area. Therefore, cultural reproduction relates to the link between original class membership and the ultimate class membership and how the link is mediated by the education system (Sullivan, 2002). In this respect, university lecturers should link the students' academic background knowledge in the TCD area to the theoretical and practical skills that they teach these students. They should ensure that there is progression and acquisition of TCD knowledge and skills by all the students, and upgrade the quality of TCD provision to meet industrial demands. This study therefore seeks to examine the strategies used by universities of technology to cater for such students with diverse academic backgrounds to improve the quality of TCD provision in Zimbabwe.

Bourdieu states that cultural capital consists of familiarity with the dominant culture in a society, especially the ability to understand and use educated language. The students that have gone through higher levels of training in the TCD field before the degree level are more familiar with technical terms and equipment used in the area of study than those students who have not been exposed to TCD before. This means that two types of cultural capital, economic and social were included under this perspective as the university TCD classes comprise those students who possess TCD skills and knowledge, and those who have just seen TCD processes being done either at home or somewhere during their daily activities at their previous institutions or in different settings. These types of cultural capital can be saved, transmitted, and can be used to obtain other resources as Bourdieu's perspective was concerned with individuals, families and social groups (Saraceno, Alberto & High Level Expert Group (HLEG), 2014). The universities may utilize these types of cultural capital in resourcing TCD departments with relevant manpower and equipment that may help enhance the teaching and learning of students. Lecturers are also challenged to design teaching strategies that cater for the students. Hence the lecturers' background training (pedagogical skills) can also be equated to cultural capital as the teacher training affects how one handles and deliver a curriculum. In this view, cultural capital is a social space in which conflicts of power are enacted and social stratification is produced and transmitted intergenerationally through interaction with economic capital (Saraceno et al, 2014; Munk & Krarup, 2011). This therefore, means that within the TCD classes students compete to perform better than the others, but their background

exposure to the area of study affect their performance leading to high performers, average performers, and low performers within the same class.

Many authors have stressed that parental education has an impact on their children's educational performance and the kind of culture possessed that include, language use, tastes and modes of cultural participation (de Graaf et al, 2000; Sullivan, 2001; Barone, 2006; van de Werfhorst, 2010). These are acquired and transmitted through primary and secondary socialization and has an impact on educational programme choices, occupational choices and outcomes. Bourdieu (1986) in Hansen& Mastekaasa (2006) argues that those students from the lower class who are unfamiliar with the academic culture are disadvantaged as compared to students from families that are closer to this culture. Cultural participation is important for individual well being at the psychological and physical levels (Daykin et al., 2008, Bygren et al., 2009). This involves participation in cultural events like attending social gatherings involvement in cultural activities like drama, dance groups and craft, for example, basketry and pottery. This leads to social reproduction because those students who have been inculcated these cultural forms from childhood have the greatest probability of academic success. (Bourdieu & Passeron, 1977; Bourdiue, 1996; Hansen & Mastekaasa, 2006).

However, those who have not been exposed to such cultural traits have minimum chances of success in education. This leads to class inequalities in educational attainment. The role of the teacher therefore is to ensure that the disadvantaged students are catered for during lesson delivery for them to succeed in their lives (Batanski & Chapello, 2007, Wiborg & Moberg, 2010, Wright, 2005). Some researchers say thatsuccess and failure in the education is seen as being due to individual gifts or lack of them (Sullivan, 2002, Lareau, 2003). Lizardo (2011) argues that cultural capital should encompass an analysis of settings that generate them. For instant accounts of a child's characteristics should not only relate to parents but also to teachers, schools legislation, and youth culture because they are referred to as cultural perspectives (Munk & Krarup, 2011; Saraceno, Albeto & HLEG, 2014). The researchers rely on analytical potentials of the concept in order to broaden empirical and interpretative scope of research rather than to procure ready made explanations.

However, Bourdieu emphasizes that the possession of cultural capital varies with the social class and the education system assumes the possession of cultural capital (Sullivan, 2002; Lizardo, 2011; Lareau, 2003). This makes curriculum designers to design curriculum content from the known to the unknown. In this study the researcher had to find out how the university lecturers adapted the TCD curriculum content to meet the needs of students in order to get strategies used to cater for the students with diverse academic backgrounds.

The study findings would support considering individual cultural capital, its contents, distribution, and the forms of access to it when analyzing inter and intra generational students' equity and sustainability. The study aimed to examine strategies used for students with diverse academic backgrounds that include analysis of lecturers' capacity, resources, and university support for these students in TCD provision at university level. An individual's culture and cultural capital may also be considered societal assets, both in view of economic development and from the perspective of social integration at national and international level (Sacco, 2011). In the form of objective assets, cultural capital refers to monuments, libraries, concert hall and cultural sits. These may be a societal property, part of its wealth and a resource for the development of individual cultural capital (Bygren et al, 2009, van de Werfhorst, 2010). In TCD provision the knowledge and skills possessed by students from their different backgrounds can be transformed at university level making the students able to perform in Clothing and Textile industries, become entrepreneurs, and contribute to the countries' gross domestic product. The skills and knowledge gained by the students at various levels in TCD and at university level is also cultural for their families and for the societies where they live.

This dual individual and societal dimension of cultural capacity may be represented using the conceptualization proposed by the European statically System network in culture (Saraceno, Albeto and HLEG, 2014). The latter emphasizes that culture being a social space, class differences and power unbalances are produced through sharing and control of what counts as culture. The family is a primary agent of cultural transmission and schools play an important role in legitimizing and strengthening it. In Bourdieu's view, the school system tends to support and acknowledge the dominant culture by reinforcing the mechanisms of reproduction of social inequality by attending to student diversity (Munk and Krarup, 2011). In this regard; the study, the researcher

sought to find out how the university lecturers utilize the diverse backgrounds of students to ensure quality provision of TCD programmes at university level.

To achieve the above, the school system needs to take cognisance of the three types of cultural capital according to Bourdieu (1996) which include embodied cultural capital, objectified cultural capital and institutionalized cultural capital. The embodied cultural capital consists of both the consciously acquired and the passively inherited features that characterize ways of student being and feelings (Saraceno, Albeto and HLEG, 2014).These includes language, tastes, patterns of communication and behavior. These are acquired over time through socialization. Therefore those students who have done the TCD related subjects and those who have been associating with specialists in TCD areas have acquired the TCD language/technical terms and tastes. Bourdieu indentifies three subtypes of embodied cultural capital that belong to three social classes that are bourgeoisies, middle class and the working class. Individuals who fall under these classes have distinct characteristics with regard to consciously acquired and passively inherited features that define ways of being and feeling. These distinctive characteristics of individual students are exhibited by students who enroll into university TCD programmes in which some have highest TCD qualification levels, average levels as well as lowest levels of TCD qualifications within specific students' year groups. Therefore, university lecturers should be aware of these students' characteristics so that they can design curriculum content and teaching and learning methodologies that enhance students' learning.

The objectified cultural capital consists of physical objects that are owned like cars, works of art and groceries. The cultural goods can be transmitted for economic profit and for symbolically conveying the cultural capital whose acquisition they facilitate. The cultural goods in the field of Clothing and Textiles relate to artistic fashion items that display skilful aspects in the area. These are possessed by students with TCD backgrounds, their previous teachers and even those done by family members. These act as inspiration sources for family members to pursue studies in specific subject areas like Textile, Clothing and Design. However, the acquisition of the goods requires relevant knowledge and skills in production processes (Saraceno, Albeto & HLEG, 2014). The institutionalized cultural capital comprises institutional recognition in the form of academic credentials of the cultural capital that are held by individuals. The academic credentials in TCD students refer to certificates they have acquired at

different institutions before they go to university. The institutional recognition process eases the conversion of cultural capital to economic capital by serving as an experience based model that sellers can use to describe their capital and buyers can use to describe their needs. This study therefore seeks to identify university strategies or processes used to identify knowledge gaps and cater for the students' knowledge gaps.

Most scholars agree that Bourdieu's notion of the cultural mismatch between the cultural backgrounds of students from low educated families and the cultural values and practices that are expected in institutions has been very influential in educational research (Savage, Warde & Devine, 2005, De Graaf, Graaf & Kraaykamp, 2000, 2007, Di Magio, 2004, 2007). Institutional level education plays a central role in transmitting social advantage of the dominant classes, particularly since direct transmission of economic power and capital become more complicated. Bourdieu stresses that the transmission of cultural capital is the most hidden form of hereditary transmission of capital. It receives disproportionately greater weight in the system of reproduction strategies, as the direct, visible forms of transmission tend to be more strongly censored and controlled (Bourdieu, 1986). This notion has stimulated many researchers to go beyond the economist concept of social class and beyond a simplistic reduction when looking at the impact of social class on students' educational attainment. There are cultural variants that include community resilience and family agency that can potentially lead to unexpected results (Seo, 2004). This may be reflected in some instances where a student has a passion for an area of study but has been denied to pursue such an area due family background. However, at a certain level like at university level, the student got the chance to take up the passionate area. Therefore, the student has greater chances of performing well in the area of study.

This implies exploring precisely what aspects of family culture and cultural practices have an impact on what aspects of educational performance. On one hand, it explores whether and how the school may not only strengthen, but on the contrary compensate this impact by rebalancing the options of those who come from a less culturally favorable background. This means that university lecturers may employ compensatory measures in curriculum implementation in order to accommodate both the less privileged and those students who have high levels of background knowledge and skills in the area of study to balance TCD provision at universities. The early child care

and education movement and polices is inspired precisely by the hypothesis that cultural capital inequalities based in family membership may and should be compensated for by early exposure to a cognitively stimulating and culturally rich structured educational environment. This relates to TCD nature of physical environment consisting of infrastructure, equipment, internet and library services that support the provision of the programmes. Provision of a stimulating environment helps to motivate students to work hard to achieve their goals. Hence the stimulating environment based to TCD concepts often starts during students' early levels of education up to university level.

Some of the studies carried out in the education area include one by Van De Werfhorst (2010) which is a quantitative empirical research on the influence of cultural capital on children's educational and occupational attainment. The research was aimed at operationalizing parent's culture through their involvement in cultural products like theatres, art, museums and books. The study has not addressed the issue of utilizing the parents' cultural capital in designing curriculum implementation strategies to ensure quality education. Other researchers have distinguished between participation to cultural event and consumption of cultural goods and cultural attitudes and activities that involve cognitive development and performance such as reading. The above may be a better predictor of students' education outcomes as compared to other cultural activities and consumption, but has not dealt with specific subject areas within the circle of inclusion approaches to curriculum implementation (De Graaf et al, 2000, Sullivan, 2001, Barone, 2006). Some scholars suggest that cultural capital is not a homogeneous set of values and tastes that affect homogeneously cognitive development, school performance and choice of field of education (Baron, 2006; An, 2014). Therefore, such arguments and views on diverse academic backgrounds of students (cultural capital) have served as a basis for examining TCD curriculum implementation strategies at university level with the aim of coming up with a curriculum implementation approach to improve quality of TCD provision.

However, different sets of cultural values and tastes within the same class affect differently the students' aspirations, education and professional choices as well as political attitudes (Van de Werfhorst, 2010). For instant business and entrepreneurial parents transmit different tastes and expectations from their children. Parents in the intellectual professions also do the same and as a result their children do not only

choose different fields of study but also perform differently in the same subjects (Bowles & Gintis, 2002).

The embodied cultural capital is the most crucial in Bourdieu's work although difficult to utilize. For instance, the different linguistic codes used in mother child interaction in different social classes and patterns of socialization by different social classes (Bernstein, 1961, 1965; John; 1963, 1977). These have offered insights on how social classes transmit values and behavioral modes which they experience as necessary and useful as adults located in the division of labour and a given stratification system. These have a strong effect on students' choice of specialization areas at various levels of one's study, especially at tertiary level, for instance at university level. Most students choose areas of specialization basing on values and behavioral codes modeled at their homes and these tend to gain much support from their guardians. Such students are highly motivated to work and these likely perform well in their areas of specialization. However, some students just choose areas of specialization to fulfill the guardians' obligations. Such students may perform badly since they are not intrinsically attached to the field of study.

Erikson and Goldthope (2002) suggest that there is more to inter generational transmission of inequality than an unequal access to institutional culture. They also point out that intergenerational inequality has important self- maintaining properties that create conditions under which individuals in less advantaged positions choose and act in ways that can be understood by them as adaptively quite rational, yet they serve to perpetuate their status quo. Such actions may take place in TCD classes due to the existence of students with diverse academic backgrounds. In some cases, by virtue of some students having higher qualifications they may override those with lower qualifications. Therefore, educational expansion and reform alone should not be expected to serve as very effective instruments of public policy at creating greater equality of opportunities (Erikson and Goldthope 2002). Instead of focusing only on cultural via education way, complementary efforts to reduce inequality of conditions, especially class inequalities in economic security, stability and prospects are also required. This study therefore, sought to examine strategies used by universities in the provision of TCD programmes to address such issues of inequality within the composite TCD classes to promote inclusive curriculum implementation approaches.

This means that lecturers should play a role in making efforts to design complementary methods in curriculum implementation that may reduce class inequality among the students who enter their programmes with various academic backgrounds. The OECD Report on the well being of nations (2001) establish that education and policies act as indicators of some methods that may act to offset inherited social inequalities among students in different institutions.

Although a great deal of attention has been given to the changing value of institutionalized cultural capital due to increased average scholarisation of the population, less attention has been given to changes in embodied capital and in their differences across social classes due to societal and technical changes (Chan and Goldthope 2007). It is also worthwhile to assess degree of education as per requirements for specific fields of study within institutions to enable designing of pre-assessment procedures and items to ascertain whether some background qualifications are relevant for some university programmes such as TCD.

The diverse academic backgrounds of university students are linked to different cultural backgrounds of the students – that is the original class membership. A study carried out on the impact of class origin on grades among all first-year students and higher-level graduates in Norwegian universities in the periods 1997 to 2002 and 1997 to 2003 respectively reflected that there was an association between class origin and academic performance (Hansen & Mastekaasa, 2006). In that study the students from high class family backgrounds scored high grades and that was reflected in both higher and lower level university studies, and in most of the fields in a detailed analysis of 36 fields.

Bourdieu (1996) stresses that success in education is enhanced by possession of cultural capital and high class habitus. The cultural capital refers to cultural resources that translate to students' familiarity with the conceptual codes that are within a specific culture including major artistic and normative manifestations. Those students who hold dominant linguistic styles, aesthetic preferences, and styles of interaction are positively accepted by their teachers. Graaf, Graaf & Kraaykamp (2000) argue that the effect of family social origin on education attainment is influenced by a greater quantity of cultural resources of privileged parents who assist their children to master curriculum that is pervasive in the schools. These elements of family life facilitate

compliance with higher education demands (Sullivan, 2002; Graaf, Graaf & Kraaykamp, 2000). The theory holds that those students who do not possess the cultural capital traits experience an educational institution as a hostile environment as they lack the skills, the habits, and styles that are rewarded at the higher educational level (Graaf et al., 2000). Hansen & Mastekaasa (2006) point out that most of the lower class students who do not possess cultural capital traits generally fail to succeed in their education carriers.

Bourdieu reiterates that cultural capital includes students' familiarity with the dominant culture in a society and especially the ability to understand and use the language. The education system assumes the students' possession of cultural capital (Sullivan, 2002; Hansen et al., 2006). Since the education system assumes the possession of cultural capital which few students may possess, there is a great deal of inefficiency in pedagogic transmission (Sullivan, 2002). The students may not understand what their teachers are trying to put across. Bourdieu gives an illustration of university students who are always afraid of revealing the extent of their ignorance by throwing a smoke-screen of vagueness over the possibility of some truth and error (Bourdieu & Passeron, 1990). As Bourdieu's view is that cultural capital is inculcated in the higher class home and enables higher class students to gain higher educational credentials than the lower class students, what strategies are used by lecturers and institutions to cater for these students in order to achieve set goals of the curriculum? The theory highlights the need for teachers to assess the backgrounds of the students so that they may design curriculum plan and teaching strategies that enhance learning for all the students. The cultural capital also relates to the lecturers' professional training which affects the way one delivers in classes such as TCD classes with students who have different academic backgrounds. The nature of teacher training and experience enables the teacher to design effective teaching approaches that enhance learning among the diverse students.

An empirically integrated use of cultural capital helps expand the analytical perspective that allows the investigation of individuals including investigation of settings and importance of ways of doing things. For example an analysis of the strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and

Design programmes assists the researcher to understand various aspects in curriculum design and implementation. Bourdieu (1984) emphasizes the relevance of practices as well as ways of doing things which encompass which practices, when are they done, and experiencing what? Various technological universities in Zimbabwe offer different TCD programmes, providing different learning experiences as they are differently resourced. These institutions have lecturers who hold different qualifications as well. Munk & Krarup (2011) point out that the strength of cultural capital is in its perspective that conceptually and empirically permits analysis of the structured construction and complex quality of the social circumstances that include differences and similarities. The researcher uses the theory in data collection, discussion and analysis to draw up sound recommendations in designing a curriculum implementation model to cater for students who enter university education with diverse academic backgrounds.

2.3 Differentiated instruction model

The study was guided by differentiated instruction model by Tomlinson (2005), who propounds that students learn best when their teachers accommodate the differences in their readiness levels, interests and academic profiles in curriculum implementation, with the main objective of taking full advantage of every student's ability to learn. Principles for differentiated instruction are; every child can learn, all children have the right to high quality education, progress for all is expected, recognized and rewarded, and students in a classroom have common needs, distinct needs and individual needs (Wilson, 2012; Bustos et al., 2012; Hall, Strangman & Mann, 2003; Tomlinson, 2005; Koch, 2007). The differentiated instruction is a teaching theory based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse students in classrooms (Hall, Strangman & Meyer, 2003; Tomlinson, 2001). The model requires teachers to be flexible in their approach to teaching and adjust the curriculum and presentation of information to students rather than expect students to modify themselves for the curriculum. Many teachers and teacher educators have identified differentiated instruction as a method of helping students in diverse classrooms to succeed in their education. Tomlinson (2001) identifies three elements of the curriculum that can be differentiated namely; content, process and product. The

framework informs lecturers on curriculum planning and instruction to ensure all the various qualifications of students are catered for. The framework also guides the researcher in examining the strategies used by universities to cater for students with diverse academic backgrounds in the provision of TCD programmes in universities of technology in Zimbabwe.

To differentiate instruction is to appreciate and recognize students' varying backgrounds, knowledge, readiness, language, learning preferences and interests; and to react responsively (OECD, 2008; Hall, Strongman and Meyer, 2003). Differentiated instruction engages a process of teaching and learning for students with different backgrounds and abilities in the same class. The purpose of differentiating instruction is to maximize each student's growth and ensure individual success by meeting each student's needs and assisting them in the learning process (Hall, Strongman and Meyer, 2003; Wilson, 2012; Bustos et al., 2012).

Tomlinson's differentiated instruction philosophy is an innovative way of thinking about teaching and learning that borrows from Vygostsky's socio-cultural theory of learning that bases learning on the social interaction between the teacher and the student. The teacher is considered the professional in the classroom, who is suitably trained to mentor and lead the class using appropriate techniques to assist each student to reach his or her potential (Subban, 2006). This study sought to find out the lecturers' qualifications to ascertain if they are adequately trained to deliver and implement inclusion of learners in the provision of TCD programmes at university level. The researcher also examined whether the interactional techniques employed by the lecturers facilitated effective learning among all the students in TCD classes that comprise students from diverse academic backgrounds. The lecturers may collaborate with support staff and other professionals in the education field to provide an optimal learning experience for the students (Goldthorpe, 2007). The researcher has to find out how the lecturers adapt TCD curriculum content including assessment to cater for the students with diverse academic backgrounds to provide the students with optimal learning experience.

The differentiated instruction model uses a two level programme implementation strategy that includes engaging students and catering for students' interests, learning profiles andreadiness levels (Tomlinson, 2005; Wilson, 2012). Engaging students

means the programme should connect to students' lives and positively influence their levels of motivation (Jabbar &Hardaker, 2012; Coleman, 2001; Hall, 2002). Catering for their interests, learning profile and readiness refers to a programme's ability to cater for students's differences, sameness and the creation of an environment in which all students can succeed and derive benefit (Abdul & Glenn, 2013; Lawrence –Brown, 2004; Tomlinson, 2003).

Besides the above, the studentsshould take responsibility for their learning by seeking independence and self-sufficiency as they strive for greater awareness of their skills, abilities and ideas (Tomlinson, 2005). Therefore, the relationship between the teacher and student is viewed as reciprocal. However, the difficulty of skills included in the curriculum should be slightly above the students' current level of mastery, while supporting their multiple intelligences of varying learning styles. Noble (2004) purports that Gardner's theory of multiple intelligences may be integrated by the lecturers as a planning tool for curriculum differentiation and for incorporating critical thinking to cater for students with diverse academic backgrounds. However, Wilson (2012) asserts that lecturers' training and their perceptions regarding students' learning styles play a pivotal role in the way they apply learning style concepts to instructional and assessment practices. Studentsare also influenced by their learning styles and they develop unique perceptions about their capabilities and preferences for learning. That affects their level of motivation and learning patterns as well as their academic performance. There are gray areas pertaining to how the learning styles of students and the delivery styles of instructors can be matched (Wilson, 2012; Evans & Waring, 2006; Obiozor, Onu & Ugwoegbu, 2010; Callinson, 2000). This study therefore, examined how the TCD lecturers designed curriculum implementation practices to match the learning styles of the diverse students in TCD classes comprised of diverse students.

Tomlinson (2005) argues that there should be provision for every student to learn as quickly and as deeply as possible. Therefore, there is need to find out the support provided by universities, and lecturers' capacity to deliver TCD curriculum content to cater for the diverse academic backgrounds of the students. Tomlinson (2005) also suggests that teachers should use time and resources flexibly and creatively to create an atmosphere of collaboration in the implementation of educational programmes. The lecturers may create collaborative learning environments by providing mixed group

activities in which the students with different academic backgrounds share information when attempting the tasks. Furthermore, the lecturers need to be innovative and creative so that they can design learning environments that contribute to effective student learning.

Learning cycle and decision factors used in planning and implementing differentiated instruction include the process for differentiating the planning, implementation and assessment of student instruction (Hall, strongman & Mayer 2003; Evans & Waring, 2006; Wilson, 2012). Inclusive education has developed from the belief that education is a basic human right and that it provides the foundation for a more just and accepting society (Thatkur, 2014). The Right to Education Act (RTE) (2009) in India requires a classroom to be accommodative in nature and be a welcoming environment pedagogically capable of educating a diverse student population.

Differentiated instruction is the very foundation upon which teachers can create such classrooms and it also forms a base on which teachers design techniques they use to accommodate each student's learning style and instructional preferences (Evans & Waring, 2006; Tomlinson, 2005). One strategy may involve teaching the same material to all the students using a variety of instructional methods. Another may require the teacher to teach content at varying levels of difficulty basing on the readiness level, interests and ability of each student. There are four areasin which teachers can differentiate instruction namely; content (the information that must be learned), process (a combination of input from the teacher, activities and materials that enable engagement of students in the content), product (outcomes of student learning that can demonstrate understanding or mastery) and learning environment (how the classroom is designed to meet the needs of the students) (Thakur, 2014, Hall, Strongman and Meyer, 2003). Over the last few decades, the development of inclusion has become central to international education policy and has forced changes in legislation in many countries (Thakur, 2014). Differentiation in the classroom requires an educator to simultaneously consider all the students whether they are the mainstream students or have special needs. It necessitates planning for their learning needs and addressing the curriculum. However, in this study, the researcher considers catering for each student's learning needs as critical in curriculum implementation for achievement of programmes' learning outcomes among all students in classes that have students from diverse academic backgrounds.

The differentiated instruction model is used for discussing data collected on strategies used for students from diverse academic backgrounds in the provision of TCD programmes at the two universities of technology in Zimbabwe. The model suits the study because it recognizes the relevance of the teachers' capacity to implement programmes, the need for adequate and relevant resources and an enabling learning environment as core in the provision of educational programmes. It also acknowledges the students' diverse backgrounds that contribute to their different learning styles and needs, as well as their responsibility for learning. The differentiated instruction model therefore, forms the basis for advancement of knowledge and critical thinking among the lecturers and students as they seek ways of catering for students' learning styles and research to cover up content and skills gaps respectively. Bustos, Lartec, De Guzman, Casiano, Carpio & Tongyofen (2012) confirm that teacher education is the driver of education reform which means pre-service teacher training should include concepts of strategies used to cater for diverse students in education training curricular. As Vygotsky (1989) in Turuk (2008) views teaching as a reciprocal process, the differentiated instruction model enables the teacher to base his or her curriculum implementation methodologies on the different characteristics of the students (Obiozor, et al., 2010; Wilson, 2012). The researcher used the differentiated instruction theory principles in examining the strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes at the two universities of technology in Zimbabwe since the institutions have different lecturers, different infrastructure and different funding policies for their programmes.

The intention of differentiating instruction is to maximize each student's growth and individual success by meeting each student's needs and assisting in the learning process. It addresses the needs of all studentsbe they at risk or gifted, through various forms of well planned, well organized, flexible curriculum and instructional strategies (Bustos et al., 2012; Willis & Mann, 2000).The differentiated instruction bases its beliefs on the theories discussed next.

2.3.1 Theoretical bases of differentiated instruction.

The foundational belief of differentiated instruction is that every student is different and he/she learns differently from others. The rationale behind differentiated instruction is

Piaget's constructivist theory, Vygostsky's zone of proximal development and Gardener's theory of multiple intelligences (Wilson, 2012; Noble, 2004). According to Piaget's (1970) in Ojose (2008) theory, students interact with objects and events available in the physical and social environment and thereby comprehend the features held by such objects or events using the process of assimilation, accommodation and equilibration. Students therefore, construct their own conceptualizations and use those conceptualizations to generate solutions to problems. Therefore, university lecturers should create teaching and learning environments that allow students with diverse backgrounds to interact with objects and perform activities that make them generate knowledge and conceptualize processes such as designing projects in the TCD field. Such projects lead to effective delivery of curriculum as students learn by performing activities.

The theory suggests that humans create and construct knowledge as they try to bring meaning to their experiences. In the differentiated classroom, teachers should facilitate the learning process by organizing learning activities and using a variety of material according to student's cognitive levels. This enables them to construct knowledge through their experiences. The zone of proximal development by Vygotsky (1989) in Turuk (2008) is the distance between the student's ability to perform a task with assistance under adult guidance or with peer collaboration and the student's ability to perform the task without any assistance. According to Vygotsky (1989) cited by Turuk (2008), learning occurs in this zone. In differentiated instruction, the teacher needs to identify what the students can achieve independently (level of actual development) and, to enhance further learning of more challenging tasks, differentiate learning tasks accordingly while providingacademic support. The support may be in the form of guidance from teachers, reading material/ manual, or assistance from more proficient peers so that students acquire necessary academic skills for independent learning (level of potential development).

Gardner (1983) states that human beings possess basic sets of intelligences at various levels and that none of the intelligences should be viewed as bad or good. Gardner (1983) in Barrington (2007) identifies distinct intelligences, visual-spatial, verbal linguistic, musical, logical mathematical, bodily kinesthetic, interpersonal, intrapersonal and naturalistic intelligences. Gardner (1983) cited by Almeida, Prieto, Ferreira, Bermejo, Ferrando & Ferrandiz (2010) observes that one of the intelligences

may be stronger than the other but they are all utilized by the same person. Therefore, it is the teacher's role to identify the student's strongest type of intelligence within the TCD field and works hard to develop those areas in which the student is weak. The lecturer may make an action plan to assist students who are weak in certain areas so that they can excel. The lecturer can also utilize the students' intelligence types in planning class activities where students can be grouped inmixed abilities to allow for peer tutoring.

In classroom comprised of diverse students, lecturers should provide educational opportunities that nurture the students' areas of intelligences so that they use all their intelligences to the optimum level. When teachers consider students' interests, they give students the opportunity to develop skills and concepts through the topics which students enjoy studying. Such areas of interest may reflect students' areas of intelligence. When lecturers consider learning styles, they plan learning activities taking into account visual, auditory and kinesthetic preferences. When lecturers consider students' readiness levels they take into account the academic needs of their students (Wilson, 2012; Noble, 2004).

For teachers to implement differentiated instruction in their classrooms, they need to modify curriculum and instruction by selecting and organizing content on the basis of learning objectives, choosing instructional approaches for effective content transmission, and designing learning activities and assessment according to students' interests, learning styles and readiness levels. The curriculum content can be modified using the processes discussed below.

2.3.2 Curriculum Content

Curriculum content is what teachers teach. The content consists of facts, concepts, generalizations or principles; attitudes and skills related to the subject, as well as materials that represent those elements (Hall, Soraymin & Meyer, 2003; Tomlinson 2001).The content may be differentiated in two ways; by content adaptation orby varying learning resources. Content adaptation is done by varying learning outcomes on the basis of what students already know. The teacher may differentiate the content by selecting and organizing learning experiences at various levels of Bloom's taxonomy (Wilson, 2012; Noble, 2004; Bloom, Englehart, Furst, Hill & Krathwohl,

1956). For instance, students who are unfamiliar with the concepts may be required to complete tasks on the lower levels of Blooms taxonomy that include knowledge, comprehension and application. Those students with partial mastery may be asked to complete the tasks in the application, analysis and synthesis areas, while those who have high levels of mastery may be asked to complete tasks atthe synthesis and evaluation level (Noble, 2004; Koch, 2007; Wilson, 2012).

The other way to differentiate contentby includingvarying learning resources involves selection of resources and varying students' access to the resources (learning materials) but maintaining the same learning outcomes for all students (Machteld & Naomi, 2016). For example the teacher may use various resource materials like concrete objects, print material or interactive software when teaching physical and chemical changes in textile fiber testing. The students may also be assigned to groups to explore the internet resources related to the topic physical and chemical change in textile fiber testing. In this way the students can have a choice to work in groups or individually, but all working towards the same instructional objectives irrespective of their varying abilities.

Rose & Meyer (2002) emphasize that lecturers must align tasks and objectives with learning goals. The objectives should be written in incremental steps resulting in a continuum of skills-building tasks. An objective driven instruction makes it easier to find the next instructional step for students entering programs at varying levels. The learning levels should link students' academic levels although the teacher teaches from simple to complex that is from the lowest academic level to the highest. Designers of the differentiated instruction model highlight that instruction should be concept focused and principle-driven (Tomlinson, 2001). The instructional concepts should be broad based, not focused on minute or unlimited facts.The instructional approach used should allow students to learn various concepts on a topic.Instructors must focus on the concepts, principles and skills that students should learn rather than giving students tasks that address content covered at lower than degree level (Tomlinson, 2005; Machteld & Naomi, 2016). What students should learn is based on the curriculum content and learning outcomes. The method of instruction should also address the same concepts with all students but the degree of complexity should be adjusted to suit diverse students and develop gradually up to the fulfillment of the curriculum's learning outcomes.Discussed next are some of the instructional

approaches that can be used by the instructor in classes that have diverse students though their use depends on available resources.

2.3.3 Instructional approaches (Teaching process)

Teaching process refers to how lecturers engage students to learn the content (Buston et al., 2012; Tomlinson, 2001; Hall, Strangman & Meyer, 2003). The instructional process enables students to understand and make sense of the content and skills.It allows them to incorporate the content and make connections with what is already known, understood and what they are able to do. The lecturer decides on different ways to deliver the instruction basing on pre-assessment results. The pre-assessment results inform the lecturer on capabilities of students to allow for progression from the known to the unknown.When using cooperative learning methods, the process component includes use of flexible groupings. The groups of students should be different for the different activities and students who are comfortable to work individually should be allowed to do so. Another part of the process includes classroom management in which the lecturers must carefully select organizational and instructional delivery strategies. Besides use of different instructional approaches, the lecturer can also differentiate products produced by students but still addressing the programmes' learning outcomes.

2.3.4 Product (Outcomes)

Product refers to what the student produces at the end of the lesson to demonstrate mastery of content (Hall et al., 2003). The product is an integral component of the differentiated instruction, as the preparation of assessments will primarily determine both what and how instruction is delivered (Hall et al., 2003; Tomlinson, 2005).Formal and informal assessment determines the level of understanding of the subject matter by the students. This component allows students to display their knowledge in several ways. In TCD, students may be asked to design fashion articles for ladies and men of different age groups, prepare 3-dimensional models, or prepare sketches that explain mastery of concepts in the textile fiber processing, to write a report, perform a play, debate, investigate an issue, design a game and compare and contrast.

Initial and on-going assessment of student readiness and growth isessential meaningful pre-assessment that leads to functional and successful differentiation (Tomlinson, 2005). Incorporating pre- and ongoing assessment informs lecturersthat they can better provide a variety of approaches, choices and scaffolds for the varying needs, interests and abilities that exist in classrooms (Hall et al., 2003). The assessment may be formal or informal and may include interviews, surveys, performance assessments and more formal evaluation procedures such as written tests. Instructors must bear in mind that students are active and responsible explorers. Therefore, they must make sure that each task put before the student is interesting, engaging and accessible for essential content understanding and skills development and each student should feel challenged most of the time. The instructors also need to vary their expectations and requirements for student responses. Items to which students respond may be differentiated so that different students can demonstrate or express their knowledge and understanding in different ways. A well designed student product such as a weather responsive jacket allows varied means of expression and alternative procedures and offers varying degrees of difficulty, types of evaluation and scoring (Hall, Strangman & Meyer, 2003; Wilson, 2012). However, such varied products are directed by the nature of questions structured by the instructors in methods presented below.

2.3.5 Strategies of differentiation for classes with diverse students

Curriculum instructors must look for students' strengths, provide personal attention when necessary and make provision for the different ways in which students approach and complete assigned tasks. Such strategies, according to Hall et al. (2003), may include big question teaching, designing learning centers/ stations, project oriented instruction, curriculum overlapping, and tiered assignments. These provide various ways in which curriculum implementers may accommodate the diverse students, although the implementers should be well acquainted with the strategies. The strategies are discussed below for assessment of their usability.

2.3.5.1 Big Question Teaching

It is a way of differentiating for all students, which involves framing of lessons and units as questions, issues or problems. Questions or problems based on critical issues in the subject area such as TCD subjects/courses stimulate the students to think innovatively and to develop creative ideas to solve the problems experienced in the textile and clothing industry (Hall et al., 2003). It is the best way of getting different responses from different students and also paves way for further learning and investigation. Some students provide more concrete answers while others provide more complex and abstract answers. Examples of questions that can be asked are; what does it mean to be a good textile designer? What will be your first decision as a clothing factory director? The use of problems, questions or critical issues as the base of a lesson or unit helps the teacher to narrow the topic, delimit content coverage and reduce the likelihood of fragmented and superficial treatment of subject matter. The other way that provides for variety in students' responses is exploitation of designated sites in the learning environment.

2.3.5.2 Centers or stations

The concept involves setting up different spots in the classroom where students work on various tasks simultaneously according to their pace and abilities. Stations involve flexible grouping because not all students need to utilize all stations. The centers teaching is ideal for use in classes comprised of diverse students since it allows teachers to work with individual students and small groups of students without needing to push them to achieve the desired objectives.

The stations may be led by the instructor if new knowledge is to be given or may be guided by a student if content mastery is to be achieved on the information given by the instructor. For example, in a TCD classroom, students may rotate through five stations according to their potential. At the first station the students work with the teacher to learn about fiber yarn production and finishing. At the second station, the students solve problems of coming up with faster yarn production techniques and evaluation of the processes. At the third station the students generate a list of yarn production processes and assessment of their usability. The fourth station involves working on problems related to yarn production processes, and at the fifth station the

students work on a review worksheet from the previous chapter if it was not well comprehended. Such learning stations enhance teaching and learning in classroom environments comprised of students from diverse backgrounds although a project based instruction technique can also be used.

2.3.5.3 Project based instruction

Project based instruction is one of the best ways to differentiate instruction as students' needs and learning styles can be addressed (Tomlinson, 2005). Projects that are independent or group based can be assigned by the curriculum implementers or can be chosen by the students. When it is a group project, there are increased opportunities for peer support and development of relationships among the students, (Hall et al., 2003) though some students tend to relax and let others work on their behalf. Those who do not participate in the project may not benefit in terms of knowledge and skills. Therefore, the instructor has to be vigilant enough to encourage all group members to participate so that learning outcomes are achieved among all the students. However, the students can work at their pace. A number of skills and disciplines can be incorporated into the project. Projects are relevant for those students who struggle to master concepts in a given topic as they get an opportunity to work at their own pace grasping the concepts slowly (Hall et al., 2003; Wilson, 2012). Therefore, some curriculum implementers may choose to use the curriculum overlapping technique for diverse students as discussed next.

2.3.5.4 Curriculum overlapping

Students who need more curriculum enrichment or more support can work on objectives that are different from those being addressed by their peers. When instructors use curriculum overlapping, some students focus on objectives that are different but clearly connected to those being addressed by the class (Tomlinson, 2001, Hall, et al., 2003). For example, a student who already knows a lot about various tribes of various states can decide to leave out some lessons of Geography class to design a classroom website that helps classmates to study about those tribes and connect to various internet resources. Thus, students work on refining and learning technology skills while practicing Geography skills. With reference to TCD students, those who have already read and studied a certain fiber production process which is

being studied by other students in the class can use that time to adapt the fiber processing into simulation. The assimilation process enables the students to conceptualize and internalize the learnt concepts. Tiered assignments also provide opportunities for curriculum implementers to cater for diverse students for achievement of effective teaching and learning.

2.3.5.5 Tiered assignment

The assignment items are designed at different levels of difficulty according to students' readiness levels. Sometimes the learning outcomes are kept the same. The learning tasks can be designed according to students' learning preferences derived from Gardener's multiple intelligences.For example, tiered assignments in a high school science class based on students' learning styles can be differentiated to achieve the same objectives (Noble, 2004) and can be structured in different way. First tier comprising students who have visual/spatial learning style or artistic qualities may be asked to prepare a model/sketch of oxygen atom by clearly showing its sub-atomic particles. For example, in TCD, students can be tasked to make a jacket or present illustrations of the jacket that can be used in summer and also in winter by tour guides. Tier two would engage those students with bodily/kinesthetic learning style and ask students to demonstrate how the nitrogen atom/ jacket will look like by considering themselves as sub-atomic particles. The third tier for students who have verbal/linguistic learning style could describe the structure of potassium atom/ jacket with its sub-atomic particles/ sectional parts. Tiered assignments also meet the needs of at-risk students though it requires a lot of time. To overcome time constraints, curriculum instructors can work together in teams to plan activities for a particular subject. The activities can be designed for small groups as well as for individual students.

The outlined strategies of differentiation for classes with diverse students can be based on the programmes' content, process and products (Hall et al., 2003). When curriculum implementers engage instructional techniques that are content based, they use pre-tests to assess where students need to begin study of a given programme topic. The instructors should frame lesson objectives at various levels of Bloom's taxonomy in order to meet the students' academic background levels (Noble, 2004). When they use a process based instructional technique, they should develop a variety

of activities that target various students' learning styles and multiple intelligences through flexible grouping of students according to ability and assessment results. However, if lecturers use differentiated instruction technique based on product, they use a wide range of assessment strategies that include projects, assignments, performance based tests and open ended questions that reflect various students' learning styles and interests. However, there should be a balance between instructor assigned and student selected projects.

2.4 Summary

In this chapter, the researcher discussed the theories which informed this study; the differentiated instruction theory by Tomlinson (2005) and the cultural capital theory by Bourdieu (1986). The differentiated instruction model by Tomlinson (2005) is based on the view that students learn best when their teachers accommodate their differences in their readiness levels, interests, and academic profiles in curriculum implementation with the main objective of taking full advantage of every student's ability to learn. The theory stipulates that instructional approaches should vary and be adapted to individual needs and diverse students in the classrooms.This should be the case for TCD university classes that comprise students with diverse academic backgrounds. Therefore, the adaptations made by lecturers to the classroom environment, curriculum content, instructional approaches, and the support they provide students determine the effectiveness of learning among students from diverse academic backgrounds.

According to cultural capital theory, possession of cultural capital by the students determines their educational achievement. In this study, students' academic backgrounds relate their levels of TCD background qualifications and these affect their performance in the Textile, Clothing and Design programmes at university level. The lecturers' levels of qualifications in the TCD field also affect the way they design teaching and learning strategies to cater for students with diverse academic backgrounds.

The study discussed the differentiated instruction theory and the cultural capital theory in an attempt to critically examine strategies used to cater for students from diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe and later develops a model for catering for the students in curriculum implementation. In the following chapter the researcher reviews literature related to the study in line with the research questions.

CHAPTER THREE

LITERATURE REVIEW: EMPIRICAL STUDIES

3.1 Introduction

The chapter reviews literature related to the study in line with the research questions that sought to examine strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at two universities of technology in Zimbabwe. Literature pertaining to programmes content adaptationand assessment to meet diverse students' needs, capacity of programme implementers (lecturers), institutional support and curriculum implementation frameworks by other scholars was analysed and evaluated. This was with a view to considering current critical issues in catering for students with diverse academic backgrounds. The literature gives the researcher an insight on what other researchers have written in the broad area of Textile, Clothing and Design programmes provisioning at national and international levels.

3.2 Lecturers' capacity to deliver TCD programmes at university level

Lecturers who are highly knowledgeable in a subject area and have acquired pedagogical content knowledge and skills enjoy their work and can deliver the content with ease (Chireshe, 2011; Wenglinsky, 2002; Nguku, 2012). They are capable of making students understand the content. If lecturers lack adequate subject content and pedagogical content knowledge and skills, they do not perform their work with high confidence and they feel detached from the subject area (Garwe &Tirivanhu, 2015; MoHTE, 2010; Stronge, 2004). Regarding teacher preparation, Muzenda & Duku (2014) argue that despite the criticisms leveled against teacher education, it has been realized that teachers who have gone through preparatory programmes for teaching carry out their work with more confidence than those with little or no teaching

qualifications. Lecturers' years of experience in the lecturing job affect how they deliver a learning programme (Kurasha & Chabaya, 2013; Wambui, Ngari & Waititu, 2016). Those with very few years of lecturing experience and those just entering the field may have problems in delivering programmes due tolack of confidence (Ladd, Clotfelter & Vigdor, 2007; Ladd, 2008). Learning materials do not work in isolation to enhance learning outcomes for students but depend on lecturers' pedagogic knowledge, professional values and language proficiencies. This impact on how they handle the class in terms of selecting appropriate methodologies to meet the needs of students (UNESCO – UNEVOC, 2013). Students with diverse academic backgrounds require instructors who are capable of responding to their diverse needs with respect to subject content and skills gaps that exist among TCD university students who have NC, ND "O" level, "A" level and Diploma in Education qualifications. Professional morale also aids in instilling a spirit of hard work among the lecturers.

Chireshe's (2011) research with university students on the effectiveness and ineffectiveness of lecturers reveals that effective lecturing or teaching is that which creates an environment in which deep learning outcomes for students are made possible, where high quality student learning is promoted, and where superficial approaches to learning are discouraged. The study establishes that an effective lecturer is one who has good rapport with the students, exhibits fairness, has sound content delivery skills and possesses sound knowledge and creativity. Good rapport attributes include lecturer qualities such as friendliness, willingness to assist students, ready availability, patience, tolerance and approachability. Lecturers' fairness attributes refer to marking content not students' names, handwriting or past record, giving constructive criticism, and considering students' creativity. The delivery attributes entail encouraging group work, leading group discussions, allowing students to participate, asking questions and answering questions and presenting in class. The knowledge and creativity attributes point to the lecturers' competency, knowledge, expertise, good mastery of content, analytic ability, creativity and resourcefulness. These desired lecturer attributes, which can only be attained through pedagogical training, enhance quality teaching and learning process.

The findings of a study carried out by the Ministry of Education in Canada in (2013) establishes that TVE teachers must look at educational developments and incorporate them into teaching practice in order to be innovative and current. Teachers should use

inquiry-based problem solving approaches to teaching, and facilitate teaching and learning. For example, students should be provided with an opportunity to construct knowledge and incorporate their own personal experiences in engaging with relevant learning experiences.

Hattie (2009) in Alber (2016) notes four effective teaching practices that ensure attainment of intended student learning outcomes and these include; teacher clarity, classroom discussion, feedback and metacognitive strategies. Hattie (2009) says the curriculum instructor should always specify what he / she intends to achieve on a topic/ chapter at the beginning of the topic/chapter. The teacher should clarify the purpose and learning goals and provide explicit criteria on how students can be successful. The curriculum implementer can also present models or examples to students so that they can see how the end product looks like. By doing so, the students get motivated regardless of their diverse backgrounds; to get engaged in the lesson as they have a picture of the end product. However, some of the students may be demotivated from the onset if they have no interest in the end product or if they have seen the product before. This is so in situations where the class comprises students with different academic levels like the university TCD classes where some would have already experienced such products or concepts. Therefore, the lecturer has to be quite innovative in order to engage all students.

When the instructor uses classroom discussion as an effective teaching strategy, he/she needs to frequently step off the stage and facilitate the entire class discussions. (Hattie, 2009 in Alber, 2016). The discussions allow students to learn from one another. It is also a great opportunity for instructors to formatively assess and observe how well students grasp new content and concepts thereby enabling the lecturer to assist students who need help and also provide an opportunity for the instructor to seek higher order answers from those who are intellectually gifted. When the instructor gets involved in the discussions and gets feedback from the groups, he/she takes note of areas that need attention. The feedback also enables the curriculum implementer to adjust the learning process, materials and instruction accordingly (Exley & Kervin, 2013; Zimmerman, 2011).

When the curriculum instructors employ metacognitive strategies, they give the students opportunities to plan and organize, monitor their own work, direct their own learning and self-reflect along the way (Alber, 2016). That way, the students are provided with the time and space to be aware of their own knowledge and their own thinking thereby enhancing their ownership of their work. Enhancement of students' ownership of their work helps them to deeply concentrate in their studies for image building through success. Therefore, both the curriculum instructors and the students need training on how the process of metacognition is done, considering thatresearch shows that metacognition can be taught (Alber, 2016; Hattie, 2009). Hattie (2009) further suggests that such curriculum delivery strategies can be learnt by the instructors through collaborating with colleagues. When the curriculum implementers spend some time with colleagues, they talk about research-based delivery strategies, best classroom practices that highly benefit the students, the implementer's contributions, as well as the institution's role.

On teaching and teacher attributes,Coe, R., Aloisi C, Higgins, S. & Major L. E. (2014) unpack six components of great teaching that comprise teachers' content knowledge, quality of instruction, classroom climate, classroom management, teachers' beliefs, and professional behavior. Content knowledge (pedagogical) entails that the most effective teachers have deep knowledge of the subjects they teach and when the teachers' knowledge falls below a certain level, it is a significant impediment to students' learning. The quality of instruction includes effective questioning and use of assessment by teachers. Such practices like reviewing previous learning, providing model responses for students, giving adequate time for practice required for learnt skills, securely and progressively introducing new learning (scaffolding), are also elements of high quality instruction. Classroom climate refers to the quality of interactions between teachers and students and teachers expectations. There is need for creating a classroom that is constantly demanding more, but recognizing, students' self-worth. It also involves attribution of students' success to effort invested in teaching and learning process. The classroom climate relates to the teacher's ability to make efficient use of lesson time, to coordinate classroom resources and space, and to manage students' behavior with clear rules that consistently enforce all that is relevant to maximize learning. Teachers' beliefs entail why teachers adopt particular practices, basing on certain theories about what teaching and learning is and how it should

happen. It also includes their conceptual models of the nature and role of teaching. Teachers' professional behaviors relate to the behaviors exhibited by teachers such as reflecting on, and development of professional practice, participation in professional development, supporting colleagues and liaising with parents.

Lecturers' professional qualifications and development enable them to exhibit the above six components of quality teaching noted by Coe et al. (2016). The results of quality teaching are linked to student outcomes. The learner outcomes are also dependent on effectiveness of classroom practices by the teacher. Saskatchewan (1991) outlines a range of instructional approaches as a framework for professional practice from which teachers can derive modes of curriculum implementation to suit diverse environments. These include direct instruction, indirect instruction, interactive instruction, experiential learning, independent study strategy and learning contracts. These instructional approaches are discussed next to reflect their applicability in different learning environments.

3.2.1 Direct Instruction

Direct instruction strategy is highly lecturer directed and is among the most commonly used methods by most curriculum implementers (Saskatchewan, 1991; Na Li, 2012). It includes methods such as lecture, didactic questioning, explicit teaching, practice & drill and demonstration. The instructional technique is effective for providing information and developing step by step skills. It works well for introducing other teaching methods and for involving students in knowledge construction as it is lecturer centred.Direct instruction is usually deductive. While this strategy may be considered among those that are easier to plan and to use, effective direct instruction is often more complex than it would first appear on the onset as it requires thorough preparation and research by the instructor since the technique is teacher centred. The predominant use of direct instruction methods need to be evaluated and reconsidered as educators need to recognize the limitations of these methods for developing students' abilities, skills and attitudes required for critical thinking, for interpersonal or group learning, as well as for effective catering of diverse students.Therefore, students' understanding of affective and higher level cognitive objectives may require the use of instructional methods associated with other strategies (Thornton, Pietier &

Medina, 2007, Opertti & Belalcaza, 2008, Buzda & Ali, 2011 & Margolin, 2011 in Smith et al., 2016). Besides direct instruction, curriculum implementers can also use indirect instruction technique to deliver in classrooms.

3.2.2 Indirect Instruction

The technique involves inquiry, induction, problem solving, decision making and discovery teaching methodologies. Although the two strategies can complement each other, the indirect instruction is mainly student centred (Saskatchewan, 1991; Martel, 2009).The technique seeks a high level of student involvement in observing, investigating, drawing inferences from data and forming hypotheses. It takes advantage of the students' interests and curiosity, often encouraging them to generate alternatives and solve problems. The concept of high level of student involvement is desired for effective teaching and learning among students from diverse backgrounds such as TCD students with diverse academic backgrounds. It is flexible and accommodative in that it allows students to explore diverse possibilities and reduces the fear associated with the possibility of giving incorrect answers. Indirect instruction also fosters creativity and development of interpersonal skills and abilities. Students often achieve better understanding of the material and ideas under study and develop the ability to draw on these understandings. In indirect instruction, the role of the instructor shifts from lecturer or director to that of facilitator, supporter and resource person. The teacher organisesthe learning environment provides opportunity for students' involvement and, when appropriate, provides feedback to students while they conduct the inquiry. Use of computer assisted instruction and packages enhance student learning among students from diverse backgrounds

However, Saskatchewan (1991) and Na Li (2012) suggest that the instructor should first teach the skills and processes necessary to achieve the intended learning outcomes so that the students may achieve optimum benefit during indirect instruction. Such skills and processes include observing, encoding, recalling, classifying, comparing and contrasting, inferring, interpreting data, predicting, elaborating, summarizing, restructuring and verifying concepts. However, the instructional approach is more time consuming than direct instruction and it is not the best way of providing detailed information or for encouraging step by step skills acquisition.It is

appropriate when content memorization and immediate recall is desired (Na Li, 2012; Saskatchewan, 1991). Therefore, one can also consider use of interactive instruction technique instead of indirect inquiry depending on the nature of subject content to be delivered and the teaching environment.

3.2.3 Interactive Instruction

The instructional approach relies heavily on discussion and sharing of information among participants.Theseare important aspects in implementation of differentiated curriculum implementation strategies in classes comprised of diverse students as the processes allow peer teaching among the students (Chireshe, 2011; Saskatchewan, 1991). It provides opportunities for students to react to ideas, experience insights and knowledge of the teacher and of the fellow students and to generate alternative ways of thinking and feeling. As the students can learn from their peers, the instructors also develop social skills and abilities to organize their thoughts and develop rational arguments. Interactive instruction allows for a wide range of groupings and interactive methods. These include total class discussions, projects, small students' group discussions, and working on assignments together. However, it requires the refinement of observation, listening, interpersonal, and intervention skills and abilities by both teachers and students. However, for effective catering of diverse students, the curriculum implementers should be well versed in a number of instructional techniques. Besides the direct, indirect and interactive techniques, experiential learning is also critical in TCD programmes implementation.

3.2.4 Experiential Learning

Experiential learning is inductive, studentcentred, and activity oriented (Karunaratne & Perera, 2015; Kathuli-Ogola, VanLeeuwen, Kabaria-Muriithi & Weeks, 2015) learning that places greater focus on student learning through linking theory with practice. Personalized reflection about an experience and the formulation of plans to apply learning to other contexts are critical factors in effective experiential learning. It occurs when students participate in an activity, critically look back on the activity to clarify learning and feelings, draw useful insights from such an analysis, and apply the learnt concepts in new situations. The emphasis in this teaching strategy is on the

process of learning and not on the product. The strategy can be used inside and outside the classroom. When applied inside the classroom, the students can engage in simulation. When carried outside the classroom, the students can conduct a practical project with the community like designing and making dresses that can withstand heat when one is working in the fields. It makes use of a variety of resources. However, the strategy makes greater demands on financial resources and adequate time for carrying out the project. These limitations hinder the application of the strategy to all situations such as the textile and clothing industry in Zimbabwe considering the economic decline of the country where it can hardly sustain adequate TCD student placement learning (OECD, 2009; Afeti, 2014). However, the benefits that the students get are worth the cost and time investment required by the strategy in its application. The curriculum implementers may also consider employing independent study strategy to effectively deliver subject content to the students.

3.2.5 Independent study strategy

Independent study strategy comprises a range of instructional methods that are purposefully provided to foster development of an individual student's initiative, self-reliance and self-improvement. Although the independent study maybe initiated by the instructor or student, the focus is on the planned independent study by students under the teachers' supervision and guidance (Rosenshine, 2012; Martel, 2009). The independent study may include learning in partnership with another individual or as part of a small group.Independent study strategy developsthe students' decision making skills individually as each student analyses problems, reflects on them, makes decisions and engages inpurposeful actions. It also enables students to respond to the changing demands of work, family and society. However, enough time must be availed for the teacher to teach the knowledge, abilities, attitudes and processes associated with independent learning and to allow students to practice it. Use of independent study should begin at early stages of student learning such as kindergarten and continue through all the stages and grades up to university level. Adequate resources are a critical issue for the success of the strategy. One can also use learning contracts that may require individualized resources.

3.2.6 Learning Contracts

Learning contracts permit individual pacing so that students may learn at the rate at which they are able to master the material. They provide a method of individualizing instruction and developing student responsibility (Rosenshine, 2012; Saskatchewan, 1991). They can be designed so that students function at the academic level most suitable to them and work with resource materials containing concepts and knowledge that are appropriate to their abilities and experiences. Although the method focuses on the individual, learning contracts also provide an opportunity for students to work in small groups. The teacher may select this approach where some students support othersas they learn to work independently. However, it is critical for the instructor to consider working with individual students and at the same time achieve the set programme's learning outcomes. Figure 1 shows how the curriculum implementer may combine the discussed delivery approaches in order to cater for diverse students.

INTERACTIVE INSTRUCTION

Debates, role playing, panels, brainstorming, peer practice, discussion, laboratory groups, problem solving, tutorial groups

DIRECT INSTRUCTION

Structured interview, explicit teaching, mastery lecture, drill & practice, compare & contrast, didactic demonstration

INDEPENDENT STUDY

Essays, computer assisted instruction, reports, learning activity package, correspondence lessons,

INDIRECT INSTRUCTION

Problem solving, case studies, inquiry, reading for meaning, reflective discussion, concept formation, mapping attainment

EXPERIENTIAL LEARNING

Field trips, experiments, simulations, focused imaging, games, field observations, role playing, synaptic, model building,

Figure 3-1: Instructional strategies. Adapted from Saskatchewan Education (1991: 20)

The diagrammatic representation of the instructional strategies that can be used by a lecturer in curriculum delivery shows that teaching approaches overlap implying that an effective teacher should usea combination of strategies to achieve teaching and learning goals as well as to cater for student diversities. However, the instructors' proficiency is a prerequisite for successful implementation of the instructional strategies. Well trained and experienced lecturers are capable of displaying proficiency in utilizing all the instructional strategies in Figure1when delivering

curriculum among diverse composite classes common at institutions of higher learning (Machteld & Naomi, 2016; Chireshe, 2011; Smith, Johnson, McLaughlin& Rovira, 2016). However, Smith et al. (2016) further say that professional development is an ongoing process that continues to equip curriculum implementers with curriculum and pedagogical reforms.

Within the African countries' perspective, Technical and Vocational Education is a form of education and training or retraining that is directed towards developing the student to become productive in a paid employment and self-employment. In most African countries, TVE is bedrock on which the country'ssocio-economic, technological and cultural advancement is built (Ethel, 2007).The major goal of quality teaching and assessment in TVE is to improve opportunities for high quality learning which is evaluated through students' performance. A study carried out in Nigeria by Ethel (2007) reveals that quality teaching and assessment of students ensures that candidates acquire the knowledge, skills and competencies that are appropriate for the area of study. The study also found that the education system may set standards that ensure that teachers know the subjects they teach, understand how students learn, and are able to deliver content to the students. The teachers should also be able to find solutions when they face challenges.They should be able to use effective teaching methods to cater for students with and without special needs. The study also reveals the need for setting teaching standards to enhance teaching and learning among the students. The study further highlights the need to develop challenging examinations in order to capture students' performance and recognize achieved teaching and learning among the students. Challenging examinations may be applied to the students who enter universities from diverse backgrounds so that their level of competence may be examined. The teaching standards and examinations may also assist in examining teaching strategies employed by the teachers in catering for diverse students. However, Ethel (2007) points out that the overall goal in ensuring quality TVE is to improve opportunities for high quality teaching and learning. Ethel (2007) also emphasizes the need for teachers to demonstrate consistent competencies in skills development and knowledge delivery as one can only teach what he/she knows and can perform. However, one can possess the relevant knowledge and skills but lack knowledge of delivery strategies. The delivery strategies

go a long way as the lecturer requires thorough planning and preparation for various environments in which teaching and learning takes place.

A research by Ethel (2007) carried out in Nigeria on quality assurance in the teaching and examination of Vocational and Technical Education recommendsthe need to have high quality teachers for quality assurance in the provision of TVE. The teachers should be ready to impart high quality knowledge and skills required in TVE provision. The study further observes that teacher education institutions should aim at producing quality teachers who are well equipped with a variety ofeffective ways of content delivery that can be applied in and outside the school setting. These should be provided with the opportunity to train the untrained and retrain the trained regularly throughout the teachers' career life. Further training of teachers is necessary in order to meet the ever complex student diversity and the ever increasing industrial demands. Current Zimbabwean trends in the provision of TVE aim to match current worldwide approaches that emphasize creativity and innovation among students.There was introduction of poly-technical colleges to train teachers for the new TVE approach. However, studies by UNESCO and ZIMDEF (2005) and Mupinga et al. (2005) reveal that not all the teachers were further trained for the new TVE provision. Therefore, the delivery of TCD programmes in universities of technology in Zimbabwe may be led by teachers who were trained for the old model TVE. On one hand, most of the trained teachers left the country for greener pastures when the country experienced economic hardships (ZIMDEF AND UNICEF, 2005; Coltart 2012). Ethel (2007) suggests that a system of feedback be implemented to monitor deficiencies among TVE teachers.Ethel (2007) reckons that such deficiencies may be compensated through seminars, workshops and in-service training. Due to the diverse students entering the TCD programmes in universities of technology, it is ideal to assess the capacity of lecturers who deliver the programmes' courses. Ethel (2007) says the emergency societal needs are many and varied, calling for new equipment, machinery and texts that meet today's learning environments. New equipment in the area of educational technology is needed to impart useful usable skills in teacher training institutions as well as in TVE Institutions. However, current teachers' skills may not meet tomorrow's demands for technical progress (Ethel, 2007) as there is need for continuous training of instructors and upgrading of student learning resources. John (2011) asserts that instructors must be aware of the range of student backgrounds and the issues that

need attention. The issues that may arise require significant investment in each student by instructors as well as by the institutions.

A study by Muzenda and Duku (2014) found that in Zimbabwean universities, many lecturers have left the teaching profession in search for greener pastures elsewhere. Therefore, the lack of up to date enterprising instructors in TCD implementation has been a major issue across the country. The teachers' instruction plays an important role in providing the right level of support for student diversity. Quality instruction is reflected by the instructor's ability to respond appropriately and with flexibility to students' different needs. However, for teachers to respond appropriately to students' different needs, they need to possess rich knowledge and skills in using various curriculum implementation and adaptation strategies. They need sound content knowledge to improve every student's learning and achievement. Such knowledge and skills help teachers to make professional decisions on the most appropriate instructional strategies to support students under different circumstances.

3.3 Curriculum adaptation including assessment to ensure accommodation of students with diverse backgrounds

3.3.1 Principles applied to design learning and teaching environments

There are some principles that may be used by Higher Education Institutions to design learning and teaching environments as suggested by Hockings (2010) based on the study carried out with European countries.Creation of safe collaborative spaces by setting ground rules for collaborative learning behavior, making provisions for time to get to know students as individuals is one of the principles. Teaching and learning environments that encourage students to articulate their thinking openly in trusting, respectful environments allow all students to learn by getting stuck, being uncertain, making mistakes and being different. Developing strategies for sharing and generating knowledge is the other competence that involves developing open, flexible activities that allow students to draw knowledge from their own interests and experiences while encouraging sharing and application of different knowledge, experiences and perspectives among peers. The teaching and learning environments should also

connect with students' lives. This may involve selecting or negotiating topics and activities relevant to students' lives, backgrounds and future or imagined identities. The institutions must be culturally aware of the various relevant resources used in teaching and learning environments. For example, resources may include materials, humour and anecdotes that are relevant to the subject and sensitive to the social and cultural diversity of the students. Pedagogies that are student centered, cater for individual differences, and relevant in the context of the course are most likely to extend opportunities for academic engagement to a wider range of students. However, such principles may work differently in different institutional settings.This study therefore,reviewed working principles applied in the provision of TCD programmes at universities of technology in Zimbabwe with the view of coming up with effective ways of catering for the TCD students who enter university education with diverse academic backgrounds.

3.3.2 Adaptation of curriculum content to meet the needs of students with different backgrounds

Respecting and valuing individual differences means autonomy is given to all students so that they can make choices to pursue their interests and develop their potential (Exley & Kervin, 2013; Bhebhe, Dziva & Maposa, 2014). Lecturers need to be committed to developing the talent of individual students by providing them with challenging learning opportunities. With a firm belief that there are different pathways for students, lecturers should be capable of making a difference in each student's learning through quality instruction that highly enable them to cater for student diversity (UNESCO –UNEVOC, 2010; Dalton, Mackenzie & Kahonde, 2012).

Universities, as parastetals operate independently. Their programmes are designed in-house by the lecturers and these programmes are approved by the national board (ZIMCHE) that governs the running of all universities within the country. A study carried out by Nguku (2012) within Southern Eastern African (S.E.A) countries analyses TCD curriculum development and review processes employed by the institutions that offer textile and clothing programmes. The study reveals that the curriculum development and review processes incorporated input from relevant partners and stakeholders such as the textile and clothing industry. It also emerged

from this study that the curriculum development process included such aspects as designing, developing, implementing, monitoring, evaluating and reviewing of curricula and the programmes were benchmarked with some selected global institutions. This study sought to establish how the students with diverse academic backgrounds were catered for in the designing, implementing and monitoring of the TCD curricula offered by the universities of technology in Zimbabwe.However, the accommodation process impact on selection of implementation procedures by the lecturers. The research by Nguku (2012) found that the institutions in the Southern Eastern Africa (SEA) were not providing sufficient training with regard to textile machines as they did not have textile or clothing industrial engineering and management programmes. A study on assessment of the adoption of apparel computer design technology training in some universities in Kenya by Kamu (2007) established that the designed CAD courses were not adequately addressing specific areas of apparel design as the courses comprised basic introductory concepts such as Corel Draw, Adobe Photoshop and Adobe Illustrator. The research pointed out that there was need for collaboration between the industry and textile and clothing department lecturers in curriculum development, training of lecturers and students, and in provision of CAD teaching and learning resources. The Pakistan Higher Education Commission emphasizes the need for preparing the Fashion and Design curriculum considering a lot of knowledge, techniques and methodologies evolving globally dictating that professionals must keep updated (Ali, 2011).In view of catering for students' diverse academic backgrounds, this study sought to examine how the lecturers were trained in order to deliver the programmes effectively.

Lecturers working within institutions of learning work very hard to adapt programmes content to cater for students with diverse backgrounds. In an institution where programme adaptation is practised, it is done to meet the needs of any student for which the standard curriculum is inappropriate and can be better implemented through adaptation (Rosell & Ondrik, 2013; Wright, 2005). It involves arranging curriculum content for students to pursue different objectives within the same programme or lesson. When a lecturer makes adaptations, the programme maintains the same learning outcomes but the goals, expectations, presentation, materials, assistance and environment may vary (Block, 2011; Rosell & Ondrik, 2013). Lecturers' instruction

and content adaptation techniques that attend to students' learning styles and needs can remove barriers to learning and support individual students to achieve more academically (Shay, 2013; Rosell & Ondrik, 2013; Block, 2011).

There are various ways in which a programme curriculum can be adapted to meet the needs of students from different backgrounds. Such adaptation ways include quantity, time, input, difficulty, output, participation, alternate goals and substitute curriculum (Wright, 2005; Rosell & Ondrik, 2013). When adapting the quantity of content, the curriculum implementer breaks down the concepts and activities and number of items/ activities the student is expected to complete before assessment into manageable units for the students. For example, an instructor can reduce number of TCD items a student must learn at a time and increase sessions in which the student practices the content activities or worksheets. However, use of this adaptive technique may impact on time allocated for each programme subject because the increase of time slots may be a challenge to timetable since students have a number of subjects taught per semester. When adapting the curriculum content through time, the time allocated for learning, completing and testing a task is altered to meet different students' capabilities for effective teaching and learning i.e. pace learning can be differentiated for some students (Wright, 2005). Use of this technique enables one to attend to individual needs though it may be very demanding on the part of the instructors who have very large classes composed of students from diverse academic backgrounds.

However, this adaptation is an accommodation if the student can demonstrate mastery of the standard on an assessment. The accommodation is dependent upon alteration of the standards. If the standards are not altered, the adaptation may influence performance differences among students. Rosell & Ondrik (2013) assert that when a teacher makes adaptations on a curriculum, the same learning outcomes should be maintained, but the goals, presentation, teaching materials, the help offered and the learning environment may vary. If the adaptation methods are routinely employed, they need individualized goals and assessment methods. In this regard, the main issue is whether the student can ultimately master the same material and demonstrate that mastery in alternate supports. The other issue is whether the institutions can afford the relevant materials for the diverse students. The provision of Textile, Clothing and Design programmes in universities has raised concerns among the textile and clothing

stakeholders. Mupinga, Burnet & Redmann (2005) argue that the TCD implementation strategy is not clear as to whether the purpose of the programme is prevocational or intensive skills training. The teachers implementing the programmes are the same teachers who were trained for the old TVE which was mainly focused on offering vocational education. The approach placed more emphasis on narrow skills training meant to prepare students for specific jobs in the industry (Kennedy, 2013; UNESCO & ZIMDEF, 2005). However, with the improvement of technology, the new approach to TVE offering emphasize students' creativity and innovation in solving industrial problems and development of better ways of carrying out job tasks (Afeti, 2014; Coltart, 2012; UNESCO & ZIMDEF, 2005).

A study carried out on student diversity and the Australian Curriculum found out that teachers adjust curriculum content and teaching and learning strategies according to students' age and individual students' needs (Australian Curriculum Assessment and Reporting Authority, (ACARA) (Anderson & Boyle, 2015). The teachers aligned learning area content with the age of students to adjust the teaching and learning programmes according to students' individual needs. The study reveals that the curriculum implementers adjust the programme content by drawing content aspects from learning area content at different levels from first year to the final year according to the age of students. That is adjustment of age equivalent content. For example, year six students may plan and conduct a specific investigation but at a lesser complex level, by exploring and answering questions. Content adjustments in the Australian curriculum is also done by drawing content from the curriculum and emphasizing specific aspects of one or more of the general capabilities. This enables adjustment of the learning focus in a specific learning area. For example, teaching targeted literacy or social skills through a science lesson with greater focus on general capabilities. However, use of this approach may result in loss of curriculum integrity due to generalization of the content aspects which may lead to loss of focus in relationto programme's learning outcomes. This may lead to production of graduates lacking relevant knowledge and skills especially when dealing with TCD programmes as the areas selected by the lecturers may differ. Besides that, some instructors may not fulfill programme demands since there are no guiding principles as to which and how the content concepts are selected. The TCD students with diverse academic qualifications may require core relevant knowledge that enables them to develop their varying

academic levels in TCD and not general capabilities, as the general capabilities may not address university TCD programmes' learning outcomes.

However, Felder & Brent (2005) propose content integration technique in which curriculum instructors combine a number of subjects/ courses into one course. The students acquire basic knowledge in the subjects/ courses in the combination within a limited time provided for the course, thereby depriving students from acquiring in-depth knowledge in the subjects/courses. The same authors also give a content adaptation technique in which the institutions categorize programmes' content into foundation, breadth and depth courses. Foundation courses provide students with fundamental concepts for pursuing studies at a higher level. Breadth courses introduce students to different special areas in a given discipline, while depth courses offer specialization within each discipline. Such a technique is quite relevant in that it enables institutions to deliver programmes' content from simple to complex. Students may enjoy working from the known to the unknown and the idea of specializing in a specific discipline enables them to acquire deeper knowledge and skills in the chosen area. For one to apply this adaptive measure in TCD provision, he/she has to ascertain the content level of the students and classify them according to whether they should go for foundation courses, breadth courses or depth courses. The technique requires a well-resourced institution that can accommodate the classification of course levels. However, when a lecturer makes adaptations of the programme, it is critical that he/she maintains the same learning outcomes although the goals, expectations, presentations, materials, assistance and environments may vary (Block, 2011; Rosell & Ondrik, 2013).

Studies by various researchers carried out globally also note that lecturers' instruction and content adaptation techniques that attend to students' learning styles and needs remove barriers to learning and support students to be more successful academically (Anderson & Boyle, 2015; Shay, 2013; Rosell & Wickham, 2008; Zepke & Leach, 2007). Therefore, the other way in which curriculum implementers can cater for diverse students is through adaptation of instructional techniques which is discussed in one of the next sections.

Australian instructors employ instructional adaptation in order to meet students' diversities in their institutions (Anderson & Boyle, 2015; Exley & Kervin, 2013). The

instructional strategies include those that use explicit and systematic instruction. Examples arewhen instructors deliver curriculum content by identifying the subject's key vocabulary for explicit instruction, providing alternative representation of teaching and learning materials such as use of multimedia, illustrated texts, simplified texts or captioned video, and providing feedback and correction. The use of such electronic media in delivering subject content may arouse students to develop interest in the lesson thereby facilitating student learning as in the use of videos. However, students may not conceptualize subject content if they are not engaged in the activity of the process and remain passive during the lesson. Instead, Wright (2005) suggests that the lecturers should adapt how the students respond to instructions.For example, instead of answering questions in writing; they should allow verbal responses, use communication books for some students, allow students to show knowledge with hands on materials and through demonstrations. Such techniques enable students to be active during the lesson.

Anderson & Boyle (2013) also reveals that the curriculum instructors can organize and connect subject content knowledge, skills and values to promote generalization so that the diverse students can effectively learn. The researchers provide a range of methods which the lecturers can use to organize and connect the subject content such as providing opportunities for students to generalize and maintain the learnt concepts, providing opportunities for the student to think aloud (Verbalization), motivating students through engagement with personal interests, and designing levels of promoting learning concepts during lesson delivery. These instructional techniques enable the lecturers to link what they deliver with the learned concept allowing the students to develop step by step in acquisition of subject content. This instructional technique links quite well with Felder and Brent's (2007) content adaptation technique that links content from known to the unknown (foundation to depth subject content knowledge). The Exley & Kervin (2013) researchers in agreement with Wright (2005) provide another instructional mode that can be employed by curriculum instructors to cater for student diversities, which is use of alternative opportunities for students to represent their learning. Such opportunities include use of technology, augmentative and alternative communication systems, scaffolding student learning through guided practice and support, modeling problem solving, modeling and demonstrating skills, knowledge and cognitive strategies, and use of cross-curricular and naturally occurring

learning opportunities to enhance individual learning goals. The techniques that involve use of technology based applications are preferable since they match industry processes where students go for experiential learning and also get employed after graduating (Afeti, 2014; Nguku 2012). Also computer applications make designing processes simpler, faster and also enable students to model processes that would require live models and very expensive unaffordable equipment. The achievement of the above strategies also requires lecturer competencies and availability of resources. Therefore, there is need for examining how the lecturers in universities of technology adapt curriculum to meet the needs of students from diverse backgrounds.

The above strategies focus on inclusion of students with disabilities and those with different levels of capabilities. The issue of students with diverse academic qualifications may be catered for to a certain extent by some of the strategies. However, Rosell & Ondrik (2013) assert that inclusive schools' focus is to adapt the curriculum in a regular education class as much as possible to meet the needs of any student for which the standard curriculum is inappropriate. It is therefore, not certain whether the students may acquire the relevant knowledge and skills especially in TCD provision at university level when the students pursue different objectives within the same lesson. Although Rosell and Ondrik (2013) argue that when teachers make content adaptations, the curriculum should maintain the same learning outcomes, the learning outcomes may also need to be adapted to meet industry stakeholders' needs that change regularly due to technological development.

The lecturers must ensure an on-going programme content review and adaptation for the content to be relevant for the dynamic needs of students. The programme's content must undergo necessary structural reform and modernization in order to meet the needs of diverse students who enter institutions of higher learning from diverse backgrounds as well as the shifts in the global economic environment (Tuffy, 2014; Catts, Falk & Wallace, 2011; Afeti, 2014). Research has revealed that there is increasing awareness of how well the programmes are catering for the constantly changing environmental and economic needs of students as well as how the institutions compare with corresponding institutions in other states in programmes content and provision strategies (Tremblay, Lalancette & Roseveare, 2012; Mitiku, Alemu & Mengsitu, 2014; Tkachenko, Bratland & Johnson, 2016; Machteld & Naomi, 2016). This entails that higher education institutions have an obligation to offer

curriculum content and implementation strategies that cater for the diverse needs of students in order to remain competitive in higher education. Curriculum content adaptation to cater for the students' needs is one of the strategies that can be used to enhance student learning. However, curriculum adaptation techniques engaged by curriculum implementers should ensure maintenance of programmes' learning outcomes (Rosell & Ondrik, 2013).

The Irish National Strategy for Higher Education to 2030 state that the main focus of technological universities is to provide education and research that is of high quality and is industry focused. Therefore, the content adaptation strategies adopted in these technological universities have to take cognizance of the diverse students for them to be competitive among other higher education institutions. The universities' focus on industry that is emphasized through engagement in workplace learning, strong record of university engagement with local business through curriculum development and implementation, record of staff exchange, funding for training and research contracts and a record of international collaboration has to engage content adaptation in the mentioned areas for effective accommodation of diverse students through adaptation of curriculum content and implementation strategies (Tremblay et al., 2012).

3.3.3 Curriculum situation globally

The international research Organization of Economic Co-operation and Development (OECD) (2008) highlights that the present tertiary education landscape has become diversified due to the emergence of polytechnics, universities, colleges and technology institutes that have been developed to enhance linkage and relationship between tertiary education and the external world of work. The world of work requires workers with high level applied occupational knowledge. Therefore, there is need for university graduates to be exposed to curriculum that emphasizes applied knowledge by effectively adapting the curriculum content to meet the needs of students as well as that of programmes learning outcomes.

The advancement of knowledge as one progress from one level to another is very critical because it impacts on quality of education and skills acquisition (Ofeti, 2014; Lammy 2009). Moore & Shulock (2009) focused on measures to monitor students'

progress and degree completion time at universities in California, ignoring the intermediate courses done at vocational colleges, technical colleges, polytechnics and technical teachers' colleges. The courses done at college level are very important in university programme design and adaptation because they form a base on which the university lecturers develop programmes content to enhance quality of education. The college and polytechnic programmes also prepare students for the more academic environment of higher education.A consideration of such programmes in designing and adapting university programmes is important as it enables curriculum designers to meet the needs of the industry and accommodate the growing diversity of college graduates and expectations of high school graduates (OECD, 2008; Bandias, Fuller & Larkin, 2013). Therefore, vocational education programs at different levels, that is National Diploma, Higher National Diploma in Education and the Advanced Level Certificate need to be considered in the design of university curriculum in Textiles, Clothing and Design courses, which is the focus of this study. Some scholars argue that countries need well-structured, diversified and sustainable university education system to enhance provision of Technical and Vocational education, (Alam, 2008; Technical Education and Skills Development Authority (TESDA), 2013; Lammy 2009).That can only be achieved by well-structured programme content that effectively caters for diverse students such as the TCD students with diverse academic backgrounds who enter university TCD programmes.

TCD diploma graduates have acquired some TCD theoretical knowledge although they are primarily focused towards industrial applications. Students from high school have basic skills in technical and vocational education. However, those who have proceeded with the vocational subjects to Advanced level have better theoretical knowledge than those with Diplomas (UNESCO & ZIMDEF, 2005; Alarm, 2007)). Those students with Advanced level certificate in technical and vocational subjects lack hands on skills while those with Diplomas have a higher level of practical skills since they go for industrial attachment during training (UNESCO & ZIMDEF, 2005). Those with 'O' level technical vocational education have very basic practical and theoretical knowledge that can be related to survival skills which require further advancement for them to be employable as well as for them to be self-sustainable (Pami, 2008; Bandias, Fuller & Larkin, 2013). In contrast to the above, degrees in technology are expected to produce graduates with stronger theoretical knowledge

that can be applied to a wider variety of contexts. Students at this levelare required to demonstrate higher levels of initiative and responsibility, (Bozalek, Ng'ambi & Gachago, 2013; Alam 2007). Hence, this study sought to find out how the Textile, Clothing and Design curriculum at the universities of technology in Zimbabwe are adapted to address the needs of the students who have TCD content gaps discussed above. Bozalek et al. (2013) and Alam (2007) further point out that university graduates may not require work practice knowledge during their course but they should be generators of knowledge through innovation and creativity. It is of paramount importancethat the TCD students at university level go for attachment for a minimum of eight months. This attachment is done at the same industries where they went during their Diploma courses. Hence it is not certain whether they get exposed to different experiential environments than before. The discussion that follows addresses the TCD curriculum provision issues at regional level.

3.3.4 TCD curriculum situation in Africa

The introduction of universities of technology in Africa was as a result of the need to increase scientific content of diplomas to improve the ability of students to adapt to complex workplaces and environmental sustainability, (Bozalek et al., 2013; Blass & Woods 2012). It is therefore, imperative that the curriculum of the TVE (that encompassesTCD) be designed to reflect scientific content from high school and diploma to universitylevel to be of value to the economy of any country. This calls for improved status of university lecturing staff, students and degree programmes through curriculum reviews (Bozalek et al., 2013; Afeti, 2014). The development of TCD programs can be enhanced at universities through linkages with colleges, high schools and industry. A study carried out in Tanzania by Pammi, (2008) calls for linkage between colleges (TCD) and universities as a way of solving space and equipment issues.With the rapid increase in student numbers and diversity at tertiaryeducationlevel, sharing of such resources may be a challenge. This study sought to find ways of adapting TCD university curriculum content to enhance learning experiences of students with diverse academic backgrounds for the improvement of quality of education. Use of teaching methodologies mixed with application of technology to match with the fast moving and constantly changing industry in the TCD field of study may help to improve quality of TCD education at university level. The

analysis of TCD programmes for bachelor of technology degree through vocational route (degrees offered by polytechnics and technical colleges) in Tanzania reveals inadequate intellectual content which made the qualifications lower in value than degree qualifications obtained from universities. The university programme produces graduates who lack adequate practical skills while strong in theoretical knowledge resulting in qualifications that are not relevant to industrial practice, (Pammi, 2008; Alam, 2008). Therefore, there is need to find out how university TCD programmes are implemented to cater for the content gaps among students from high schools and those from colleges (Polytechnics and teachers' colleges). Hence, the study sought to establish differentiated curriculum implementation techniques that would yield a wholesome graduate who can meet industry requirement in skills proficiency.

The transition of students from more work oriented diplomas to more academic degrees may open up avenues for TCD students to have new developments for the future factories through new ways of doing things, (Bozalek et al., 2013; Nguku, 2012). However, the societal pressures to change from diploma to degrees for increased status and employability leads to secondary contradictions of access issues relating to points of entry and entry requirements for university education. To alleviate the access issue, universities' TCD programmes' curricula need to be accommodative enough by adopting strategies that enable students from diverse academic backgrounds to achieve their academic needs, which is the major purpose of this study. Of which implementation of effective strategies to cater for diverse students require well trained and experienced personnel. However, Blass & Woods (2012) and Thomas & Daniel (2009) raise the problem of employability of graduates from universities of technology because they lack adequate training. The same authors argue that most African institutions have lost more experienced, practice oriented staff through disasters and search for greener pastures overseas. Therefore, the degree of suitability of current staff to teach degrees of technology is questionable, particularly where they have over the years developed knowledge and skills in more practice based curriculum/ offerings. Hence, the need for this study to ascertain qualifications of lecturers who teach TCD programmes at universities to determineif they are capable of catering for students from diverse academic backgrounds for effective teaching and learning at university level.

The teaching and learning and research level among the university staff affect the expert performance of the manpower in delivering curriculum content domain specifics (Rip & Kulati, 2013). An analysis of degree programmes at Cape Penisula University of Technology in South Africa reveals the issue of programs requiring students to spend a lot of time in the work place during their studies.This limits the time to spend on theory and generic skills. This results in a dilemma of equating students' learning experiences at universities of technology with those at academic universities (traditional universities) seeing thatthe products (graduates) from both universities do not get an equal opportunity in the workplace, (Winberg, Engel Hills & Rip, 2013). Therefore, universities of technology lecturers should work very hard to design curriculum implementation strategies that enable production of graduates who are comparable to graduates from academic universities. They should strive to meet the needs of the diverse students as well as consider programmes' learning outcomes among the students.Bozalek et al. (2013) argue that the graduates from TVEcolleges are weak in theoretical knowledge and strong in practical skills while those from traditional universities are strong in theoretical knowledge but poor in practical skills.Thus, this study aims to find out curriculum implementation strategies that effectively cater for knowledge gaps among the students with diverse academic experiences that include those who are strong in theoretical TCD content and those who are strong in practical know how.

Besides the issue of balancing students' learning experiences, incorporation of sustainability in TCD curricular may solve the issue of joblessness across African countries due to continuous closure of clothing and textile industry(South African Clothing and Textiles Workers Union (SACTWU), 2013; Phakathi, 2013; IDC, 2012). In view of this problem, the higher education sector has to come up with degree curricular after an analysis of the current workplace situation in the Clothing and Textile industry, rather than developing a curriculum based on training needs for the current surviving factories (Bozalek et al., 2013).Such accommodative programmes can be produced by adapting the existing programmes to incorporate industry demands and the needs of the diverse students who enter university education from various schools and colleges. In addition to the above, Bozalek et al. (2013) notes that current university graduates view the clothing and textile industry as a 'sunset' industry which should be avoided when entering the business world.Sunset industry means that the

industry's future is unpredictable as it is deteriorating due to various challenges faced by the industry sector. Hence, investment in this sector has not significantly attracted highly skilled workers and technicians resulting in shortage of skilled manpower, (Dhliwayo, 2012; Morris & Reed, 2008; Vlok, 2006). This inhibits students' motivation in studying the TCD programmes. The institutions that offer TCD programmes have to work very hard to provide accommodative programmes that cater for student diversities in order to attract many students to join the field of study.The level of skills required for this sector has rapidly increased due to greater demand for quality and a shift to value added production approaches being employed by surviving clothing and textile factories in Western countries. This then calls forthe development of TCD university curriculum that addresses the skills gap.

An analysis of textile and clothing training institutions in Southern Africa by Nguku (2012) reveals university curricula which lack practical skills. However, the diploma, craft and artisan courses have between 40% - 90% emphasis on practical skills; hence, the stakeholders felt that there was need for universities to revise their curricular. Elma (2010) also highlights that the skills gap in TCD programmes in Kenya wasin the area of textile engineering and technology, technical fashion and design skills in middle management area. This study also examinesTCD lecturers' capacity to implement the TCD programmes that base on equipping students with designing and innovative knowledge and skills to meet industry requirements by implementing strategies to cater for diverse students in curricular provision. The overall analysis of courses offered in TCD areas across East Southern Africa's institutions reveals that the institutions do not provide training to specific textile machines. This leads to limited knowledge of modern equipment, tools, modern production methods, specialized programs in TCD management and insufficient capacity infrastructure for the ginning sector in cotton processing (Nguku, 2012; Afeti, 2014). This study therefore soughtto find out how the issues raised above can be addressed in the TCD programmes in Zimbabwe to improve on quality of TCD education.

3.3.5 Studies on TCD curriculum in Zimbabwe

The TVE in Zimbabwe was rationalized in 1990 when it was structured into five (5) levels which are Pre-Vocational Certificate (PVC), National Foundation Certificate

(NFC), National Certificate (NC), National Diploma (ND) and Higher National Diploma (HND) (UNESCO and ZIMDEF 2005). The HND was equivalent to a general degree which was a technologist grade and was at the sixth level in the Zimbabwe Qualifications Framework (ZQF) (Nziramasanga, 1990). With effect from 2004, the polytechnics were able to upgrade technical and vocational education training qualifications to graduate and postgraduate levels by adding only one year to the HND leading to a Bachelor of Technology (Honours) degree, hoping to progress to Master of Technology degree and Doctor of Technology degree in the future. Currently, institutions of higher learning allow students to move from technical and vocational institutions to the other TVE institutions without losing credits.However, thestudents get disadvantaged when they join universities because there is no national policy that guides such movements (UNESCO & UNICEF, 2005). Therefore, the individual departments within universities are given discretion to place students from the TVE institutions at any level they deem necessary.Hence, those students doing Textile, Clothing and Design programmes are mostly affected in terms of content coverage at the universities considering their various background qualifications from the various private and government institutions such as Polytechnics, Technical Colleges, Technical Teachers' Colleges, Teachers' Colleges, and Vocational Training Centres. From the course analysis in Textile, Clothing and Design Training institutions in the Eastern-Southern Africa by Nguku (2013), TCD programmes lack strong multi-disciplinary skills and application components in some programs where critical textile processes are not adequately addressed.There is also minimal design management content knowledge incorporated in the programmes.

The issue of lacking quality in tertiary education has also been raised by Mawoyo (2013) who points out that after Zimbabwe's independence, the tertiary education system focused on increasing access to education without paying attention to issues of quality. Quality is achieved through well-tailored programmes that cater for students' diversities and provide high quality learning experiences that can adequately meet industry requirements (Afeti, 2014; SARUA, 2009; UNESCO-UNEVOC, 2013). Due to the use of an inadequately structured curriculum in Textile, Clothing and Design programs at tertiary education level in Zimbabwe, the industry stakeholders noted that university college students were well grounded in theoretical knowledge but complained that they were not competent in practical aspects, probably as a result of

inadequate training due to lack of trained staff to operate and train students on specialized equipment and techniques (Nguku, 2012; Bozalek et al., 2013; Nguku, 2013; Bandias, Fuller & Larkin, 2013; Rip & Kulati, 2013; Hills & Rip, 2013). The TCD lecturers may need to adapt the programmes so that the curricular address the industry requirements as well as the needs of diverse students. The industry stakeholders indicated that students from Technical and Vocational Training institutions were competent in practical skills as they couldhandle assignments with little supervision although they lacked theoretical elements. This implied that these institutions place more emphasis on practical skills than theoretical content. It can also imply that the university curriculum implementers place more emphasis on theoretical content at the expense of practical skills. Nguku (2012, 2013) and Curriculum Analysis Whitepaper (Organization for Economic Cooperation and Development (OECD)(2008) observethat the TCD training institutions, especially universities, need to urgently revise the way they develop their curricular which may necessitate change in implementation policies so that more emphasis is placed on the value of the programmes and balancing of both practical and theoretical content knowledge as opposed to attracting high student numbers.The value of a programme may be influenced by adopted implementation strategies and its ability to meet the students' needs.

Currently many companies recruit candidates who need at least four years to complete the Technical and Vocational Education Training (TVET) (that includes TCD students) at Diploma level and spend one of these years at a college or polytechnic (UNESCO & ZIMDEF, 2005). Direct entry TVE Diploma students do the same programme in three years in which two years are spent at college or polytechnic and one on industrial attachment. In an effort to upgrade some of the TVET programmes to university level, some universities were established. This study sought to establish how the universities structured their programme content to accommodate candidates with diverse academic backgrounds and possibly come up with a proposed model of curriculum implementation that may improve transference and progression of candidates from colleges and schools to universities.

Zimbabwe's higher education engaged in widening access to tertiary education through a rampant introduction of universities and upgrading of colleges into university colleges (SARUA, 2009; Murerwa and Chigwedere, 2004). Because of the

mushrooming of many universities, infrastructure, qualified personnel and equipment became a challenge that heavily impacted the quality of TCD education (SARUA, 2009). Work related learning and internships for students deteriorated radically due to liquidation of companies. This seriously affected the curricular for TCD since places for experiential learning and experimentation were difficult to come by, hence affecting curriculum implementation with regard to equipping students with relevant practical skills. This study sought to find out how the TCD curriculum and implementation strategies can be adapted to meet the needs of students with diverse academic backgrounds in order to improve the quality of TCD education at university level and also address the needs of the textile and clothing industry at large.

In a bid to improve quality of technical and vocational education, Belvedere and Chinhoyi Technical Teachers' colleges were introduced to train qualified teachers for TVE programmes. However, the institutions were criticized for not affording enough time for practical training.The students were therefore, insufficiently trained (UNESCO & ZIMDEF, 2005). The products from the technical teachers' colleges, TVET colleges and Advanced level enroll at universities of technology to acquire degrees in their special areas. Therefore, this study soughtto examine the strategies used in the provision of TCD programmes at the sampled universities in order to address the different TCD content gaps among the students as well as to fulfill the intended degree learning outcomes.

A study by Kanyongo (2005) reveals that industry in Zimbabwe complains about the poor quality of curriculum that lacks the prerequisite skills for employability of the graduates. The OECD (2008) report notes that Zimbabwe's tertiary education is of poor quality because it lacks equity in student access. This means that the entrance qualifications for students vary leading to acceptance of students with various background qualifications.Although there is equality of TCD student access to tertiary level education through acceptance of students with various levels of qualifications, the issue of how the programmes are structured to accommodate the various levels of qualifications to enhance advancement in knowledge and skills acquisition among students needs to be addressed by this research. It is imperative that this study also examines assessment processes used to assess TCD students from diverse backgrounds to establish whether they enable achievement of programme learning outcomes or not. Mupinga, Burnett and Redmann (2005) carried out a study to

examine the purpose of TVE in Zimbabwe's high schools and revealed that the programme lacks clarity of purpose and there are differences between the purpose of programmes, as viewed by teachers, and that which is in official documents, whether it is prevocational or intensive skill training. This confusion among implementers and curriculum documents leads to variance in curriculum content and skills delivery strategies. As a result, this heavily impacts on the structure of TCD programmes and implementation strategies at university level, hence, the need to find out which content aspects are emphasized by the university TCD curriculum and how the curriculum accommodates students with various levels of knowledge and skills backgrounds to ensure high quality TCD.

In addition to the above, Primrose and Alexander (2013) observe that the current curriculum in higher education needs strengthening in development of values and in catering for needs and aspirations for self-reliance and entrepreneurship in order to produce a graduate who is a responsible, productive and self-sustaining citizen. The strengthening relates to improvement in thequality of programmes' content and implementation strategies which isthe purpose of this study. Macpherson and Holt (2007) cite the problem of the dynamic environment that is characterized by changing trends, globalization and sustainability issues. These issues may be addressed through curriculum and assessment adaptation and designing of delivery techniques to effectively cater for the students who enter university institutions with diverse academic backgrounds.

3.3.6 Assessment

Johns et al. (2008), Chessman (2007) and Akamobi (2005) assert that various assessments should be carried out after each teaching and learning stage to ensure that the students' chances of success are maximized. O'Farrell (2015) adds that use of a variety of assessments methods enables one to assess a range of skills, get more reliable and balanced assessment results in order to produce well versed and employable graduates. The assessments may be in the form of success criteria assessments, alternative assessments and differentiated internal examination papers that are aligned with teaching and learning as a cycle. These assessments can help each student to make improvements in learning.

Lecturers assess students to determine whether the intended learning outcomes of the course are achieved, to provide feedback to students on their performance, motivate students, support and guide their learning, provide information for decision making on progression and awards, and enable lecturers to evaluate effectiveness of teaching (O'Farrell, 2015; OECD, 2008). For the students, good quality, comprehensive and timeous feedback is very important as it drives student learning and enables them to realize where they have done well and also areas that need improvement. The other benefits of assessment feedback to a student are that it builds confidence in the student, motivates students to improve on their performance, it shows students their performance improvement level, enables them to identify their strengths and weaknesses, and makes them correct errors (O'Farrell, 2015; Hall et al., 2003).

O'Farrell (2015) further points out that if students use assessment to define and prioritize what is important to learn, and spend most of their time learning it, the lecturers have to respond accordingly. The assessment methods and timing of assessment convey messages to students. Lecturers need to take cognizance of the messages and prioritize the most important areas they want students to learn from as well as create clear and upfront learning outcomes and assess them accordingly (OECD, 2008; Tremblay, Lalancette and Roseveare, 2012). The different abilities may be a result of students' various academic levels and background characteristics when they enter programmes in various institutionslike university education. Deep learners usually tend to be critical thinkers while surface learners usually reproduce the taught information when asked for it. For instance, in the Irish tradition, assessment can test memorization, acquisition of facts or skills, and methods that can be reproduced. The assessment can also be used to test making sense of, abstracting meaning, interpreting and re-interpreting knowledge.

However, lecturers should be aware of the students' level and assess them accordingly. The level and mode of skills and competencies imparted through assessment depend on the level and type of course offered (National Qualifications Authority of Ireland (NQAI), 2003). The TCD students who enter university programmes have varying levels of knowledge and skills as reflected by their different qualifications that include Higher National Diploma, National Diploma, National

Certificate and "O" level and working experience. The TCD university lecturer should consider the academic level of students when designing assessment items.

3.3.7 Designing assessments

When designing, running and assessing a course or module, it is important that the instructors know and are able to clearly communicate to the students what the module/course is intended to achieve, what the student should be able to do after completion and what they should demonstrate in order to pass the module/course (Tremblay et al., 2012; Brown, 2001)

Alignment of these processes is vital for effective curriculum assessment procedures. When designing a course/module using a learning outcome approach, there is need to plan assessment as part of the whole curriculum experience. The assessment process should be congruent with the aims, learning outcomes as well as with the teaching/learning methods adopted (Biggs, 2002; Race, 2002).

In order to come up with clear and various assessment items that may address the needs of students, the curriculum implementers may examine Bloom's (1956) domains that base learning outcomes on three domains namely; cognitive, skills and affective (Biggs, 2002; Race, 2002; O'Farrell, 2015). These assist the instructors in framing assessment items that test the three domains although the assessment items may be structured differently to cater for the diverse students such as the TCD university classes. For instance, cognitive skills can be tested through assessments that generate problem solving, independent judgment and interrelation of knowledge and understanding. However, the Bloom's Taxonomy has been criticized in that the domains may only be hundred percent achieved in a situation where there is a balance of teaching and learning resources (Tremblay et al., 2012).Therefore, the implementation of strategies to cater for students in differently resourced environments such as those in Zimbabwean universities provided impetus for the researcher to examine assessment techniques used for the diverse TCD students to promote effective teaching and learning process.

3.3.8 Assessment techniques

Assessment can be in the form of summative, formative or continuous mode. Summative assessment is assessment that is used to test students' competences and contributes to the student's grade in a course, module, level or degree (Brown, 2001). Formative assessment is used to provide feedback to the student with advice on how to maintain and improve their progress. Brown (2001) argues that this mode of assessment should not form part of their summative grade or mark. Continuous assessment involves a series of tasks that are individually assessed. Sometimes final assessment is added to continuous assessment. Continuous assessment is best used when there are several distinct module learning outcomes that are achieved at established stages during the module. Formative assessments provide students with effective and accurate feedback. However, teachers need to assess students frequently and routinely in relation to the unit or study's learning goals or end product using summative assessment (Brown, 2001). Hattie in Alber (2016) recommends that teachers spend the same amount of time on formative assessment as they do on summative assessment.

Summative assessment has the ability to determine the extent to which the student has attained learning outcomes for a specified module and ends with a student grade that affects the students' progression. The assessment technique also helps the instructor to measure achievement of programmes' learning outcomes, to understand what the students have learnt, how much effort they applied in designing implementation approaches in teaching and learning, and the nature of summative assessment that suits the students' level of competence (Brown, 2001).The disadvantage of summative assessment is that it only gives the student a single chance to show his/her capabilities, it measures particular types of knowledge and can work well for those students who can withstand stress and possess good recall skills (O'Farrell, 2015).

However, continuous assessments are capable of providing a more reliable estimate of the students' capabilities, achievement of subject/course objectives, and can indirectly measure students' ability to manage time and handle stress (Brown, 2001). Continuous assessment is more evenly distributed although it tends to exert a greater workload on the student and on the lecturers as compared to summative assessment

which is a once-off final assessment. O'Farrell (2015) argues that timely feedback is an important characteristic of continuous assessment because it informs the student how well he/she is progressing and identifies how he/she can improve. The feedback can as well direct the students' future learning demands. These merits of continuous assessment are very relevant when dealing with diverse students as each student may get to judge the level of his/her knowledge and skill acquisition. The assessment results also guide the instructor on future course content planning for the students.

Formative assessment is also one of the assessment techniques that is essential for students' learning and for the teacher as it forms the basis from which summative assessment is derived. O'Farrell (2015) emphasizes that the amount of formative assessment should be maximized in curriculum design as it is an important factor that drives students' learning. The assessment however, should be accompanied by good quality and comprehensive timely feedback. The feedback enables students to observe their achievement of learning outcomes, realize where they have done well, indicate what they need to improve and finally help them to justify their summative assessment grades. Although, it is important to provide feedback timely, too soon a feedback may disrupt the students' reflective process and feedback that is received too late may not motivate students to improve as they may lack time to work on identified shortfalls (O'Farrell, 2015). The student is likely to benefit from feedback once the task is complete before they move on to a new task. The assessment also assists the instructor to design and improve content delivery approaches to match students' needs and learning styles.

Due to technological advancement, the continuous assessment, formative assessment and summative assessment can be done on a computer using relevant software that makes students carry out assessments on their own. Computer assisted assessment is a fast and efficient method of assessment that gives immediate feedback to the learner and saves instructors time on marking. Computer Assisted assessment is formative since it helps students to discover whether they learned the content that was intended by the teacher/lecturer (Brown, 2001). There are various methods in which computers are used in the assessment of students' learning that include Computer Aided Assessment, Computerized Assessment, Computer Based Assessment and Computer Based Testing. Online Computer Based Assessment has been in existence for a long time in the form of Multiple Choice Questions. Computer

Based Assessment is directly used to manage or support students' assessment process. The provision of various modes of computerized assessment methods may enable lecturers to cater for diverse students.These methods also provide a platform from which instructors may choose methods that they feel comfortable to work with.

Besides use of computer assisted assessment, lecturers can use assessment grids to assess students from diverse backgrounds. Assessment grids are timely and efficient assessment practices that are used by markers to develop and enhance student feedback (Race, 2001; 2002; Rust, 2001). The lecturer must provide the students with assessment guides that inform their assessment preparation. Margaret Price and Chris Rust of Oxford Brookes University have developed a high standard assessment grid for instructors (Rust, 2001). The assessment grid provides a comprehensive list of criteria that can be tailored to suit one's modules. One simply selects the criteria/descriptor one wishes to use for an assessment that is relevant for one's module, and creates a grid.

Table 3-1: Assessment methods

ASSESSMENT METHOD	DESCRIPTION
Cases and open problems	Is an intensive analysis of a specific example
Computer based assessment	Use of computers to support assessment
Essays	Written work in which students try out ideas and arguments supported by evidence
Learning logs/diaries	Wide variety of formats ranging from an unstructured account of each day to a structured form based on tasks.
Mini-practicals	A series of short practical examinations taken under timed conditions.

	Assessment of practical skills is an authentic setting.
Modified essay questions	A sequence of questions based on a case study. After students have answered one question, further information and a question are given.
Multiple choice questions	Select the correct answers
Orals	Verbal interaction between assessor and assessed.
Objective structured clinical examinations	Candidates measured under examination conditions on their reaction to a series short, practical, real life situations.
Portfolios	Systematic collections of educational or work products that are typically collected over time. Wide variety of types from a collection of assignments to reflections upon critical incidents.
Poster services	Display results from an investigative project.
Presentations	Oral reports on projects or other investigative activities.
Problems	Measure application, analysis and problem solving strategies.

Group projects and dissertations	Assessment by tutor/lecturer of the products of student group work.
Questionnaires and report forms	One or more questions presented and answered together.
Reflective practice assignments	Measures capacity and evaluates experience in the light of theories and research evidence.
Reports and practical	Methodically written account of a practical investigation
Self-assessed questions based on open learning. (Distance learning materials and computer based approaches)	An assessment instrument is self-administered for a specific purpose of providing performance feedback, diagnosis and prescription recommendations rather than pass or fails decision.
Short answer questions	Brief answers that can measure analysis, application of knowledge, problem solving and evaluative skills.
Simulated interviews	Assessment of oral communication skills.
Single essay examination	Usually three hours on prepared topic.
Work based assessment	Variety of methods possible, including learning logs, portfolios, projects, structured reports from supervisors/ mentors.

Adaptedfrom Brown (2001: 11)

In TVE provision, institutions should strive to produce students who have competent skills and knowledge that meet expectations of industry. Akamobi (2005) posit that employers require employees with critical thinking skills, self-regulatory skills, who are adaptable and flexible. These employees also need meaningful evidence of these capacities in potential employees. Authentic Assessment has been recommended by Akamobi (2005) as a method of assessment that may meet the mentioned standards by industry.It can align institutional operations with the way imparted knowledge and competencies are judged in the work place. It focuses on those tasks that are meaningful to the students and linked to school and non-school demands like when one begins his/her business.

Students were also assessed when they are on industrial attachment by both the lecturers and industrial mentors. The assessment is relevant because it provides curriculum implementers with information on how students perform in the industry. However, various issues have been leveled against industrial attachment by many researchers. Jumo, Chiweshe, Edziwa & Museva (2013) examined the use of the log book as an assessment tool by the assessors and found out that the industry stakeholders did not understand the instrument since the universities did not induct the mentors on how to use the instrument. Therefore, the mentors were coming up with different interpretations of the assessment instrument. The researchers suggest that there be regular workshops to staff develop the assessors. The other study by Kathuli-Ogola, VanLeeuwen, Kabaria-Muriithi & Weeks (2015) on supervision challenges encountered during Kenyan University students' practicum attachment, found out that most industrial supervisors did not have a clear understanding of the learning objectives for the students. The study findings reveal that the industrial supervisors felt that they should meet the lecturers first to discuss what they should focus on during the supervision.

In Ireland, the education system recognizes prior knowledge of students employs credit accumulation system, practices modularization and flexible delivery systems and integrated system of qualifications to cater for student diversities (Scattergood, 2011; UNESCO, 2012). The admission to the programme is based on the recognition

of the applicant's prior experiential and /certified learning. Exemptions from programme components are not available. The programmes enroll a small number of students from various backgrounds and with various experiences. The teaching and learning experience is intensive and adapted to deal with the diversity of students entering the programme because Ireland has a Recognition of Prior Learning Policy (RPL) (Skillnets, 2012; Scattergood, 2011).

When designing adult and continuing education programmes, the lecturers cater for students with prior learning by providing core and elective streams within programme components from which students seek exemptions. However, Scattergood (2011) and Van Kleef (2011) allude to the disadvantage of recognition of prior learning policy by Ireland University saying the policy may be unfair to the traditional students who enter universities from high schools as the mature students (those from colleges and industry) dominate the instruction processes and override the traditional students. Some instructors noted that some of the mature students have challenges in coping with the university workload since some of them have been operating businesses or working in different fields within the specified areas. However, it has been noted that the mature students who have acquired their knowledge and skills outside the formal education and training systems may require additional formal support from institutions to ensure that they can successfully participate in a given programme (UNESCO, 2012; Scattergood, 2011; Skillnets, 2012; Van Kleef, 2011). This can be catered for by improved consistency between programme design, learning outcomes, teaching and assessment methods by the lecturers. Students from different backgrounds are likely to benefit from teaching and assessment methods that match with intended learning outcomes and examination based assessment (Scattergood, 2011).

3.4 Support for catering for students with diverse backgrounds at institutions of higher learning

Since higher education institutions have the responsibility for the selection of students, they should be able to align student enrolments with their capacity, which includes provision of adequate human and material resources to serve the number and address the characteristics of students they enroll (ATF, ILO & UNESCO, 2012). Chand (2001)

and Andrews (2013) concur that university management should fund and actively support the training programs by allocating funds for specialized training to meet current trends in industry and needs of diverse students. Examples of such training programmes include specialized training in pattern design and modern technology to address curriculum learning outcomes. Specialized CAD/CAM equipment maximizes students' interaction with the subject content. The resources enable TCD programme implementation to be formalized, coherent, well-sustained, thereby catering for diverse students and providing students with up to date knowledge base to increase their innovative capacities and address students' differences (Lucas, Spencer & Claxton, 2013). Chand (2001) and Alam (2008) propose that university management should allow a co-ordinate and complementary approach among education and training institutions to strengthen their existing ties and create new initiatives in order to develop specialized skills required in industry. Coordination of training institutions also allows curriculum instructors to share challenges and information pertaining to inclusion practices for students from diverse academic backgrounds. However, Chand (2001) and Nguku (2013) propose that universities should provide a multi-disciplinary education curriculum instead of a specialized education specific to a particular market, in order to produce versatile graduates. University management should also provide room for program evaluation and knowledge feedback to keep track of innovation opportunities among students with different abilities and backgrounds through stakeholder involvement (Muzenda & Duku, 2014; Osam, 2013). However, catering for students with diverse academic backgrounds may require further content adaptation procedures and designing of curriculum implementation strategies that require necessary support for lecturers' innovation and creativity.

Institutional support for disadvantaged students requires prioritization of programme resources. The first year students require support in the form of human and material resources during student selection and admission, course selection and during the orientation stage (UNESCO, 2013). During these stages, the institutions should provide relevant staff and appropriate media to test students so that at risk students, who require academic support and development, and those who require preparation for the world of work can be identified. The students in need of support should then be channeled to support units which should be well-resourced for entry into specific programmes. Catering of diverse students from different academic backgrounds may

not require specialized adaptive materials, but requires support in terms of time and human resources to assist those with special needs to reach the same level with the whole group of students. This study examined the appropriate support required by both curriculum implementers and students with diverse academic backgrounds for facilitation of effective teaching and learning.

Institutions of higher learning and policy makers must be assisted to deal with traditional and non-traditional students by identifying at risk students and developing policies and procedures to ensure their success in completing university programmes (Moore & Shulock, 2009 study carried out in California). The institutions need a high degree of flexibility within programmes offered to enable schools and lecturers to adapt instructional materials, teaching methods and environment to provide the most appropriate educational opportunities for diverse students (Ministry of Education, 2011 in California).

When institutions employ adaptive measures to programme provisioning, the measures help students to achieve curriculum outcomes by maximizing student learning and independence, lessening discrepancies between achievement and ability, promoting positive self-image and feeling of belonging, and promoting students' willingness to become involved in learning (Ministry of Education, 2011). However, while these are general adaptive measures and benefits for students with different abilities, the study sought to establish institutional support strategies for TCD students from diverse academic backgrounds to promote effective learning among all the students. The institutions must also offer a culturally relevant curriculum and adequate resources to foster meaningful learning experiences for all students and support universal human rights. Moore & Shulock (2009) assert that a more recent and growing part of the literature is aimed at helping institutions and policy makers deal with the realities of non-traditional and traditional student populations through identifying at risk students and developing policies and procedures to foster their success. Within the classrooms, curriculum implementers also play a greater role in supporting diverse students to succeed in their studies. The study, therefore, sought to examine the level of the lecturers' support for the achievement of curriculum learning outcomes among the students.

The instructors design a wide range of coordinated and coherent structural mechanisms to provide holistic support and development throughout the student academic life. Jones, Coetzee, Brailey & Wickham (2008) propose a wide range of lecturer coordinated programmes ranging from student pre-assessment, setting up academic development units, designing foundation and extended learning programmes, running targeted support programmes, mentoring peers, and providing tutorial support to in-service training and employment services. However, these programmes have inherent weaknesses which call for greater tracking and monitoring to improve their effectiveness and to ascertain whether they can effectively cater for students from diverse academic backgrounds or not. Since different institutions have different policies and learning environments, it was necessary to find out how the technology universities supported the TCD students from diverse academic backgrounds to achieve quality TCD provision.

During curriculum implementation, the instructors may adjust the level of support by increasing the amount of individual student assistance to keep students on the task, to reinforce and to promote use of specific skills. Curriculum implementers enhance adult student relationship through use of physical space and environmental structure. Thus, the study sought to establish how the physical space and learning environment was manipulated by the lecturers to cater for students from diverse academic backgrounds. For example, assigning peer buddies, teaching assistants, peer tutors or cross age tutors. However, interactive techniques and methods of structuring the learning environment may be determined by the course being taught, that is whether it is theoretical or practical, as well as by the support structures and the skills possessed by the instructor.

3.4.1 Student pre-assessment

Research carried out in South Africa reveals that students who enter institutions of higher learning come from different geographical settings, different financial backgrounds and different institutions where their languages are taken as a second or third language, and also from various socio-cultural backgrounds (Jones, Coetzee, Bailey & Wickham, 2008).The students from some of the rural areas have had less exposure to current technologies, and their way of living differs from students who

have grown up in an urban setting where they have been exposed to more current technologies (Chessman, 2007; Rizvi, 2014). Financial resources refer to the various sources of funds on which family members depend. Students from well financed backgrounds have had opportunities to attend better schools than those from financially constrained backgrounds. The students who have attended schools where their language was taken as a second or third language have problems of communication with other students and have challenges of understanding the language of instruction during lessons. The various socio-cultural backgrounds affect students' participation in class and also affect their socialization with others during extra curricular activities. Troskie–De Bruin (2004) in Jones et al. (2008) argues that academic success is enhanced by positive student interactions and relationships with institutional staff as well as peers. The interactions are achieved in class and via students' involvement in extracurricular activities and through interaction with peers during class activities engaged in from the teaching methodologies employed. The various student backgrounds discussed are equated to the various academic backgrounds of TCD students in which their different levels of qualifications, which inherently encompass the institutions attended, affect their performance at university level. The present study sought curriculum implementation strategies employed by the lecturers to enhance students' learning achievement and quality of TCD programmes' provision at university level.

Student pre-assessment that involves student selection and admission procedures are necessary within institutions of higher learning to enable admission of only those students with the potential to succeed at university and within a selected field of study (Jones et al., 2008; UNESCO UNEVOC, 2013). The pre-assessment procedure also enables the institutions to design strategies for student diversities. The pre-assessment criteria varyfrom one institution to the other and also differ among faculties within the same institution. However, the mode of identifying potential students using their school marks has raised some concerns among university academic staff as the students' high marks at school level do not match their performance at universities (Jones et al., 2008). Therefore, students' school marks and results may not be reliable predictors of academic success. A study carried out among South African school leavers in 2002 revealed that most of the students who had performed highly at school level examinations did not perform correspondingly well at university level. Their

school level results did not seem to have an impact on their performance at university level (Jones et al., 2008). The same authors argue that students' school performance rank and their grades is just an indicator of the student's ability to progress to the next academic level.

The quality of a grade varies across schools and provinces. One lecturer points out that if a student has struggled academically, and has been at a well-resourced school that has high educational standards and good academic support; one is likely to succeed at university level (Bourdieu, 1996; Sullivan, 2002). The lecturer also indicates that weak students from good schools who qualified for foundation programs were unlikely to succeed whereas students who had performed well at a weak school were likely to use the foundation support and perform well at university. The students are more likely to complete a degree if they come from higher income families, have parents who have attained college certificates, have stronger academic preparation in high schools, have enrolled in college shortly after high school graduation, are highly committed to complete a degree, and attend college full time without interruptions (Adelman, 2006; Calcagno, Crosta, Bailey & Jenkins, 2006). This entails that traditional students are mostly successful, because of post-secondary institutions' programmes designed at a time when most students were well prepared for those programmes (Moore and Shulock, 2009). Basing on the growing population of non-traditional students (students from diverse backgrounds), there is need to design or improve institutions and educational programmes in order to be more effective on the nature of students such as those with diverse academic backgrounds (Adelman, 2006; Calcagno et al., 2006, Moore & Shulock, 2009).

In a bid to support programme provisions to cater for the diverse students, the universities of technology need to pave way for the diverse students to participate in various activities related to programmes in regional clusters with partner universities (Irish Higher Education, 2013). This enables them to deliver curriculum content on the range of national policy outcomes (Irish Higher Education Authority, 2011). The studies also emphasize that the institutions must provide sufficient materials and expertise to deliver excellence in teaching and learning with a strong basis on innovative and flexible modes of delivery. These institutions must also develop strong international profiles in curriculum implementation (Higher Education Authority, 2013).

These assist students to develop a positive attitude and self-concept in the programmes offered by the institutions, thereby facilitating effective teaching and learning among the diverse students.

Basing on the above arguments, most universities carry out different forms of assessments on students entering universities. In South Africa, the assessments are carried out to test the applicant's knowledge and application of Mathematics, their understanding and use of a specific language, and their ability to think analytically and critically (Jones et al., 2008). The assessments are used to identify students who need foundation programmes before entering some programmes, to identify prospective students for some courses and to identify at risk students who require support mechanisms and monitoring of their progress in order to maximize their success. The entry point assessments to higher education are important as appropriate assessment and student retention are inextricably linked (Jones et al., 2008). Mather & Muchatuta (2011) consider identification of student diversity as a resource that enriches universities' core activities in teaching and learning, research, leadership and administration, and community engagement.

In United States of America (USA), students' entry into higher education is guided by the civil rights movement, an approach that promotes respect and equity for a wide range of cultural groups rather than focusing on particular groups characterized by gender, ethnicity and disability (Mather & Muchatuta, 2011). In United Kingdom (UK), the higher education section enrolls all students with various characteristics ranging from those who come from different social classes, ethnic groups, disabled students, from different religious groups, from different cultural identities, and from diverse sexual orientations, to full time and part time students (Mather & Muchatuta, 2011). These enter into universities with different qualifications, work and life experiences, life styles and approaches to learning. Mather & Muchatuta (2011) posit that this wide range of differences among students requires an inclusive pedagogy that embraces a wide range of differences and exploration of their effects on individual learning, such as those discussed next.

3.4.2 Setting up academic development units

Institutions set up academic development units to assist diverse students who enter the institutions with different characteristics. The academic development units comprise alternative access programmes and targeted academic development workshops for students who lack some program components as they enter universities. They also offer remedial support to students. However, the support rendered to students is also relevant for the curriculum instructors in order to upgrade and enhance their proficiency in TCD delivery strategies. The study sought to establish the support provided for TCD lecturers for them to be responsive to dynamic TCD classroom environments, developments in industry and ultimately to meeting the needs of diverse students such as those from diverse academic backgrounds. The development units may be centralized or decentralized (Dhillon, McGowan & Wang, 2006). When they are decentralized, the support units are set up across different campuses, faculties and departments. When they are centralized, the academic support is provided directly to students by one academic development unit within a university. If the academic support units are decentralized, each faculty, school or department has its own academic support programmes, modules or interventions that suit their students. Johns et al. (2006) point out that centralized support models allow for greater integration of foundation and support programmes into mainstream academic programmes, whereas the decentralized units may become fragmented, uncoordinated and unevenly implemented across the faculties, schools and departments. The decentralized units may also lack the necessary support services like specialized equipment, materials and expertise needed for ensuring high quality of curriculum development and teaching practice for various programmes. However, some scholars argue that a centralized support unit offers a platform for advocating change and a forum for staff that are adapting and changing their teaching practices from the old operation modes to the new systems, especially technology driven methodologies (Hockings, 2010; Majumdar, 2012).

Although there are support centers at most of the global institutions, Dhillon et al. (2006) highlight that there is global concern about the increase in the number of students who drop out of universities before completing their degrees and the costs of non-completiondue to increasing diversity of students entering high education

institutions. This has resulted in the need for additional academic support and personal development of students that includes study skills to support academic writing skills as well as subject-specific support to address gaps in subject knowledge and understanding. The support contributes to the quality of students' learning experiences and their educational achievement (UNESCO, 2013; Majumdar, 2012), but does not adequately address the need for accommodative teaching practices by the instructor to enhance students' interaction with subject content knowledge to achieve curriculum learning outcomes.

3.4.3 Designing foundation and extended learning programmes

Foundation and extended learning programmes are alternative access routes for students who show that they are academically not ready to enter the university programmes after the point of entry assessments done by student admission departments (Hockings, 2010; Dhillon et al., 2006). The foundation programmes may include some mainstream course content coupled with relevant foundation development components like language, academic literacy, study skills and subject specific support to address gaps in programme knowledge and understanding (Jones et al., 2008; Dhillon et al., 2006). The extended programmes are an extension of a mainstream first year programme over two years to support those students who lack important concepts of the mainstream programme. In some instances, the extended learning programmes are generic in certain fields of study such as Textile, Clothing and Design field. In such cases, students pursuing different programmes can go through the foundation or extended programmes together and split into different programmes later after fulfilling the lagging gaps in knowledge in specific programme courses. The foundation programmes are recommended as the most effective ones because they are composed of a wide range of teaching and learning packages that widely prepare students for course specifics as well as for the general programme requirements like language skills and academic literacy and study skills (Dhillon et al., 2006; Moore & Shulock, 2008). However, such support services are just structures laid down by the institutions which may not be very effective if not well equipped to meet the needs of various students and stakeholder dynamic needs. It is important to find out how the lecturers and other relevant support structures like library and programme laboratories are equipped to ensure provision of responsive learning

environments for diverse learners during mainstream lessons, which is the purpose for this study. Jones et al. (2008) point out that after completion of the foundation and extended learning programme, the students require a more holistic system of assessment to give them the opportunity to demonstrate a range of abilities acquired during the foundation and extended learning programme.

In Australian universities, students from diverse backgrounds are exposed to transition programmes and foundation programmes as well as pre- assessment to address knowledge gaps and direct students to appropriate programmes. The transition programmes are meant to familiarize students with university demands, to meet the demands of university study, and to address students with special needs (McInnis & James, 2003; Anderson & Boyle, 2015). These may include international students, mature age entrants, and those from rural and isolated regions. In some cases, the transition programmes are separated from orientation programme in order to address students with special needs. The Australian universities offer whole institution foundation programmes that are designed to accommodate mature age entrants with a median age of twenty-two years. The approach is meant to address the significant differences that exist between the twenty-two to twenty-four year old age group and the school leavers as well as the old students (mature age). These diverse groups have different expectations and learning needs. The programme helps beginner undergraduate students in the development of skills and approaches that are a prerequisite for success in their subsequent studies. The foundation programme also helps to introduce students to the value of broader outlooks through interdisciplinary perspectives in the form of transition and bridging units. These programs are coordinated by the teaching and learning centers in Australian universities. This study focused on how such learning centers' instructors are supported as well as the nature of the classroom environments.

In the African countries context, the foundation and extended learning programmes address issues of access of different individuals and students with different socio-cultural identities which influence how they develop valued capabilities (UNESCO-UNEVOC, 2013). UNESCO (2011) views these preparatory programmes as capability approaches which focus on addressing institutional and cultural barriers that prevent the accommodation of different groups of students into specific programmes like the

Technical Vocational Education Training (TVET). Unterhalter (2007) claims that there are gender norms and practices within some cultures that may limit the enrolment of girls and women in TVET programs. UNESCO-UNEVOC (2013) and Maclean (2010) posit that students with disabilities, students from minority ethnic groups and those who speak minority languages often encounter some forms of discrimination that limit their access to TVET and their opportunities for learning when they are enrolled into the programmes. The same authors point out that the area relating to barriers of learning faced by different groups of students is under-researched. The study on strategies used for students from diverse backgrounds in the provision of TCD programmes falls within the same area of study related to barriers of learning faced by different groups of students.

A study by Moore & Shulock (2009) carried out with California State University students, suggests some factors that may enhance student success in university programmes. These include improving student preparation for university programmes through better alignment across secondary and post-secondary education and carrying out outreach programs to families around college preparation, admission and financial aid. Adelman (2006) suggests that students need to complete gateway courses, especially Mathematics, early in their college career so that it is easier for them to complete bachelor's degree programmes successfully and complete Mathematics credits early during the first two years. Many studies by Adelman (1999), Adelman (2005), Roksa & Calcagno (2008), McCormick & Carrol (1999), Chen & Carrol (2005) & Calcagno et al. (2006) emphasize the importance of early accumulation of college credits as means of providing momentum towards degree completion. One of the studies reveals that among the students who enrolled in a four year programme at a university, forty-five percent completing fewer than twenty units in their first year went on to complete a degree study as compared to ninety-one percent completion among students who had thirty percent credits in their first year (McCormick & Carroll, 1999). Therefore, students' completion of thirty credits in their first year was correlated positively with degree completion (Chen & Carroll, 2005). An analysis of students beginning in community colleges reveals that bachelor's degree attainment was fifteen percent lower for students who earned less than twenty credits in their first calendar year of enrolment compared to students who got twenty or more credits (Adelman, 2005). A study of first time degree seeking students in the Florida

Community college system found that reaching each of the three credit thresholds- twenty-four, thirty-six and forty-eight semester units was associated with a higher likelihood of transferring to a university degree programme (Roksa & Calcagno, 2008). In a study with all Florida College students, Mart (2007) notes that students who accumulated credits at a declining rate over successive terms were less socially and academically engaged in college work. The results suggest that a decline in credit accumulation was a marker of limited engagement and of being at high risk of dropping out. Therefore, this study sought to find out how the decline in students' performance can be alleviated through relevantly designed support services as well as diversified implementation strategies designed by curriculum implementers.

Besides the above, research consensus is that students' academic preparation in high school is strongly related to college outcomes (Berkner, He, Cataldi & Knepper, 2002; Hoachlander, Sikora, Horn & Carroll, 2003). Some researchers suggest that the predictive strength of high school preparation declines when variables representing college academic performance are included in the university models. Researchers found out that use of methods that account for events that took place over time lead to decline in the predictive strength of high school academic resources. Therefore, the authors argued that high school preparation is important because it affects college GPA, which in turn predicts degree completion by students. The TCD students with varying academic qualifications may perform differently as their level of background knowledge in Textile and Clothing area varies. These students need university engagement that assists them to perform well by attending to their various needs and ensure they succeed in their academic careers. This study sought to find out how the institutions attend to the needs of such TCD students who join university education with various academic backgrounds.

A considerable number of researchers indicate that support programmes for new students are associated with better student outcomes (Moore & Shulock, 2009; Bailey & Alfonso, 2005). Some researchers refer to the support programmes as orientation courses. These courses provide students with information on study skills, goal setting, campus facilities, and support services. Various studies carried out in universities and community colleges in California found that students who take an orientation course upon enrolment in college have higher completion rates, earn more total credits,

maintain higher GPAs, and are more likely to persist and graduate (Derby & Smith, 2004; Sommo & Collado, 2009; Stovall, 1999; Zimmerman, 2000). However, it depends on their academic preparation in the fields of study they pursue at university. The first days' orientation is a general support that assists students to adjust to the university academic environment, which is different from how programmes instruction is delivered in mainstream classrooms that have diverse students. Students with diverse academic backgrounds have various content knowledge and skills experiences that may need to be taken into account and utilized to ensure students' academic success. This study sought to establish best measures that can be applied to cater for such students at university level.

3.4.4 Targeted support programmes

Targeted support programmes are support programmes that are meant to offer assistance to students on the mainstream. The programmes are aimed to offer support to the first year students always. For instance, students with challenges concerning language are assisted. Some students may lack confidence to seek for assistance from lecturers because they may not be sure how to express themselves (Coetzee, Bailey and Wickham, 2008). They may also struggle to understand the lecturers' responses. The same students may also fail to understand examination and test questions. For example, the students who enter university TCD programmes without any TCD subject at Ordinary level or at Advanced level may have challenges in understanding TCD technical terms used in teaching and learning, and may also be shy to express themselves to the whole class, hence, the need to find out how the lecturers handle such challenges which affect their academic careers to ensure catering for diverse students especially those with different academic qualifications.

3.4.5 Peer mentoring and Tutorial support.

Thomas et al. (2002) in Jones et al. (2008) conducted a study with South African Higher Education lecturers and observed that most institutions use peer mentoring and tutorial support to support students academically. The approach involves appointment of personal tutors / mentors who take on a structured and pro-active role in supporting students in their studies. The peers or mentors have been found to be

very effective as students could relate to them more easily (Jones et al., 2008). However, institutions need to develop formal peer support programmes that should guide the mentors in their operations. Jones et al. (2008) argue that it is not easy to match senior students with first year students doing the same course. Therefore, some institutions engage specialist subject tutors to hold tutoring sessions with the students regularly. There is therefore, need to find out how the TCD department engages support services through tutorship for students with diverse academic backgrounds. The mentoring programme must cater for both students living on or off campus. Jones et al. (2008) point out that although evening sessions are carried out with students, the mentoring programme always experiences some challenges in reaching all the students. In some institutions, some academic staff offer formalized mentorship to support students with academic challenges. However, weak students may be reluctant to make appointments with the staff (Jones et al., 2008). The tutorial programmes need to be continuously monitored and evaluated to ensure that they meet students' needs and for institutions to ascertain their impact on the students and on the institution itself. The study also reviewed how the existing support services were delivered and monitored in order to come up with improved support services for students from diverse academic backgrounds.

3.4.6 Tracking and monitoring

Tracking and monitoring students' progress is implemented by institutions in order to provide academic support. The process enables the institutions to identify failing or at risk students, to ascertain the mode of support required, and to evaluate the effectiveness of support systems and programmes employed. Jones et al. (2008) argues that disadvantaged students such as those with disabilities are inherently at risk therefore, institutions should put up systems to monitor them. The process of tracking and monitoring students can inform diagnostic approaches for the development of learning support procedures to serve students with academic challenges. However, in most instances, struggling students are only identified at the end of the course when marks are collated, which is too late for corrective measures to be effected. In some instances, student classes are too large for lecturers to offer individualized counseling services (Jones et al., 2008). Students from diverse academic backgrounds also suffer the same challenges of academic achievements

since their skill and knowledge levels differ, thereby requiring different approaches to learning and teaching (Tkachenko, Bratland & Johnson, 2016). However, Jones et al. (2008) highlight that student success is more than just academic achievement.It is also about students' employability after they have completed their degree programmes. Clothing industrialization Zimbabwe argue that the TCD graduates are not performing as per their expectations because they lack the relevant knowledge and skills (Nguku, 2012) (Mupinga et al., 2005; UNESCO and ZIMDEF, 2005; SARUA, 2009). There is therefore, need to assess how training of students is done, especially through catering for students from diverse academic backgrounds to promote effective teaching and learning measures for quality education in TCD programmes.

3.4.7 In-service training and employment service.

Many qualifications, especially professional qualifications, require students to complete a period of in-service training or work placement before they graduate. In-service training is most successful when the programme is well structured within the institutions to assist students to get suitable placement, and when there are clear agreements between the institutions, the organizations hosting the students, and the students (Jones et al., 2008). With regard to TCD students with diverse academic backgrounds, there should be agreement among the three parties as to the nature of skills to be learnt so that the students are placed in relevant sections of the organization to enhance skills acquisition by the students. The study also examined the conduct of TCD student attachment experiences to find out strategies offered by the institutions and by the host companies for effective learning among the diverse students. In-service programmes do not only enhance job prospects of students, but also produce a pool of high quality, work ready graduates for the industry.

A well-structured in-service training programme should be developed by lecturers in conjunction with industry and the graduates. Feedback to university academic departments by workplace supervisors on the work readiness of students, especially with regard to aspects that they find to be inadequately covered in the curriculum, is very essential. The feedback enables lecturers to incorporate the aspects that are not adequately addressed in the curriculum design, enrichment and adaptation. The TCD students look for in-service placement on their own, which maynot be easy. One

student reported that she had made poor choice of work placement and as a result had not learnt what she needed to learn in order to cope with subsequent course material. She had to drop out of the course as a result, and returned to college the following year to complete the programme (Jones et al., 2008). Making an informed choice of in-service placement is more difficult for students who have little experience of the workplace and may also be disadvantaged by lack of confidence to assert their need to learn different skills. The study examined the relationship that existed between the universities and the college and school institutions to ascertain whether these parties shared their experiences with students in order to come up with relevant support measures for students' attachment process. Formalized in-service learning programmes and institutional support is relevant for students to maximally benefit from the opportunityof learning in the work context. Higher Education institutions may set up careers and employment offices to assist students to look for in-service training and employment after graduating.

3.4.8 Recognition of prior learning

Recognition of prior learning may be quite relevant among institutions of higher learning. However, some issues may arise whereby the holder of an award moves between institutions and seeks exemption on the basis of the recognized prior learning towards a second award. For instance, when one holds a postgraduate diploma from one institution and goes to another institution to pursue Master's degree using the former award as exemption against the latter. Although some institutions are concerned by the potential double counting of credit, one institution may not rescind an award by another institution. A National Policy direction in this regard is needed in order to support the continued recognition of prior learning, mobility of students and the principles underlying the framework. This also applies to qualifications held by Textile, Clothing and Design students progressing from various institutions holding various certificates from different bodies. Their prior learning may need to be recognized for smooth progression of learning. Therefore, there is need to find out how institutions of higher learning support students from diverse academic backgrounds in the provision of TCD programmes.

In some Ireland universities, the best practice is not to grade prior learning, especially a combination of experiential and certified learning, to avoid complications that arise during assessment process. Some universities that recognize prior learning set limitations as to what courses of a degree programme the student may be exempted from. For example, National University of Ireland Galway exempt students up to 50% of the learning programme courses. Setting limits on exemption levels ensures that the student undertakes a substantial amount of learning with the institution. The limit can also act as a safety net for new lecturers who may be uncertain of the system and its outcomes (OECD, 2003; VanKleef, 2011; Skillnets, 2012). Remediation is also another measure taken to assist disadvantaged students by various institutions.

Due to increasing number of students with diverse attributes entering Higher Education each year, the institutions have to be geared to cater for their diversities. Gravestock (2009) and Rosell & Ondrik (2013) state that institutions are faced with student diversities in the form of disabled students, mature students and international students. This student diversity requires Higher Education institutions, through the instructors, to adapt their teaching methods, curriculum contentand assessment methods to ensure that all the students succeed in their studies. In other words, Higher Education institutions should focus more on diversified approaches to programme provision. Diversified programme provision approaches mean that a curriculum is designed incorporating students' profiles. It involves a change of emphasis in the way institutions work with students but without lowering academic standards. In Higher Education, inclusion usually refers to curriculum plans and activities that take cognizance of legislation in terms of students' race, disability, sexual orientation, religion, age and gender identity (Gravestock, 2009).

To remain relevant to the needs of students, society and the lecturers must ensure an on-going curricular reform and modernization (Tuffy, 2014; Tkachenko et al., 2016; Coe, Aloisi, Higgins, & Major, 2014). In relation to higher education system, there is increasing awareness of how well students are prepared for constantly changing programmes and implementation methods by corresponding institutions in other states (Tremblay, Lalancette & Roseveare, 2012).

3.4.9 Remediation

Besides the above institutional support methods of catering for students from diverse academic backgrounds, some researchers purport that remediation can be carried out with students who enroll in colleges and universities unprepared for college and university level work (Moore & Shulock, 2009; Levin & Calcagno, 2008). However, current research literature leaves uncertainty about the efficacy of remedial education. Many researchers argue that current pedagogical approaches in use in most colleges are not effective with a population that failed to master basic skills when exposed to similar approaches in high school (Bailey, 2009; The Carnegie Foundation for the Advancement of Teaching, 2008; Grubb, 1999). This study sought to find out how the TCD departments manage or apply remediation as a strategy for catering for students with diverse academic backgrounds in TCD provision at university level.

Research evaluating the effectiveness of remediation is complicated by students' self-selection into remedial courses and by the diverse set of policies and practices across states and institutions related to assessment of students' skills and placement into appropriate programmes (Levin &Calcagno, 2008; Bailey & Alfonso, 2005).Some students who need remediation do not enroll in the remediation courses, or they enroll but fail to complete the entire sequence of courses. The assessment of the students' skills would not provide accurate information that would be used to evaluate the effectiveness of remediation and the relationship between developmental education and degree completion.The monitoring of programme provision andsupport was also sought by this study in order to establish improved strategies to cater for theTCD diverse students at university level.

Some studies have found that remediation is effective in improving the skills of under-prepared students, with several studies indicating that students who successfully complete remediation and transition into university-level courses have persistence and higher success rates similar to those who start directly with university-level courses (Attewell, Lavin, Domina, & Levey, 2006; Kolajo, 2004; Office of Programme Policy Analysis & Government Accountability [OPPAGA], 2007; Waycaster, 2001). One large study of Ohio community college students found that students placed under remediation were more likely to transfer to a university than students with similar levels

of readiness who attended colleges where placement in remedial classes was not required (Bettinger & Long, 2005). While these studies offer evidence of the effectiveness of remediation, a recent study of students in both two-year and four-year colleges in Texas found little evidence that remediation improves rates of success for under prepared students (Martorell & McFarlin, 2007). A similar study of Florida community college students found little impact of remediation on success in college-level courses or any likelyhood of completion (Calcagno & Long, 2008). Given that these studies focused only on students who scored just above and just below the cut-off score used to assign students to remediation, the findings suggesting little benefit of remediation do not necessarily apply to very low-scoring students for whom remediation may offer greater benefits. The studies also summarize the average effect of remediation at the state level, obscuring any evidence of more effective remediation at some institutions or for certain groups of students (Moore & Shulock, 2009). It is therefore, worthwhile to examine how universities of technology support the provision of Textile, Clothing and Design programmes to ensure that students with diverse academic backgrounds are catered for.The support strategies like remediation are influenced by different institutional settings and monitoring strategies.Attewell et al. (2006) observe that the benefits of remediation may vary by the type of coursework, type of programme and learning environment. The benefits may also vary according to students' age and academic background.One recent study suggests that students above twenty-five (25) years gain greater benefits from remedial coursework in Mathematics than do younger students (Calcagno et al., 2006).

Basing on the research on remedial education, Bailey (2009) and Moore & Shulock (2009) recommend that institutions should ensure that assessment practices focus on what individual students need to be successful in university-level courses rather than just on placement in a developmental sequence. They should incorporate more academic support services into university-level courses in recognition of the ambiguity in precisely determining the skills and likely outcomes of students through an assessment test. They should also develop accelerated remedial strategies to minimize the time necessary for students to enroll in university-level programmes.

The research literature points to predictors of success related to three categories of student enrolment behavior.The predictors include remediation, which is the importance of addressing any remedial needs immediately on enrolment. Gateway courses refer to the benefit of early enrolment in, and completion of, certain gateway courses. Credit accumulation and related academic behavior means the importance of building momentum through academic behavior that lead to the timely earning of college credits. These predictors may help assist the TCD students who enroll with varying academic qualifications to fit in appropriate programmes. Tracking the predictors of success can help identify students at risk and point to appropriate interventions at the appropriate times in terms of practice and policy, with a view to increasing the rate of certificate and degree completion.

While each of these measures derive from the study on factors associated with retention and degree completion, more analysis is needed to determine the specific measures that are most appropriate depending on the intended purpose of the measurement. The institutions could use specific indicators to identify whether particular students are on track for successful completion or whether they are at risk of dropping out. Institutions could use aggregate data to identify patterns and develop college policies and practices to support student success.

3.5 Catering for diverse students at universities

Universities should provide the Textile, Clothing and Design programmes the support that enhance exploration, articulation of subjects' content knowledge and mobility of students and lecturers from one institution to the other (ATF, ILO & UNESCO, 2012; Manitoba Education, 2013). The provision of a flexible TCD curriculum implementation model enhances the opportunities for more students to broaden their knowledge and skills and to explore and access more and more diverse career opportunities. UNESCO-UNEVOC (2013) proposes a capabilities perspective as an appropriate approach to cater for students with different characteristics. The approach puts more emphasis on the access that the different individuals and groups have to good quality TVET, and the opportunities they have for achieving desired outcomes. However,

Hughes (2005) notes that high quality education can only be achieved if resources are fairly distributed through recognition of sociocultural identities of different groups of students. The approach also focuses on the institutional and cultural barriers that inhibit catering for different groups of students. For example, girls and women sometimes go against sexist norms and practices that limit their involvement in Technical and Vocational Education and Training (UNESCO, 2011; Rizvi, 2014). Hence, Unterhalter (2007) stresses that such barriers need to be understood in relation to broader societal barriers that discriminate against women and girls as well as those members with disabilities. Barabasch & Petrick (2012) propose the adoption of trainer training programmes which emphasize transitioning to studentcentered approach and strategies for organizing learning environments for students with special needs and different abilities. Specific training programmes that focus on competence based learning may also be adopted in trainer training. Akamobi (2005) and ATF, ILO & UNESCO (2005) suggest that institutions may use the credit accumulation approach to cater for qualification variances and address progression of TCD knowledge and skills and also enable recognition of prior knowledge of students from schools andcolleges up to university level. However, Mupinga et al. (2005) & Broido, (2004) argue that the TVE implementation strategy needs to be revised to meet current trends in TVE provision that stresses the right of diverse students to education regardless of their diverse backgrounds.

The students' diversity presents challenges among academics such as lecturers' difficulties to motivate and promote students' understanding of knowledge and skills (Andrews, 2013; Rizvi, 2014). The students' different age ranges presents issues of variance in students' reasoning capacities as the older students are considered to be more serious than the younger ones in handling assignments and practical tasks among first year Health Science students in England (Andrews, 2013). Students from diverse academic backgrounds may also present challenges to their lecturers by virtue of their varying characteristics.

Multicultural education is an interdisciplinary education process that fosters understanding, acceptance, empathy and constructive and harmonious relations among people of various cultures. It encourages students of all age groups to view different cultures as a source of learning and enrichment. This benefits most students from diverse backgrounds through career education, which is highly encouraged to

assist students to fulfill personal, social and work roles through exposure to a career building processes (Ireland Ministry of Education, 2011). Career education progresses from early childhood through adulthood and focuses on the continuous development of competencies in three areas namely; personal management, learning and work exploration, and life/ work building.

3.5.1 Differentiated Curriculum Practice

Differentiated teaching practice entails seeking alternative ways of demonstrating and assessing the competence levels of students to allow full participation of students from diverse backgrounds and those with a variety of personal attributes. Students from diverse backgrounds also require teaching and learning practices that are focused towards their specific characteristics since their level of competencies differ by virtue of their differing levels of qualifications. Mather & Muchatuta (2011) observe that non-traditional students respond and understand the academic world differently by virtue of their cultures and prior learning environments. Culture and tradition influence the ways students think, express themselves, and interact in the classroom.

Differentiated curriculum practice relates to the process of developing, designing and refining programmes of study to minimize the hindrances that diverse students may face in accessing the curriculum (Gravestock, 2009). The approach does not only minimize barriers among the students, but alsocaters for the challenges that maybe faced by the instructors in the implementation of the curriculum. An example would be instructional resources provision to cater for the diverse students, as well as professional development needs to meet the nature of student diversities. The inclusive curriculum practice focuses on the core requirements of the programme and it also aims to identify aspects of the program that may prevent some students from achieving the core requirements of the curriculum. When the aspects are identified, the curriculum is then redesigned to reduce or eliminate the potential barriers. In some instances, the curriculum may require enrichment to meet the level of the students enrolled.

In the United Kingdom, they use the term inclusion which refers to the extent to which students with special education needs can be integrated into mainstream teaching and

learning environments (Hockings, 2010). United Kingdom's 1981 Education Reform Act required schools to decide how they would supplement their standard education provisions with higher level support that targeted those students who needed it most. Since the inception of the legislation, the teachers and researchers have moved away from the narrow interpretation of inclusion as being concerned with only those students with special needs. Inclusion of students with special needs emphasized crude categorizations, segregation and discrimination that became associated with its implementation (Dyson, 2005). However, catering for students from diverse backgrounds is concerned with overcoming barriers to participation in the teaching and learning that is experienced by students from diverse academic backgrounds.

Accommodating diverse students' focus is to increase students' participation and reduce their exclusion from their cultures, curricula and from the communities of their local and international schools. Hockings (2010) argues that the notion of accommodating students lays a basis from which approaches that may lead to transformation of the education system may be developed. Many students from different backgrounds have different learning experiences and learning styles. When they are grouped together in class, they share important characteristics they may have learnt atdifferent institutions and backgrounds that may have some similarities and differences. Therefore, systematic interventions may be employed to solve students' problems and cater for their different learning styles (Hockings, 2010; Dyson, 2005). This implies that it is the learning environment that needs to be altered rather than the individual. However, when dealing with students from diverse academic backgrounds, the instructors may also require some changes in their teaching capacities in order to meet the needs of the students and help the students to reach their highest capabilities. The changes may be effected through staff development.

The findings from the study carried out with teachers teaching students in Higher Education institutions in UK confirm that students value teaching and learning that take cognizance of their individual academic and social identities and that recognizes their particular learning needs and interests. The results also portray that the dominant notion of traditional and non-traditional students creates over simplistic understandings which limit development of accommodating and engaging teaching. An example is when a teacher assumes that all students have understood specific

skills and knowledge from the way most students respond to questions and from the way certain students with background knowledge in the area participate during the lessons. Therefore, it is worthwhile to examine how lecturers in the TCD area adapt content and assessment to ensure that all students from different academic backgrounds are catered for. Hockings (2009) proposes that teachers should reflect on, and conceptualize their views about students' diversity in order to decide how they may design or redesign programmes as well as teaching and learning strategies to allow for greater student involvement. Academic developers also should create an atmosphere that allows teachers to debate their ideas and beliefs about students and challenge pedagogical practices and discourses that prevent creation of conducive learning environments.

The study by Hockings (2009) also establishes that university systems are designed to ensure quality teaching and learning, and to make full use of the economic and efficiency strategies in teaching. Economic factors that often affect most higher education institutions constrain the instructors' capacity to create diversified pedagogies in their work, especially with respect to non-traditional students and some traditional students as well.

More so, university leaders and managers should ensure that systems do not limit learning of students from diverse backgrounds such as cultural, social and educational settings. Management systems may also affect how the lecturers cater for the diverse academic backgrounds of students in the provision of various programmes. There is therefore, need to find out how institutions support the provision of TCD programmes to ensure that all students from diverse academic backgrounds are catered for.

Hockings (2009) highlights that the major qualitiesof catering for diverse students in teaching and learningare equity and fairness. These refer to recognition and valuing of students' differences within the mainstream curriculum, pedagogy and assessment. This is also one of the key principles shared by Universal Design, a concept usually applied within the disability literature. However, the Universal Design's original aim was to inform the design of products and environments to be usable by all people to the greatest extent possible without the need for adaptation or specialized design (Hockings, 2009). This aim and principle underpinning Universal Design has been

applied to education settings. John and Fox (2003), in Hockings (2009) observe that it is more effective to include ramps and accessibility into design of a new building, andis also more cost effective and time effective to consider the flexibility of learning materials when designing a programme than trying to provide individual accommodations after the fact. This encourages an anticipatory approach to curriculum design. It embeds the aspect of disability as an aspect of difference that can enrich the lives of all students with different characteristics.

3.6 Summary

In this chapter, the researcher has reviewed studies that address catering for studentsfrom diverse academic backgrounds in the provision of university programmes with regards to lecturer professional training required, curriculum implementation strategies adopted, assessment procedures, and monitoring and support mechanisms required for catering for students from diverse academic backgrounds has been reviewed.

The study findings reveal that catering for student diversities at higher education institutions is not easy due to the increase of student numbers that enter universities from diverse backgrounds that include cultural settings, language, ability levels, socio economic status, academic qualification, race, gender, disability, age and religious beliefs. The lecturers' lack of adequate professional knowledge, skills and expertise to understand and support the students lead to a sense of insufficiency among themselves and among the students. Therefore, the researcher believes that university curriculum implementers, especially TCD lecturers, need to be provided with adequate support through continuous professional development and good supply of resources to enable them to effectively and successfully cater for the students from diverse academic backgrounds and help to improve TCD provision at university level. The chapter that follows discusses the methodology adopted for this study.

CHAPTER FOUR

METHODOLOGY

4.1 Research Methodology

Research methodology describes the method of inquiry that was employed by the researcher in carrying out the study. In this section, the researcher discusses the research paradigm, research design, population, sample and sampling techniques, data collection instruments, reliability, data analysis, ethical considerations and limitations of the study.

4.2 Research Paradigm

A paradigm is a theoretical framework that guides the researcher to establish relationships among study constructs. It is perceived as a frame of reference through which people view the world (Creswell, 2013). It explains the nature of a particular research orientation by going deeper in it and strives to connect the research themes with similar events (Martens, 2005). It influences the way in which knowledge is studied and interpreted. An adopted research paradigm affects the researcher's motivation and expectations. It affects the researcher's nature of enquiry by directing his/her thinking and interrelated practices in three dimensions namely; ontology, epistemology and methodology (Morgan, 2007; Mungunda, 2003). Ontology specifies the nature of reality that is to be studied and what is to be known about it. It influences the researcher's line of thinking and reasoning within the area of study, which in this case is accommodating students with diverse academic backgrounds in the implementation of TCD programmes. Epistemology means the way we do something which translates to the relationship between the researcher and what can be known throughout the research process. It explores the way in which the researcher relates to the data being collected and how he/she should be neutral and not develop attitudes towards the data. Methodology specifies how the researcher practically goes about

studying what he believes can be known about strategies used for students from diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe. Studies can be located in the various research paradigms such as positivism, interpretivism, post-positivism and critical theory.

4.3 Positivist Paradigm

Positivism paradigm explores social reality basing on philosophical ideas (rationalistic and empicist) that originated with Aristotle, Bacon, Lock, Comte and Kant (Mackenzie & Knipe, 2006). The paradigm emphasizes a deterministic belief in research which posits that the causes determine effects and outcomes (Cresswell, 2014). Positivist paradigm also claims that ''the social world can be studied in the same way as the natural world, that there is a method for studying the social world that is value free, and that explanations of a causal nature can be provided''(Mertens, 2005:8). Positivists strive to test a theory or describe an experience through observation and measurement to predict and control forces that surround the key variables (O'Leary, 2004). However, critiques argue that the positivists' methods of inquiry extricate contexts from meaning by developing quantified measures of the phenomenon (Mackenzie & Knipe, 2006) that may lead to misconceptions about the reality. The quantitative measures most often exclude participants' meanings and interpretations from the data that are collected and impose outside meanings and interpretations. They also tend to exclude discovery from the domain of scientific inquiry. Therefore, they do not dwell on real facts about a phenomenon. Gray (2014) observes that positivists require statistical samples that do not represent specific groups, that do not allow generalization of results to other groups, and that do not allow generalization of results to other groups, but understanding of individual cases. Positivism has also been criticized by constructivism and critical post modernism, which raise relevant philosophical challenges for positivism and other alternative theoretical methodological and practical approaches to research on management and organization of the study process. Constructivism and post modernism unravelcritical issues in research that address timely social and political issues that are not addressed by positivist researchers (Mackenzie & Knipe, 2006). For instance,the view that positivism strives to uncover truths and facts using experimental and survey

methods has been criticized byconstructivism and post modernism who argue that the paradigm imposes a view of the world on subjects instead of capturing, describing and understanding the world views through individual perspectives (Gray, 2014; Toledo-Pereyra & Luis, 2013).

The positivist paradigm is identified by its objective nature which refers to its adherence to the notion of objective reality and absolute truths and its empirical quality that claims that knowledge comes through sensory experience. The sensory experience may lead to data that is detached from the real situation on the ground with regard to the phenomenon under study, such as strategies used for students from diverse academic backgrounds. Its quantities nature that stresses the value of accuracy, precision, measurement and objectivity discourages subjectivity that is key in social research and is strongly related to human life situations. Its quality of determinism, which views the world as deterministic, follows strict causal laws which if discovered, social life can be predicted and controlled and researchers can employ strict design plans and constructs prior to the commencement of the research (Sarantakos, 2005; Curts & Drennan, 2013; Mustafa, 2010). Such deterministic quality of positivist paradigm may be advantageous as it provides room for researchers to plan the research process though the plans can be overtaken by social life events before commencement of the research. Given the limitations of the positivist paradigm discussed above, this study is not located in the positivism paradigm.

4.4 Interpretive Paradigm

Interpretive research paradigm focuses on culturally derived and historically situated interpretations of the social world (Gray, 2014). Interpretivists are interested in the events that take place in the social environment and they tend to focus on aspects that are unique, individual and qualitative as opposed to positivists who are interested in the natural world by concentrating on more abstract phenomena which exhibit quantifiable, empirical regularities (Gray, 2014; Creswell, 2009). Interpretivists have an interest in contextual meaning rather than generalized rules (Mustafa, 2010; Jan Van Kensburg, 2001). The interpretivists aim to tap the subjectivity of individual experience which yields thick description of phenomenon when studying human

beings. The focus is on the interpretations, social actions, beliefs and perceptions of the participants on phenomena. The interpretivism paradigm rests on the premise that knowledge is constructed, notonly by observable phenomena, but also by descriptions of human beings, imitations, beliefs, values and reasons, meaning making and self-understanding (Flick,2011).

The interpretivism paradigm has been criticized for its failure to generalize its findings and for its subjectivity (Creswell, 2013; Mustafa, 2010). Human bias cannot be underestimated neither can the notion of objectivity/subjectivity. Interpretivism paradigm is criticized for being impressionistic, a quality based on reactions and opinions rather than specific facts and details. The data yielded is biased, insignificant, cannot be generalized, issubjective and short sighted. Therefore, it is not possible to tell whether the researchers gain a true account of the respondents' meanings or not. Further, the accounts of the researcher and respondents may be varied and competing. Apart from the above, interpretivism cannot solely address the factors and conditions that lead to meanings and interpretations, actions, rules and beliefs on catering for students from diverse backgrounds in TCD provision. Therefore, the approach could not be solely used for this study because of the above mentioned limitations.

4.5 Post-positivist paradigm

Post-positivists assume the world is ambiguous, variable and multiple in its realities (O'Leary, 2005). The proponents assume the existence of an objective world but they further hold the view that this world may not be readily apprehended and that variable relations/facts may only be approximated (Gray, 2014; Summer, 1999).

The post-positivist paradigm also relies on multiple methods of quantitative and qualitative orientation as a way of capturing as much of the reality of the study phenomenon as possible (Mackenzie & Knipe, 2006; Toledo-Pereyra & Luis, 2013). The post-positivist paradigm yields both qualitative and quantitative data (Mustafa, 2010; Hofstee, 2011). The use of post-positivist paradigm enabled the researcher to use various methods of data collection instruments that yielded both quantitative and qualitative data.The data collection instruments used for this study included self

administered questionnaire, face to face interview and focus group discussion which enabled the researcher to collect quantitative and qualitative data. Quantitative data facilitated measurement of the strategies used to cater for students with diverse academic backgrounds and relationships between variables of interest like student academic qualification and performance. Qualitative data assisted the researcher to determine respondents' experiences, beliefs and perceptions regarding strategies used to cater for students from diverse academic backgrounds in the provision of TCD programmes. Therefore, an in-depth and comprehensive picture of the problem was realized.

The post-positivist paradigm was relevant for this study as it sought to examine causes that influence outcomes (Mackenzie & Knipe, 2006). The knowledge that develops through this paradigm is based on careful observation and measurement of the objective reality that exists in various individual group settings (O'Leary, 2004). It enables the researcher to come up with numeric measures of observations and study the behavior of individuals in order to predict and control forces that surround people. Post positivists believe that the truth for one person or cultural group may not be the truth for another (Onwuegbuzie & Combs, 2011). The paradigm was also appropriate for this study because it permitted the use of both quantitative and qualitative data collection and analysis techniques that are advantageous for the effectiveness of the study on strategies used to cater for students from diverse academic backgrounds in the implementation of TCD programmes in universities of technology in Zimbabwe. The post-positivist paradigm enabled the researcher to observe and analyze study findings to get the factors that influenced catering for students with diverse academic backgrounds in TCD programmes provision. The findings from different samples such as TCD deans, lecturers, and students from the two sampled universities of technology in Zimbabwe that offer TCD programmes were analyzed, as the truth for one person or cultural group may not be the truth for the other. The post-positivist paradigm has much strength in the research process since the use of both quantitative and qualitative approaches has complementary effects (Mackenzie & Knipe, 2006; Creswell, 2014). Such combination of approaches neutralizes most of the weaknesses and biases of the methods and can result in valid data that gives confidence to the researcher's findings.

4.6 Research Approach

The study adopted a mixed method approach which involved use of quantitative and qualitative data collection and analysis techniques in the same study. The mixed method approach enabled the researcher to effectively synthesize ideas from respondents on strategies used to cater for students from diverse academic backgrounds in the provision of TCD programmes at universities of technology. The mixed method approach draws from qualitative and quantitative research approaches and therefore, minimizes the limitations of both approaches (Creswell, 2014). Creswell (2009) argues that a mixed method research approach is more than simply collecting and analyzing qualitative and quantitative data, but involves the use of the two approaches together such that the overall strength of a specific study becomes greater than either quantitative or qualitative research. Therefore, the approach assisted the researcher to explain and analyze events and occurrences on strategies used to cater for students from diverse academic backgrounds in TCD programmes provision at universities of technology in Zimbabwe (Johnson & Christensen, 2011).

The concept of mixing different research methods originated in 1959 when Campbell and Fish employed various methods to study the validity of psychological traits. They encouraged other researchers to use their multi-method matrix to analyze data collection approaches. This motivated others to mix research methods and approaches associated with field methods like combining observations and interviews with traditional surveys (Sieber, 1973 in Creswell, 2009). Triangulating of data sources became a way of seeking convergence across qualitative and quantitative research approaches. For instance, research results from one method could be used to identify study participants and nature of questions to ask for the other method. Qualitative and quantitative data can be combined into one large data base where the results can be used side by side with each research approach strengthening the other (Creswell, 2009; Creswell & Clark, 2007). In this study the data collected and the findings were integrated or connected at one or several points within the study for strengthening of each approach. For example, qualitative quotes were used to support statistical results. Gray (2014:204) justifies the idea of mixing research methods by saying, "… the careful measurement, generalizable samples, experimental control and statistical tools of good quantitative studies are precious asserts when they are combined with

up-close, deep, credible understanding of complex real world contexts." Therefore, use of mixed method would allow for which a single methodology would not do. For instance, quantitative approach enabled the researcher to gather information from a large number of lecturers which would not be possible if qualitative research approach was used alone.

Gray (2014) and Johnson, Onwuegbuzie & Turner (2007) argue that mixed method research adopts a pragmatic method and system based on the fact that knowledge is socially constructed and is based upon the reality of the world experienced and lived. This approach employs induction (identification of patterns), deduction (testing theories & hypotheses) and abduction (uncovering and relying on the best explanations for understanding one's results) which enable holistic understanding of the study problem. Johnson and Onwuegbuzie (2004) assert that the major quality of the mixed method approach is its ability to use multiple methodologies that produce superior study findings, which cannot be achieved when a single research methodology is used. The approach advocates for use of multiple measures and observations, of which each may possess different types of error and therefore, need to employ triangulation across multiple errorful data collection methods to get a better view of what is happening on the ground with reference to the study topic. The approach uses multiple methods of data collection and this study employs questionnaire, interview, focus group discussion as well as document analysis instruments.Therefore, mixed method approach produces in depth knowledge on the strategies used to cater for students with diverse academic backgrounds.

The strength of this approach is that findings from one method can be checked against findings from another and allow for more complete analysis of the research problem through comparing data produced from different methods. The researcher used the mixed method approach that employs two research methodologies in an attempt to confirm, cross validate or corroborate study findings within the single study. Collection and analysis of data in a mixed method approach can be sequential, concurrent or transformative. Sequential procedure means that the researcher collects and analyses qualitative and quantitative data in phases. The transformative research process comprises an action agenda for reform that is aimed at changing the lives of the participants, institutions where individuals work and live, and the researcher's life. The concurrent procedure entails that the researcher collects and analyses data at the

same time and then integrating the information in interpretation of the study findings. The purpose of the concurrent triangulation design was to validate and cross check data from different sources. Mixing of data occurred at the data analysis stage by transforming and clustering quantitative data results and assigning them themes to compare with other themes that emerged from the qualitative data analysis. This study employed a concurrent triangulation research design that is discussed in the next section.

4.7 Research Design

The concurrent triangulation design was implemented as it uses both qualitative and quantitative data collection at the same time in order to provide a comprehensive analysis of the study problem (Creswell, 2014). Concurrent procedures involve collecting both quantitative and qualitative data side by side during the study and then combining the information in the interpretation of the overall study findings (Terrell, 2012). The concurrent approach provides a basis for triangulation of data as results from one method (quantitative or qualitative) can help to inform the other method. It also ensures reliability of the research process (confirm, cross validate and corroborate research findings) (Creswell, 2003). The flow chart in figure 4.1 below illustrates the procedures involved in the use of a concurrent triangulation strategy in the study.
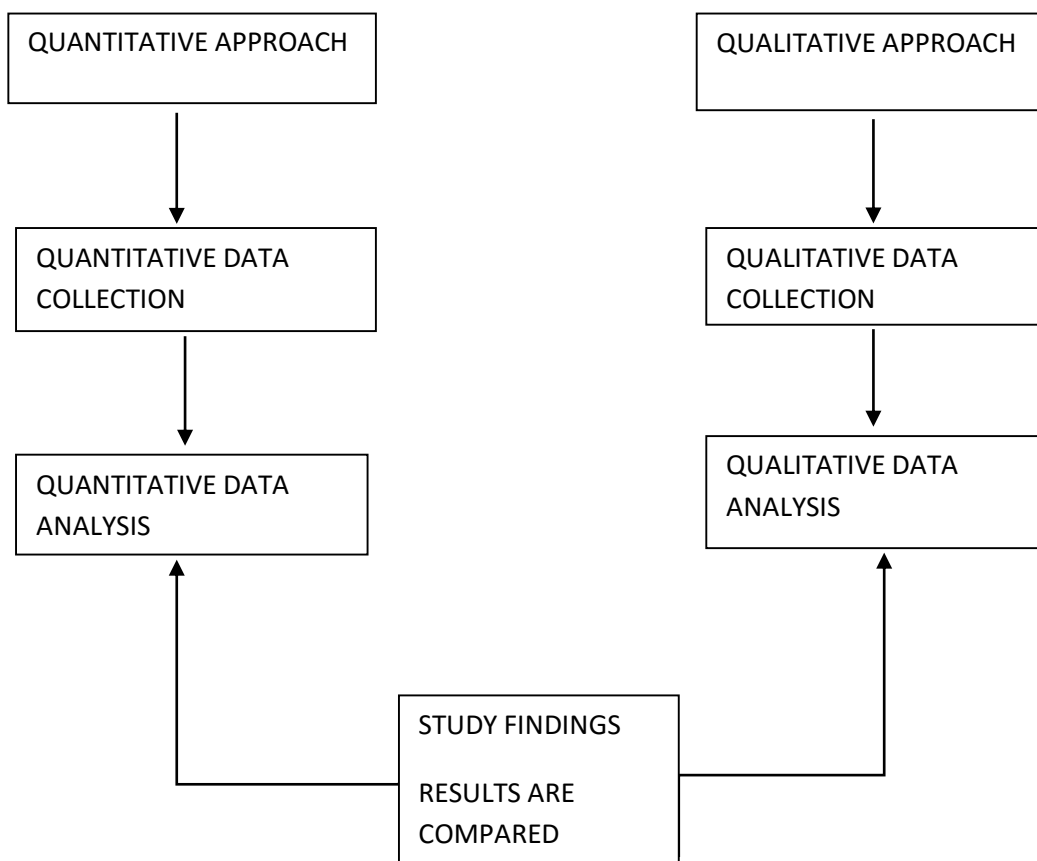
Figure 4-1: Concurrent Triangulation Strategy: Adapted from Terrel (2012: 267)

The quantitative approach allowed the researcher to produce a large amount of data within a short period of time, enabling the study to be completed within the time limits of the study programme. The approach also offered opportunities for a large number of the TCD lecturers at the two universities of technology to give their views on the strategies used to cater for students with diverse academic backgrounds, thereby enhancing the reliability and generalizability of the results. Furthermore, the quantitative approach guaranteed a shorter time for data analysis as the researcher used SPSS to aid the statistical analysis process. The different data collection methods produced both quantitative and qualitative data. Maree (2007) asserts that mixed method approach offers a good foundation for data triangulation and ensures reliability of the process of research. The data sets supplemented each other during the collection, analysis and interpretation process to give a holistic view of strategies

used to cater for students with diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe.

The adoption of the concurrent triangulation design for this study facilitated comprehensive and in-depth understanding of the study research questions through the use of multi-research methods (Terrell, 2012; Teddlie &Tashakkori, 2009).The use of multiple methods to study the phenomenon means that biases inherent in one method are neutralized or cancelled by the strengths of the other method (Creswell, 2009; Teddlie & Johnson, 2009; Terrell, 2012). The approach was used for the purpose of gaining a broader perspective of the strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe than could be gained from using only a predominant research design. Bartunek & Myeong (2002) and Johnson, Onwuegbuzie & Turner (2007) affirm that perceiving things from various perspectives with the opportunity to cross validate or corroborate findings within a study enhances the validity of data and provides a better understanding of a research problem.

However, Gray (2011) and Terrell (2012) argue that the concurrent triangulation research design requires a great deal of expertise and effort to study the phenomenon using two different methods. The high level of expertise and effort is needed to collect and analyze two separate sets of data at the same time, which is qualitative and quantitative data. In order to solve such issues, the researcher allowed adequate time for data collection and analysis. An elaborate procedure for comparing different data sets was advised, such as comparing data from each of the three instruments in answering specific sub research questions.

4.8 Population, sample and sampling

4.8.1 Population

Population refers to any group of individuals or things that have one or more characteristics in common that are of interest to the researcher (McMillan & Schumacher, 2006; Gray, 2011). In this context, the population comprised the two universities of technology that offer TCD programmes in Zimbabwe, two quality

assurance directors, two textile and clothing deans, two textile and clothing heads of departments, seventy (70) lecturers and two hundred and forty (240) students.

4.8.2 Sample and Sampling Techniques

A sample is a small proportion of a population selected for observation and analysis, (Cohen & Manion, 2011). McMillan and Schumacher (2006) point out that sampling is a systematic principle based procedure that is used to make well considered selection of individuals or subjects that enable a researcher to gain access to relevant data for a study. Sampling is an important research step that involves selection of subjects from a chosen group of people which should be based on well thought out procedures that enable the researcher to access meaningful and valid data for a study.

The concept of accessing relevant data is critical in research because it determines the credibility and dependability of yielded data. Newman (2002) argues that the size of a research sample affects generalizability of the study findings because if a researcher chooses too small a sample size from the population, the data yielded becomes invalid. O'Leary (2004) emphasizes that irrespective of any quest for representativeness, the process of sampling means stating your population and determining sample size using an appropriate sampling strategy. However, the consequences of having diverse samples and different sample sizes when integrating quantitative and qualitative data sets have to be taken into consideration (Creswell, 2009). Such consequences include problems faced by researchers in combining data from different individuals, who operate at different levels in which the data collected may be incompatible. It is preferable to have the same individuals participating in both samples in order to make the data and results more comparable when selecting samples in concurrent research design. McMillan and Schumacher (2006) assert that researchers perform sampling process to select study subjects because of limited resources such as time which often prevents them from studying an entire research population. The purposive sampling technique was used to select participants for this study as the technique enabled the researcher to select the respondents who possessed rich data on strategies used to cater for students with diverse academic backgrounds. Purposive sampling technique entails handpicking the subjects to be

included in the study based on researcher's judgment of their characteristics (Creswell & Clark, 2007). Teddie & (2009) recognize the significance of purposive sampling technique in research where a researcher purposively selects certain groups of people or individuals for their relevance to the issue being studied such as strategies used to cater for students with diverse academic backgrounds in TCD provision at university level.

This study adopted purposive sampling technique to select the study participants. Two universities of technology were chosen for the study because they were the only onesthat offered TCD degree programmes in Zimbabwe. Two Quality Assurance Directors, two TCD Deans and two heads of departments from the two universities of technology were purposively selected, since they have the relevant knowledge on implementation of TCD programmes in the universities. Purposive sampling procedure was very important for this study as the groups of individuals selected held administration posts, implying their responsibility for monitoring the provision of TCD programmes. Thirty-six (36) TCD lecturers from the two universities were incorporated in the study through purposive sampling technique since they are TCD curriculum implementers who plan and implement the TCD programmes' strategies to cater for students with diverse academic backgrounds. Hence, the sample accurately represented the targeted population.

Eight (8) lecturers were selected through purposive sampling technique from the initial thirty to be interviewed, among which two (2) comprised most experienced lecturers and two (2) were those who had recently joined university lecturing profession. These were selected from both universities. The purposive sampling technique was also used to select twenty four (24) students, twelve (12) from each of the two universities of technology comprising four (4) students admitted through normal entry, four (4) admitted through mature entry and the other four (4) admitted through special entry procedure, from both universities. This comprised first year, second year, third year and fourth year streams from the two universities.

4.9 Data Collection, Instruments and Procedures

The researcher collected both qualitative and quantitative data since a mixed method approach was adopted for the study. The researcher made use of questionnaire, face-to-face semi structured interviews, focus group discussions and document analysis to gather data on strategies used to cater for students from diverse academic backgrounds in the provision of TCD programmes in universities of technology in Zimbabwe.

4.9.1 Face- to- Face, Semi- Structured Interviews

Face to face interviews were conducted with two Quality Assurance Directors, two TCD deans, two chairpersons and six lecturers from the two universities of technology. A semi- structured interview was used in the study since it solicited participants' views through narration of their experiences on strategies used to cater for students from diverse academic backgrounds in the implementation of TCD programmes in universities of technology (Cohen & Manion, 2011). Strategies used by university management to support and ensure that students with diverse academic backgrounds are catered for in the provision of TCD programmes were relayed through the semi-structured interviews with quality assurance directors. The semi structured interview allowed participants to talk freely about their experiences and views, and allowed the researcher to refocus the discussion to gain more accurate information from participants through rephrasing questions and observation of non-verbal cues like facial expressions (Mackenzie & Knipe, 2006).

Interview data usually gives access to facts about a specific world reality that is represented by accounts in order to get a true and complete picture of how things are (Gray, 2011). In this study, the quality assurance directors, deans, chairpersons and lecturers were the professional people involved in designing strategies to cater for students from diverse academic backgrounds in TCD programmes provision. These had managed students' diversities as they had various levels of teaching experiences. The interview also afforded the researcher a chance to pursue respondents' responses for clarification of obscure points. The researcher was able to ask for elaboration or redefinition of views when a response on implementation of textile

clothing and design programmes appeared to be incomplete or ambiguous. More information was solicited through personal contact between the researcher and the respondents as that minimized the limitations of questionnaires that arise from its impersonal nature.

The use of semi-structured interviews enabled the researcher to solicit more data from the respondents as they allowed respondents to express themselves at some length. However, they offered enough scope and direction to prevent digressions (Maree, 2007). Semi-structured interviews provide access to that which is inside a person's head and make it possible to measure how knowledgeable a person is in a specific field of study (subject content. It also makes it possible to measure a person's likes and dislikes (values and perceptions) and what a person thinks (attitude and belief) on Textile Clothing and Design implementation with reference to students from diverse academic backgrounds. The participant is required to answer a set of predetermined questions that define the line of inquiry. The researcher needs to be very attentive to the responses given by the interviewee to identify new emerging lines of inquiry within the phenomenon under study.

The views, perceptions and attitudes were relevant to the researcher as they provided insights on implementation of diversified curriculum implementation strategies in the provision of Textile Clothing and Design programmes at universities of technology. Although the interview afforded the researcher personal contact, the technique had small coverage due to financial and time limitations especially considering the spacing of the universities in Zimbabwe. Newman (2000) and Flick (2011) point out that training, travel, supervision and personnel costs for interviews can be high. Interviewer bias is high in face to face interviews (Mackenzie and Knipe, 2006). To minimize interviewer bias, the researcher adhered to research ethics and data was gathered among many informants. Despite the mentioned flaws, the researcher opted to use the interview as a data collection instrument as it is a two person verbal conversation initiated by the interviewer for the purpose of obtaining relevant data aimed at answering research objectives (Creswell, 2009; O' Leary, 2004)

4.9.2 Focus group discussion

Focus group discussion is a carefully planned series of discussions designed to obtain perceptions on a defined area of study in a permissive and non-threatening environment (Creswell, 2013; Terrell, 2012). Focus group discussions with twenty four (24) students from two universities of technology were conducted. The students were divided into (3) groups of eight (8) each, comprising two (2) groups from one university and one group from the other university. These were asked to share their views on curriculum adaptation strategies used to cater for students from diverse academic backgrounds in the provision of TCD programmes to ensure that all various qualifications of students are catered for.

Focus group discussion with students was an essential data gathering instrument for the study in that the responses provided an in depth view about the provision of Textile Clothing and Design programmes to students with diverse academic backgrounds. The data collected through focus group discussions would otherwise not have been obtained through individual interview or any other data gathering instrument. Focus group discussions are interviews that rely on the interaction of individuals within the group. The researcher's role is to create an environment that is conducive for participation by members that constitute the groups so as to solicit their views and perceptions on the subject under discussion (Krueger and Casey, 2009). The researcher needs also to be very careful and systematic with whatever the respondents say, so that they go away feeling good about being incorporated in the study.

The use of focus group discussions in research is effective for studying professional practices (Barboar, 2008). Therefore, the researcher opted for focus group discussion as one of the data collection techniques because the study at hand concerns how Textile Clothing and Design programmes are provided to students from diverse academic backgrounds. The group interactions during the group discussions were productive in widening the range of responses, activating forgotten experiences and releasing inhibitions that could otherwise have discouraged participants from disclosing information about catering for students from diverse academic backgrounds in TCD provision at the two sampled universities. However, the use of focus group discussion has the limitation of getting biased data as some members tend to

dominate the discussions (Maree, 2007). The researcher overcame this by encouraging contributions from every member and maintaining focus on the topic under discussion.

4.9.3 Questionnaire

The questionnaire was used to solicit data from the thirty-six TCD lecturers. It comprised open ended and closed questions. The questionnaire enabled the lecturers to give data on strategies they use to cater for students from diverse academic backgrounds in the provision of Textile, Clothing and Design programmes as well as comments on their capacity to deliver TCD curricular. The data collected through semi-structured questionnaires may be qualitative or quantitative (Creswell, 2013). The researcher had an advantage of obtaining rich qualitative description above the numbers or percentages of each type of response.

The rate at which questionnaire were returned by lecturers was 94%. Two coies of questionnaire were not returned because most lecturers who teach TCD programmes at one of the two universities were part time lecturers. These were difficult to locate at the university during working hours.

The questionnaire allows anonymity and privacy among respondents (Cohen et al., 2000). This gave more room for participants to elucidate their views on the current study topic. Use of questionnaire had an advantage of obtaining respondents' views on strategies used to cater for diverse students in provision of Textile, Clothing and Design programmes to students from diverse academic backgrounds at university level. This gave a wider view of diversified curriculum implementation approaches in delivering TCD programmes from a large number of respondents, and how the diverse students can be catered for to enhance the quality of teaching and learning. However, some respondents may abuse the impersonal nature of the instrument and just decide not to disclose some information (Maree, 2007; Gray, 2011). This disadvantage was taken care of by using other methods of data collection such as interviews and documentary analysis.

4.9.4 Document analysis

Documents are standardized artifacts in various formats that can be in the form of notes or reports that serve as organizational traces of activities that take place in an organization (Borg & Gall, 2006). Analysis of documentaries in this study provided access to information that would be difficult to get in in-depth interviews, such as TCD programme content adaptation and assessment tools used by TCD lecturers to cater for students from diverse academic backgrounds in the implementation of TCD programmes.

The use of document analysis in this study was aimed at soliciting programmes and course outlines' descriptions, identification of trends, frequencies and interrelationships between course content and delivering methodologies. From the documents, the researcher managed to gather data on teaching methodologies and assessment techniques used for Textile Clothing and Design programmes as well as the enrolment criteria used by universities for Textile Clothing and Design programmes. Document analysis was used in this study as it incurred low costs on the researcher. The data collection method was more economical than use of questionnaires and interviews. It was also less time consuming, and it offered a possibility for re-testing as the documents were readily available. Inventory on tools and equipment used in the provision of Textile Clothing and Design programmes at university level was analyzed to get information on their availability, their types or models and their state with reference to usability. As document analysis is unobtrusive non-reactive and enables yielding of data about participants' values and beliefs in relation to their environment, it complemented interview and questionnaire data collection processes (Maree, 2007; Flick, 2011). Analysis of documents assisted the researcher to address questions which interview and questionnaires could not answer and enlightened the researcher on some areas that needed clarification, for instance, types of equipment used by students, their accessibility, durability and equipment that was regarded crucial for the implementation of the programmes.

4.10 Validity and Reliability

4.10.1 Validity

Validity is an important component of research which makes the results to be sound. If the research results are invalid, the purpose of the research becomes useless. Cohen et al. (2000) assert that validity is a requirement for both quantitative and qualitative researches. While earlier versions of validity were based on the view that it was essentially a demonstration that a particular instrument measured what it intended to measure, more recently validity has taken many forms. Cohen et al. (2000) postulate that in qualitative data, validity may be addressed through honest, depth, richness and scope of the data collected, the participants employed, the extent of triangulation and the objectivity of the researcher. In quantitative data, validity is a critical issue and can be improved through careful sampling, appropriate instrumentation and appropriate statistical analysis of the data.

The researcher considered the length of the questionnaire, language use with reference to the educational level of respondents and the position held by the study respondents where the instruments were administered. The interview and questionnaire instruments were administered in English as English is the main medium of instrument at the universities in Zimbabwe. The respondents were advised not to write their names on the questionnaire in order to give them confidence and security to respond to the questions as honestly as possible. The researcher also carried out a pilot study to check on the validity of the instruments. The feedback from the pilot study led to some improvements on the instruments schedules and the validity of the instruments.

4.10.2 Reliability

Reliability refers to consistency and replicability of gathered data overtime, over instruments and over groups of respondents (Cohen et al., 2000). It is concerned with precision and accuracy and therefore, can be viewed as a measure of consistency over time and over similar samples. A reliable research instrument is capable of

yielding similar data from similar respondents over time if the same methods and instruments were used.

To ensure reliability for this study, the instruments were edited by the supervisor and a group of critical friends that included PhD students and graduates. The team reviewed the instrument items with regard to readability, clarity, format, ease and adequacy of items to ensure consistency and replicability of data gathered using the designed questions. The numbers of questions were also considered, since too many questions could have demotivated the respondents. The concentration span of lecturer and student respondents was also considered for the questionnaire and focus group discussions respectively. The main aim was to edit the instruments to eliminate irrelevant items, to ensure that there was adequate coverage of the research topic.

The student focus group discussions were conducted in English as it is a language of instruction at all universities in Zimbabwe. Therefore, all the students could interpret the medium of communication during the focus group discussions. Time factor was the other aspect that was considered important during the interview process as to how long each interview lasted and the time it was conducted in order to accommodate all the sampled respondents for the study. Nonetheless, the instruments were pilot tested for ease of administration and language clarity. The researcher also judged the reliability of the instruments by the way the pilot study participants responded and had to adjust some question items that were misunderstood by the respondents. The interview responses were also read by the participants to ascertain whether correct responses were recorded.

In qualitative research, reliability is regarded as a fit between what researchers' record and what actually occurs in the natural setting that is being researched, which refers to the degree of accuracy and comprehensiveness of coverage (Cohen et al., 2000). Therefore, the researcher recorded respondents' responses as they occurred using a digital voice recorder and also made back up by note taking. Triangulation of different forms of data that was collected added to the reliability of the research process and the findings since the researcher utilized three data collection methods and large samples of respondents.

4.10.3 Member checking

It is a process of getting back to the respondents to find out if the data interpretation makes sense to the respondents and reflect on their experience (Cresswell, 2009). The researcher returned to some study respondents for them to comment on whether the interpreted data were in congruent with their own experiences. The process helped in establishing researchers' confidence in the study findings (Cresswell, 2003). The other way of checking accuracy of data collected is by allowing the study participants to review the research findings in order for them to confirm or challenge the accuracy of the data collection process (Cresswell, 2003). The researcher went back to some lecturer interview respondents for them to go through the collected data. A few typing errors were detected and corrected.

4.10.4 Pilot study

In order to increase the reliability and validity of the study findings, the instruments used for this study were pilot-tested. Pilot testing is necessary to determine whether the ways in which respondents understand questions are relatively similar across the group and to establish if the information is easily accessible to the respondents. The pilot testing procedure is necessary to ensure at the instruments items are such that the respondents correlate to what the study intends to measure (Grays, 2011) that is to establish strategies used for students from diverse academic backgrounds in the provision of TCD programmes at the universities of technology in Zimbabwe.

The pretesting process was done on the questionnaire and on the interview instruments with chairperson, lecturer and student respondents from one of the universities that offer clothing and textile programmes for teachers (Bachelor of Education program). The pilot sample had similar characteristics with the study sample in that; it comprised the programme management personnel, curriculum implementers and recipients (students). The students were also from different academic backgrounds since some were trained to teach at primary schools while others were trained to teach at secondary schools. However, the types of academic backgrounds were not as many as those for the study that included industry personnel and students from high schools in addition to students from other tertiary colleges. Literature also

highlights that pilot testing is important as it enables the researcher to estimate costs and duration of the study, effectiveness of study's organization, familiarizes the researcher with the research environment and to discover possible weaknesses, ambiguities and problems so that they can be corrected before actual data collection is carried out (Babbie & Monton, 2005; Buckingham and Saunders, 2004).

The data from the pilot study was analyzed and some modifications were made especially on some areas where the respondents had suggested that it lacked clarity. On the interview, the researcher observed that sometimes the time taken was too long and this afforded the researcher a chance to adjust time spend on introductory information and time used to ask research and probing questions to minimize time taken by the researcher but afford the interviewee enough time to respond to the questions. Pilot testing also gave the researcher the opportunity to testthe digital voice recorder. This assisted in knowing how to record the interview at the right pitch and pausing to accommodate unforeseen demands. This was relevant for interviewing quality assurance directors and faculty deans of studies and chairpersons who could be forced to attend to some urgent business demand such as phone calls, unexpected visitors who needed urgent attention and some emergency issues. After the pilot study, some amendments were made to the questionnaire and interview guides. There were two questions that demanded the same information from the respondents. One of the questions was removed and among the other pair one was rephrased to address a different aspect from the other, but answering the research questions.

4.11 Ethical considerations

Researchers are guided by ethics in their practice. The consideration of ethics in research is important because research participants in any study should be protected from harm. Gray (2014) postulates that harm can be embarrassment, anger, irritation, physical and emotional stress, loss of self-esteem, exacerbation of stress, loss of respect from others, negative labelling, invasion of privacy and damage to personal dignity. Ethics are expressions of our values and a guide to achieve them.

In order to carry out the study, the researcher secured an introductory letter from the University of Fort Hare to confirm the intention to conduct a study with two universities

of technology in Zimbabwe. The researcher then applied to the Zimbabwe Ministry of Higher and Tertiary Education for permission to carry out the study in the two universities of technology. A copy of the introductory letter was attached to each letter. The researcher entered the universities of technology after getting permission letters from the registrars of the two universities of technology mentioned above.

The researcher also observed participants' interest and well-being by ensuring voluntary participation in the study and guarding against infliction of any harm to the participants by conducting the research openly at their working sites in a natural environment. The researcher drafted a consent form that was signed by both the lecturer and student participants to show their willingness to participate in the research, to safeguard both the researcher and the participants. For confidentiality and anonymity purposes, the researcher protected information obtained from participants and made sure the information was used for academic purposes only. The right to respondents' privacy was adhered to by use of pseudonyms during interviews, numbers and letters of the alphabet for respondents' positions and names of institutions. However, pseudo names and codes were used where necessary as these would ensure anonymity and safety of participants. The researcher also sought clearance from University of Fort Hare Research Ethics Committee. Finally, in reporting the results, the researcher reported the findings as they are without any alterations. The ethical code states clearly that it is the responsibility of the researcher to accurately report and prevent misuse of results.

4.12 Data Analysis

Since quantitative and qualitative data were collected, the data were analyzed quantitatively and qualitatively respectively. The data collected using questionnaire were coded and entered using SPSS. The analysis took the form of univariate analysis such as frequency counts, percentages and calculation of appropriate indicators. Inferential statistics were used to establish relationships between variables (Cohen, Manion & Morrison, 2002).

The qualitative data collected were subjected to clustering in thematic areas, writing stories, tallying and ranking the responses to reveal the main issues arising. The

issues arising from the questionnaire, interviews and focus group discussions were analyzed concurrently to address the main research question (Creswell, 2011). Within the concurrent triangulation, the data were interpreted together and quantitative data were analyzed first followed by qualitative data.

4.13 Summary

The chapter presented and explored the methodology that was used in this study. The research paradigm, research design, instruments, and data collection procedures were discussed. The study adopted a mixed methods approach and a triangulation concurrent mixed methods research design. The adopted mixed method research enabled the researcher to collect both qualitative and quantitative data from the respondents. The study solicited data using questionnaire, interview, and document analysis instruments which enabled the researcher to acquire relevant data on strategies used for students from diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe. Data analysis procedure and sampling techniques were discussed as well. In the chapter that follows (chapter 5), the researcher presents and analyzes findings from this study.

CHAPTER FIVE

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

5.1 Introduction

This chapter focuses on data analysis, interpretation and presentation. The data presented was collected through in-depth face to face interviews, focus group interview, questionnaire and analysis of documents. The respondents for the study were universities' quality assurance directors, Textile, Clothing and Design (TCD) faculty deans, chairpersons, lecturers, and students. Quantitative data was gathered through self-administered questionnaire while qualitative data was gathered through individual face to face interview, focus group interview and analysis of documents. The quantitative data was collected from 36 lecturers and analyzed using SPSS software. Frequency distribution tables are used to present quantitative data.

Qualitative data solicited from respondents through in depth face to face interviews, focus group interview and analysis of documents was recorded using a smart phone. The recorded data was transcribed into written text. The respondents were 2 universities' quality assurance directors, 2 Textile, Clothing and Design deans, 2 chairpersons, 8 lecturers and 19 students. Important documents that included program regulations and course outlines were analyzed. The respondents are identified under the following codes reflected in Table 5.1.

Table 5-1: Codes assigned to study respondents

RESPONDENT	CODE
Quality Assurance Director, University A	QAD1
Quality Assurance Director, University B	QAD2.
Faculty Dean, University A	FD1
Faculty Dean, University B	FD2
Department Chairperson, University A	DC1
Department Chairperson, University B	DC2
Textile Clothing and Design lecturer, University A	TCDL1 – 4
Textile Clothing and Design lecturer, University B	TCD5-6
Students focus group discussions, University A	SFG 1 – 2
Students focus group discussions, University B	SFG 3

5.2 Biographic information of respondents

Presenting the profile for study respondents is necessary because the duties they perform depend on their levels of expertise and skill essential for them to function effectively to achieve differentiated curriculum implementation strategies to cater for students with diverse academic backgrounds. The respondents' profiles provide a picture of the level at which they function and understand strategies to cater for students with diverse academic backgrounds in the implementation of Textile, Clothing and Design curriculum at university level. Examination of teaching experience also assisted in determining whether the views of the respondents were congruent with their knowledge of the job related to curriculum implementation. Scholars think that perceptions tend to be influenced by gender and age (Eweje & Brunton, 2010; Jonsson & Devonish, 2010). Therefore, there was need to outline the respondents' profiles with respect to gender and age. It is assumed that a fuller understanding of respondents'

attributes makes it easier to understand why certain practices prevail in the implementation of strategies used to cater for students with diverse academic backgrounds in Textile, Clothing and Design at university level. In the following sections, the researcher presents respondents' gender, age, and academic backgrounds.

5.2.1 Distribution of respondents by gender

The study sought information on the gender of respondents comprising quality assurance directors, TCD faculty deans, department chairpersons, lecturers and students. This is relevant for the study because the researcher wanted to ascertain whether the views expressed were a reflection of both sexes in the sampled universities.

Table5-2: Gender of lecturer respondents

Gender	Frequency	Percentage
Male	10	27.8
Female	26	72.2
Total	36	100

Table 5.2 above shows that most lecturer respondents (72%) were females while fewer (28%) were males. The study results indicate that within the two universities of technology in Zimbabwe, the teaching of the TCD programmes was dominated by female lecturers. This could be attributed to the fact that more female lecturers were trained to teach the subject area at various institutions of higher learning. Traditionally this was an occupation for women.

Among the selected TCD management staff, 2 were female while 4 were male. This reflects that most of the supervisory posts in the study were held by male staff (57%) while female staff occupied less (43%) of the posts at the two universities of technology in Zimbabwe. The female staff members were chairpersons, a lower supervisory post

than the dean and quality assurance director posts. This shows that more men were taking more leading roles in TCD provision than females, although the subject area is dominated by the female gender at lecturer level. The next table 5.3 presents the distribution of TCD sampled students by gender.

Table5-3: Distribution of TCD students by gender

Gender	Frequency	Percentage
Female	19	79.2
Male	5	20.8
Total	24	100

The distribution of the sampled TCD students' respondents by gender in Table 5.3 above shows that there were (79.2%) female students and (20.8%) male students. The data indicates that there were more female students than male students among the TCD sampled students for focus group discussions.

5.2.2 Academic background of students in TCD classes

The level of qualification of students who enrol for programs determines how the programme content is designed and how lecturers structure teaching methodologies they use to deliver content. Lecturers base programme content on background knowledge of students. They develop theoretical and practical content from the lower levels (background qualification of students) to equip students with in-depth knowledge and skills in the area. For university TCD programmes, students should possess basic knowledge and practical skills so that one progresses in acquiring knowledge and skills in the area, from one level to the other. The researcher found it necessary to ascertain the entry qualifications of students who were in TCD classes in order to understand inclusive curriculum implementation strategies engaged by the lecturers. Table 5.4 below displays a range of levels of academic backgrounds of students in TCD classes at universities of technology in Zimbabwe as provided by lecturer respondents.

Table5-4: Academic backgrounds of TCD students

Academic background	YES	%	NO	%	Total	
Ordinary Level	9	25	27	75	36	100
Advanced Level	32	88.9	4	11.1	36	100
National Certificate in Clothing	4	11.1	32	88.9	36	100
Diploma in Clothing	23	63.9	13	36.1	36	100
Diploma in Education	17	47.2	19	52.8	36	100
2yrs & above industry working experience	13	36.1	23	63.9	36	100
Higher National Diploma in Clothing	14	38.9	22	61.1	36	100
City and Guilds	1	2.8	35	97.2	36	100

The results on Table 5.4 above show that 32 (88.9%) lecturers indicated that they had "A" level students in their TCD classes. The other lecturers 23 (63.9) indicated that they had students who have Diploma in clothing. Seventeen respondents (47.2%) pointed out that they had Diploma in education students in their classes. Fourteen (38.9%) lecturers indicated that they had students with Higher National Diploma qualifications. Thirteen respondents (36.1%) noted that their classes had students who had industry working experience of a minimum of two years. Nine (25%) of the respondents indicated that they were teaching students who had ordinary level as a background qualification. Those who indicated that they had students with National Certificate as a background qualification were 4 (11.1%). Only one candidate indicated that he or she had students who had City and Guilds qualifications. From the findings presented, the highest number of respondents showed that they had advanced level students in their classes, reflecting that students with "A" level qualification were the overwhelming majority in the TCD classes followed by those with Diploma certificates in Clothing and Education. There were few candidates with City and Guilds qualification in the TCD classes as indicated by only one respondent out of 36 participants. The department chairpersons, dean of studies, quality assurance

directors and lecturers also indicated that they had students with different academic background qualifications in their classes:

QAD1 pointed out that:

> *Any 2 "A" level passes, 2 "A" level passes in special area, Textile Clothing and Design, and "O" level and 2years working experience in industry.*

FD1said that:

> *… "A" level graduates but most of them don't have background information in any related subjects like visual art and maybe one or two are mature entry students who have worked in the area and have 'O' level qualifications.*

FD2 stated that:

> *Undergraduates – "A" level – MPC. We do take sometimes ND & NC in Drafting Diesel plant & mechanical engineering, so have a diverse.*

DC1 elucidated that they enrolled:

> *…some who have done Dress and Textiles at "A" level, others who have done Fashion and Fabrics at "O" level and a few have not done any of these two courses. Those with no Fashion and Fabrics have at least 2 "A" level passes. Then we also have those with Diploma in Education, especially those who have done Fashion and Fabrics and we have got a few who have done Clothing….*

The other lecturers, TCDL1, TCDL2, TCDL3, TCDL4 and TCDL5 shared the same sentiments with DC1.

DC2 confirmed that:

> *We enrol those with Diploma in Education from various teachers' colleges. We often take Technical Arts and out of all those students, their programmes sometimes differ, Dress and Textile programmes, Art and Design, Wood Technology and Graphics.*

TCDL6 commented that:

> *Most of them have done "O" level, some are primary and secondary trained teachers who have specialized in Home Economics. Most programmes have a few who studied Textile Studies and Design.*

The participants revealed that the TCD programmes offered at the universities of technology were open for a wide range of candidates with different background qualifications. Besides the interview and questionnaire results, the program documents also confirm that the TCD programmes were accommodating students with various qualifications and these were enrolled under normal entry, mature entry and special entry. This shows that the TCD classes at the two sampled universities comprised students with diverse academic backgrounds that demanded curriculum implementers to have knowledge and skills in teaching classes that comprised students from diverse backgrounds.

5.3 Capacity of Lecturers to deliver TCD Programmes at the Universities

Lecturer capacity involves knowledge and dispositions that are required from lecturers to teach in the classroom at a university. The subject core knowledge, skills and dispositions possessed by lecturers enable them to handle students' concerns and effectively deliver in their classes within a field of study. Knowledge and skills refer to the command of subject matter, practical skills proficiency and pedagogical content knowledge. However, lecturer capacity is determined by a number of factors such as resources, technological changes and changing student demographics. This study considered lecturer capacity as a relevant variable that informs the implementation of TCD programmes at university level. The capacity of lecturers presented in Tables 5.5 to 5.11 below include academic and professional qualification, area of specialization, working experience and teaching methodologies used. One has to use a wide range of teaching methods and techniques to address issues in delivering TCD programmes content and catering for students with diverse academic backgrounds.

5.3.1 Age and experience of lecturers and faculty managers

The ages of TCD lecturers, quality assurance directors, deans and chairpersons were sought because it was assumed that the older lecturers were mature and more experienced in delivery strategies and in catering for student diversity. Contrary young lecturers were believed to be less experienced in designing curriculum implementation strategies to cater for diverse students. The lecturer's experience in implementing diversified curriculum implementation strategies for diverse students is important because more experience in a field of work means one possesses more content and skills in the area of study, and is more capable to deliver, impart skills and meet challenges confronted in the classroom (Wambui, Ngari & Waititu, 2016).

Experienced faculty managers are required to support lecturers in building knowledge and skills on classroom supervisory practices. Management roles are a challenge for a novice individual to perform. The tables below 5.5, 5.6 and 5.7 reflect the distribution of lecturer and faculty manager respondents by age and working experience.

Table5-5: Lecturer's age

Age range	Frequency	Percentage
30 – 39	14	38.9
40 – 49	15	41.7
50 – 59	6	16.7
60 –69	1	2.8
Total	36	100

Table 5.5 above shows that the highest number of TCD lecturers 15 (41.7%) at the two universities of technology were aged between 40 and 49 years. The oldest lecturer (2.8%) was aged between 60 and 69 years. Fourteen (38.9%) lecturers were aged between 30 and 39 and 6 were in the age range 50 to 59 years. This shows that most lecturers who were teaching TCD programmes were aged between 30 and 49 years. This reflects that they were young and energetic to work hard to cater for students with diverse academic backgrounds in their classes. The next table, Table 5.6 shows the TCD lecturers' working experience.

Table5-6: lecturer's working experience

Experience (years)	Frequency	Percentage
<1	1	2.8
1 – 5	16	44.4
6 – 10	11	30.6
11 – 15	4	11.1
16 – 20	4	11.1
Total	36	100

Table 5.6 above reflects that the majority of the lecturers 16 (44.4%) had working experience ranging from one year to 5 years. Eleven (30.6) lecturers had working experience ranging from six to ten years. Four respondents (11.1%) had an experience between 11 and 15 years, while the other 4 (11.1%) had between 16 and 20 years working experience. There was one respondent who had less than one year university lecturing experience. This reflects that the lecturing staff in the sampled TCD programmes comprised highly experienced and less experienced lecturers. The most experienced lecturers, those who had lectured for more than ten years, were less than the lecturers who had lectured for less than ten years. Table 5.7 shows the age and working experience of the TCD faculty managers at the two universities of technology in Zimbabwe.

Table5-7: Age and working experience: faculty managers

Age range	Experience (years)	Frequency	Percentage
20- 29	<1	0	0
30- 39	1-5	0	0
40- 49	6- 10	3	50
Above 50	>11	3	50
Total		6	100

Table 5.7 above shows that 50% of the faculty management posts were held by individuals who were between 40 to 49 years old and had working experience ranging from 6 to 10 years. The other 50% were above 50 years old and had worked in the lecturing field for more than 11years. This shows that the management posts in the TCD departments were held by individuals who were quite experienced and mature since their working experience ranged from six years and above and were above forty years old. The faculty managers' high levels of maturity and experience may assist them to guide the lecturers on how to handle the diverse students in the TCD classes to facilitate effective teaching and learning among all the students.

5.3.2 Academic and Professional qualifications of respondents

The minimum qualification for one to lecture at a university in Zimbabwe is a Master'sdegree (Ministry of Higher and Tertiary Education, Science and Technology Development, 2012). The qualification is attained after two to three years of training in the degree programmes at various universities that offer those programmes. University education equips the candidates with in-depth knowledge and skills in the subject area and prepares one for the working environment. Therefore, the researcher sought professional qualifications of the respondents to ascertain whether they were properly qualified to lecture at university level. Table 5.8 next presents professional qualifications of the faculty managers who included quality assurance directors, deans of studies, and department chairpersons.

Table5-8: Faculty managers' professional qualifications

Qualification	Frequency	Percentage
Masters in Education	2	33.3
Masters of Art in Education	1	16.7
Masters in Industrial Education	2	33.3
PhD	1	16.7
Total	6	100

The data presented in Table 5.8 above reflects that two (33.3%) of the faculty managers had Masters degree in Industrial Education and the other 2 (33.3%) had Masters degrees in Education. One (16.7%) faculty manager had a Doctor of Philosophy Degree and the other 1 (16.7%) had Masters degree in Art Education. All the qualifications are recognised as appropriate teaching qualifications at universities in Zimbabwe. Therefore, the TCD managers had appropriate professional qualifications for university work although could have lacked experience in dealing with diverse students. The next table, Table 5.9 shows the TCD lecturers' professional qualifications.

Table5-9: Lecturer's Professional educational qualification

Qualification	Frequency	Percentage
Honours degree	13	36.1
Masters in Education	13	36.1
Higher National Diploma	1	2.8
Masters in Engineering	3	8.3
Masters in Heritage Studies	1	2.8
PhD	2	5.6
Bachelor of Education degree	1	2.8
Masters in Industrial Textile Technology.	2	5.6
Total	36	100

Table 5.9 above unveils that 13 (36.1%) of the lecturer respondents had Honor's degree and the other 13 (36.1%) had Masters degree in Education. Three (8, 3%) of the respondents had Masters degree in Engineering. Two (5.6%) of the respondents had Doctor of Philosophy degree and the other 2 (5.6%) had Masters degree in Industrial Textile Technology. One (2.8%) of the respondents had a Masters degree in Heritage Studies and the other 1 (2.8%) had Bachelor of Education Degree. Among the lecturer respondents, the highest professional qualification was Doctor of Philosophy degree and the lowest qualification was Higher National Diploma. From the interviews carried out with lecturers, one with Bachelor's degree qualification was pursuing Master's degree with one of the universities and was a part time lecturer. It is clear from the data presented above that most lecturers did not have pedagogical educational qualification. Lack of pedagogical education qualifications by most lecturers shows that the lecturers were not properly trained to teach at the two sampled institutions. This also means that such lecturers were not adequately trained for the teaching profession.

5.3.3 Respondents' area of specialisation

It was also important to establish whether the TCD lecturers had undergone training in the programmes they taught. This is so because some programmes have implementation principles that are not necessarily addressed in the regular curriculum. Therefore, the researcher enquired about respondents' areas of specialization to infer if they had in-depth knowledge and skills in delivering TCD programs. The tables 5.10 and 5.11 next display the areas of specialization for the faculty managers and the lecturers.

Table5-10: Faculty managers' area of specialization

Area of specialization	Frequency	Percentage
Education Administration	1	16.7
Design and Technology	1	16.7
Education Management	1	16.7
Manufacturing Systems	2	33.3
Performing Arts	1	16.7
Total	6	100

The data presented in Table 5.10 shows that 2 (33.3%) faculty managers had specialized in manufacturing systems. One (16.7%) faculty manager had specialized in Education Administration, (16.7%) in Design and Technology, 1(16.7%) in Education Management, and 1(16.7%) in Performing Arts (16.7%). Three of the areas of specialization, Education Management, Education Administration and Performing Arts are not related to Textile, Clothing and Design programmes. The other two; Design and Technology, and Manufacturing Systems are areas within the TCD field of study, and those who have specialised in these areas are appropriately qualified to teach the programmes. Table 5.11 presents lecturers' areas of specialization.

Table5-11: Lecturer's area of specialization

Area of specialization	Frequency	Percentage
Clothing and Textile Technology	12	33.3
Clothing Technology	1	2.8
Textile Technology	12	33.3
Fashion Design	3	8.3
Fashion Design and Illustration	2	5.6
Food Science	1	2.8
Textile Decoration	1	2.8
Art and Design	2	5.6
Management	1	2.8
Textile Engineering	1	2.8
Total	36	100

Table 5.11 reflects that 12 (33.3%) lecturer respondents had specialized in Clothing and Textile Technology and the other 12 (33.3%) had specialized in Textile Technology. Three lecturers (8.3%) had specialized in Fashion Design. Two (5.6%) of the lecturers had done Fashion Design and Illustration and the other two (5.6%) had specialized in Art and Design. Each of the five lecturers had specialized in one of the following areas, Clothing Technology, Food Science, Textile Decoration, Management and Textile Engineering. From the range of areas of specialisation displayed in Table 5.11, Food Science, and Management areas are divorced from the TCD field. The two respondents who possessed the two qualifications were not appropriately qualified to teach the TCD programmes.

From the interviews carried out with faculty deans, it was established that some of the lecturing staff in the TCD departments were not well trained in the TCD areas, such as the Creative Design, because the training programmes they attended were not focussing on artistic components. It also emerged that some lecturers lacked practical

content knowledge and skills for some TCD courses such as Textile Science, Fashion Photography, and Fashion Illustration. This reveals that some of the TCD lecturers were not specialists in the subjects they were teaching or they were inadequately trained for the areas as indicated earlier on. Hence, they possibly lacked some relevant knowledge and skills in the areas they were teaching. This meant the students were disadvantaged as they were not getting optimum benefit from the lecturers. The following are comments from some of the respondents:

FD1 commented that:

> *I think training also comes into being part of that since we did not have a Clothing Fashion degree programme that focused at the artistic aspect. The training programmes in the universities we have, especially if looking at Master's level, the one at University of Zimbabwe, the one at Solusi University and the other one at Midlands State University. Those programmes are not so much intended on fostering creativity or promoting the creative aspect so that the lecturers can impart those ideas. The programmes are mostly focused on training teachers who are going to teach students how to make things, so that same structural defect that we find in the programme is echoed in the training of the manpower.*

SFG2 also commented that:

> *The lecturers are relevant in teaching simple vocational skills. I don't think they are adequately qualified for all the areas like in-depth knowledge in the subjects they teach. They need more practical knowledge in Textile Science, Fashion Photography, and Fashion Illustration. The lecturers know how to comment, especially on our work, but they cannot bring their own piece of work to show us how we can do it……*

However, the same group SFG2 acknowledged that some lecturers were knowledgeable in the areas they were teaching as they said:

> *…we have to note that some lecturers do have strengths in some areas for example in Grooming and Modeling, and Pattern Making. It was really*

like opening our minds because we did the theory part and the practical

part. It was very good.

5.3.4 Courses that were taught by TCD lecturers

The Textile, Clothing and Design programmes offered at the two universities have a wide range of courses. The range of courses offered include courses that are purely theoretical, those that are practical, and design courses. Theoretical courses' focus is to enhance the students' knowledge in the area of TCD. Practical courses impart hands on skills to the students so that they become proficient in a specialized area of TCD such as pattern making or machine shop engineering. The design courses train students to be creative and innovative so that they can invent processes and products that may improve the operations in the TCD industry and performance of TCD products among the consumers. This study sought to establish the courses that were taught by the lecturers to ascertain whether the delivery methodologies and the area of specialization for the lecturers were relevant for the courses they were teaching. It was also important to establish types of courses taught by the lecturers as the course content entails the delivery methodologies that would improve curriculum implementation practices in TCD provision. Table 5.12 that follows shows the courses that were taught by the TCD lecturers.

Table5-12: Courses taught by the lecturers

Courses taught by lecturers	YES	%	NO	%	Total	
Design courses	25	69.4	11	30.6	36	100
Theory courses	13	36.1	23	63.9	36	100
Practical courses	4	11.1	32	88.9	36	100

Table 5.12 shows that 25 (69.4%) of the lecturers were teaching design courses. Thirteen (36.1%) lecturers indicated that they were teaching theory courses. Four (11.1%) lecturers were teaching practical courses. The majority of the lecturers were teaching design courses which shows that most of the courses in the programmes were design oriented. The programmes' documents also confirmed that most of the

TCD university curricular courses from the sampled universities were design oriented. This reflected that the programmes' main focus is to instill creative and innovative design knowledge and skills among students.

5.4 How lecturers adapt the curriculum content including assessment to ensure that students with diverse academic backgrounds are catered in the programmes.

5.4.1 Content adaptation to meet needs of students with diverse academic backgrounds

Catering for students with diverse academic backgrounds is one of the issues that universities face around the world. It is a complex and dynamic issue that requires careful consideration and close systematic approach to address it. Many students find learning difficult, while others learn faster and easier than their counterparts. Therefore, the programme implementers have a responsibility of constructing conducive classroom environment for effective teaching and learning. Lecturers design various curriculum implementation programmes that they use to cater for the diverse students in teaching and learning in order to meet the needs of the students (Jones, Coetzee, Brailey & Wickham, 2008). The next sections provide presentations and analyses of factors considered when designing the TCD programmes, to find out if the lecturers incorporated the needs of students with diverse academic backgrounds during the designing of programmes.

5.4.2 Factors considered when designing TCD programmes content at university level

The current pedagogical ideology emphasizes that learning has to be dynamic to meet the needs of different students (Dalton, Mackenzie & Kahonde, 2012). Curriculum implementers design programmes' content based on various aspects depending on the characteristics of the students. This includes the students undertaking the programme and those who graduate from the programme. Therefore, it is important for this study to explore the way TCD content was adapted to cater for the needs of

students from diverse academic backgrounds. Table 5.13 presents factors considered by lecturers when designing TCD programmes' content.

Table5-13: Factors considered when designing TCD programmes' content

Factors considered	YES	%	NO	%	Total	
Prior learning experiences of students	25	69.4	11	30.6	36	100
Academic qualifications of students	17	47.2	19	52.8	36	100
Industry demands	28	77.8	8	22.2	36	100
Contemporary trends in TCD provision	21	58.3	15	41.7	36	100
Available human and material resources	17	47.2	19	52.8	36	100

The information on Table 5.13 shows that 77.8% (28) of the lecturers considered the demands of the industry when they designed the content of the TCD programmes at university level. Twenty-five (69.4%) lecturers indicated that they considered the prior learning experiences of the students. Twenty-one (58.3%) lecturer respondents said they considered the contemporary trends in the provision of TCD programmes. Seventeen (47.2%) lecturer respondents noted that they looked at the academic qualifications of the students in designing the programmes' content. The other 17 (47.2%) claimed that they looked at the available human and material resources that facilitate provision of the TCD programmes. From the data gathered from the lecturer respondents, most of them 28 (77.8%) said that they considered industry demands in coming up with programmes' content in the TCD field at university level. The least number of lecturers indicated that they considered the academic qualifications of students and the available human and material resources in designing the content of TCD programmes at university level. The data reflects that the lecturers mostly considered the needs of the industry when designing TCD degree content, although they also looked at prior learning experiences of the students and contemporary trends in TCD provision. This implies that the diverse needs of students with various academic backgrounds was not considered critical in designing the TCD university programmes' content in the two sampled universities, although their needs were

catered for since prior learning experiences of the students was incorporated in the process as indicated by more than half the total number of questionnaire respondents.

Interviews carried out with the quality assurance directors, faculty deans of studies, department chairpersons, lecturers, and students confirm the points that were highlighted by the questionnaire respondents on factors considered in designing content for TCD programmes at university level.

QAD1 confirmed that the lecturers took cognisance of the textile industry's needs with regard to job opportunities in the industry and further said that:

> *… The courses are also designed such that graduates will be able to start own businesses. One way is having the interests of the students. How affordable is the programme? How marketable are the programmes in the country or will employers be ready to employ them? And can they compete with students from other institutions which offer the qualification in the same field? Then what are the industrial employers' views to graduates? This is normally by stakeholder consultations. Maybe the societal needs, we need to address them and the potential of graduates to engage in further studies i.e. career path. Does it promote further learning directly?*

QAD2 also indicated that they considered industry's needs considering the changes of technologies used in production and manufacturing processes and added that:

> *Look at local industry's research direction where we talk about local and regional direction changes in terms of technology. Industry where everyone doesn't want textile pure but textile mixed. By that you also talk about it's not only about textiles, but textiles in terms of mixture, control and graphics. Mixture in terms of interdisciplinary discourse. You can't have an engineer with just a simple engineering course.*

FD2 explained that the designing of programmes incorporated core courses that were taken by every student in the TCD programs. Such courses were designed to prepare students for training in the various TCD programmes offered by the institutions:

There are those courses set in such a way that different backgrounds can actually take; for example, courses like chemistry, physics- as first year.As they pick up courses about the design in terms of full course that's when you talk about manufacturing courses, rubber, leathers and also the programs obviously pick people from different backgrounds where some are specialists in manufacturing, computer science, chemistry major. So, obvious; that should take care for the students.

DC1 Further confirmed that the lecturers incorporated the needs of industry when they designed university TCD programmes and commented on the issue of resources available as she revealed that:

….then we also look at what infrastructure we have in the university to cater for the teaching of the courses we include in the programme. We also look at total costs, costs implications of the program because that is what determines the fees paid by the students. Besides infrastructure, we also look at the national needs. What is it that our country requires in terms of skills development in the graduates?

DC2 said that they sought views on the content to include in the programmes from the TCD stakeholders, especially lecturers from other universities.

We consult through involving part time lecturers. We go to other universities outside the country for consultations and also through discussion with students.

TCDL3 also stated that they looked at industry needs and added that:

…. secondly, we try as much as possible to offer some courses that are in tandem with what other universities are offering. Say universities of technology in the nation, in the region and in the global world; so that we are at par with others internationally.

TCDL4 concurred that they considered requirements of industry and:

…we also need to consider the disciplinary aspects that need to be covered within a particular discipline like you find out that there are general aspects that a clothing and textile student should do, so we also

consider those general aspects like, for example, programme in fashion designing. It's obvious that students need to be introduced to designing aspects. There is no way we can leave out that. Then also include other aspects like changes in technologies, such has to be considered when designing a programme.

TCDL5 argued that:

At university the part time lecturers are not consulted. Here I am not sure because when I come here, the courses are just done. They will be prepared so I'm not sure who is consulted.

The interview respondents confirmed the questionnaire respondents' view that they mostly considered the needs of the industry when designing TCD programmes' content at university level. This shows that the needs of industry were the most guiding factor in coming up with TCD university content at the two universities of technology not withstanding the needs of diverse students they engaged in the programs. The quality assurance directors, deans of studies, chairpersons and lecturers added that the lecturers considered students' potential to become entrepreneurs, students' interests, competitiveness of the programme against related programs offered by other institutions, societal needs, and national policies with regard to training of manpower. The deans of studies and lecturers also added that they considered the programme approval procedures, whose process, they argued, was very rigid. They considered the level of the programme, disciplinary components in TCD area, title of programme versus content, methods of delivering content, as well as assessment methods. They outlined that the programmes were first developed by individual members, assessed at department level, at school level and then sent to industry stakeholders for consultations. After the industry consultations, the programme is taken to the university programme's committee and then to senate. It is important to note that the approval process is concerned with whether the programme is addressing needs of industry and is not violating the ministry's education mandate in manpower training needs. Thus, the needs of students with diverse backgrounds are considered to a lesser extend when the programmes are designed since the quality checking process does not address them. The next section presents how the designed programmes are adapted to cater for the needs of students with diverse academic backgrounds.

5.4.3 Adapting TCD content to meet the needs of students with diverse academic backgrounds

Curriculum adaptation ensures catering for students from diverse academic backgroundsand paves way for effective teaching and learning. The curriculum implementers need to get in their classes after thorough planning of content to be delivered so that they can create a classroom environment that is suitable for learning. Well trained and experienced lecturers are capable of breaking down content into units that can be easily understood by students and that meet the needs of all students, resulting in positive learning outcomes (Chataika, Mckenzie, Swart &Lyner-Cleaphas 2012). The next table, Table 5.14 presents methods of adapting content employed by the TCD lecturers to cater for students with diverse academic backgrounds.

Table5-14: Methods of adapting TCD programmes content to meet the needs of students with diverse academic backgrounds

Method of adapting content	YES	%	NO	%	Total	
Adjust quantity of content aspects	20	55.6	16	44.4	36	100
Adjustment by qualification equivalent content	6	16.7	30	83.3	36	100
Drawing content from programme & emphasize specific aspects	17	47.2	19	52.8	36	100
Adapt time allocation per task	17	47.2	19	52.8	36	100
Adjust level of individual assistance	18	50	18	50	36	100
Adapt instruction delivery method (adjust teaching methodology)	20	55.6	16	44.4	36	100
Adapt skill level, problem type & rules on how students approach content (have core background courses)	17	47.2	19	52.8	36	100
Adjust learner output	10	27.8	26	72.2	36	100
Adjust students participation	9	25	27	75	36	100
Alternate outcome expectations	6	16.7	30	83.3	36	100
Substitute curriculum	3	8.3	33	91.7	36	100
Give more time to teach fundamentals & preliminary knowledge (teach content from known to unknown, teach basic content and skills)	1	2.8	35	97.2	36	100
Teach students with common challenges separately in groups (tutorials).	1	2.8	35	97.2	36	100

Table 5.14 above presents the methods of adapting TCD content to cater for students with diverse academic backgrounds. Twenty (55.6%) lecturers indicated that they adjusted the quantity of content aspects in order to cater for students with diverse academic backgrounds. Another 55.6% (20) of the lecturers said that they catered for the students by adapting the ways instruction was delivered to students. Eighteen (50%) lecturer respondents noted that they adjusted the level of individual assistance in catering for students with diverse academic background. However, considering the large number of students per class in TCD provision, as indicated earlier on, individual attention would require more time and adequate resources. Seventeen (47.2%) lecturers said that they adapted content to cater for students with diverse academic backgrounds by drawing content from the programme and emphasizing specific aspects. In this view, the specific aspects of the content that is selected requires thorough attention as students have unique knowledge gaps because of their diverse academic backgrounds. Seventeen (47.2%) lecturers noted that they adapted the time that is allocated to tasks during the lessons to accommodate the students. The other 17 (47.7%) lecturers indicated that they adapted the skill level, problem type and rules on how students approached the content. Ten (27.8%) respondents said that they adjusted the student output to meet the needs of the students. Twenty-five percent (9) of the lecturer respondents indicated that they adjusted student participation. Six (16.7%) lecturers said that they adjusted the programme content by equivalent qualification level. The other 16.7% (6) noted that they alternated outcome expectations of the programme to accommodate students with diverse academic backgrounds. Three (8.3%) lecturers indicated that they substituted curriculum content in order to cater for students with diverse academic backgrounds. One respondent said that he/she allocated more time to teaching the fundamentals and preliminary knowledge for the programme. The other one mentioned that teaching students with common challenges separately was the technique that he/she employed to cater for students with diverse academic backgrounds.

Most respondents indicated that they adjusted the quantity of content aspects and adapted ways in which instruction was delivered to students. Adjusting quantity of content may benefit some students and disadvantage other students at the same time. When a lecturer adjusts content by removing some concepts, the students who may not have learnt the concepts before, may not benefit since they do not have

background content in the concepts. If the lecturer enriches the content, those with strong background knowledge benefit since they easily cope with the enrichment. Those students who have not covered the basic concepts before may not effectively cope with the enrichment as they do not have basic knowledge about the concepts. However, a combination of different adaptive techniques may benefit students with diverse academic backgrounds.

The interview respondents gave their views on how the lecturers adapted the TCD content to cater for students with diverse academic backgrounds, and these are presented next.

The quality assurance directors commented that the lecturers adapted the programme content by breaking it down into courses and course outlines that reflect breakdown of content from simple to complex, and by having the core course with introductory content first. Their responses are captured in the statements below.

QAD1 said that:

> *When the content that has been consulted first is packaged into course outline, the course outline spells the content level, the gradual development of the content level which originates from lower level to higher level covering all the levels. The skills they do should match the content levels. The course outline has to spell out all the aspects, like the assessment procedure, the teaching procedures/ methodologies that are going to be employed in that particular course, and the evaluation techniques.* They also spell out exit level and the set times in number of hours.

QAD2 displayed that:

> *...There are those courses set in such a way that different backgrounds can actually take e.g. courses like Chemistry and Physics as first year.*

The faculty deans of studies argued that the programmes' content should not be adapted. They advocated the adaptation of teaching and learning methodologies to suit the diverse students' needs. FD2 echoed the same sentiments as QAD2 who

commented that they have broken programmes in such a way that they have simple courses with general content taken by all the students in first year.

FD1 pointed out that:

> *That will be the issue of methodology because the content the programme is supposed to provide for should be there whether a student is deficient in what or what. This is what our competencies are in terms of our graduate. It's a student who knows 1, 2, and 3 from the set content. But what should vary from class to class is the methodology used by lecturers. The students can be assisted through tutorials by academics. These tutorials need to be turned a little bit to the lighter side of 12 students per class since there are very large classes of 30 to 50.*

DC1 agreed with QAD1 and FD2 that they have common courses in the first semester in order to teach basic subject content knowledge and skills among all the students in first year. They also revealed that they adapted the programmes content at regular intervals to meet global technological advancements.

DC2 outlined that:

> *Adapting content with us is an ongoing process because we want to meet new developments in technology. Every 3 years, we do curriculum review. So far it is a 3 year programme but the new one, which is supposed to begin this year, is going to be a 4 year programme – Design and Technology, and will be reviewed after 4 years.*

The lecturers also gave their views on how they tailored the TCD programmes' content to meet the needs of the students with diverse academic backgrounds. The lecturers commented that they taught from the simple content to complex and employed mixed ability grouping in order to capture attention of all the students and also assist those in need during extra hours.

TCDL1 argued that:

> *I don't do anything to the programme. The programme encompasses everyone, but when it comes to, like when you are talking of catering for*

those other students, it's up to me now to give them extra tuition and sometimes I settle for tutorials, taught up lessons and also, I give them time to consult either me as the lecturer, other students or even other lecturers in the department. They can also get something like clarification of some issues not clear to them.

TCDL2 explained that:

When I offer my lectures, I try to like open up more for those who have unique backgrounds and also another way would be telling students, especially those lacking crucial core knowledge, give them areas to read on as a way of catering. Then the other way will be like where we do peer group presentations. When you constitute the groups, you try to spread them to make sure each group has students who are well experienced and those who have little knowledge in the area for cross pollination of ideas, especially with those who have little knowledge in the area.

TCDL3, TCDL4, and TCDL5 agreed with the above lecturers that they start to teach basic concepts from the known to the unknown.

TCDL6 elaborated that:

Yes, we adapt the content like I have explained earlier on. The intention is not on removing other content which they have to cover. It's additional of some of the content. We add some of the things that would have been taken for granted.

Most of the interview respondents' responses confirm most of the lecturer respondents' views that the lecturers adjusted teaching methodologies in order to cater for students with diverse academic backgrounds. However, most of the questionnaire lecturer respondents indicated that they also adjusted the quantity of curriculum content to cater for the diverse students; a view that was not shared by the faculty deans of studies. The TCD deans argued that the content was not supposed to be adjusted because the programme content had set competencies for the graduates that should not be adjusted.

Adjustment of curriculum content may benefit and disadvantage the students. If it is well coordinated in which content is altered through modification for enrichment to meet the needs of the diverse students, the process benefits the students. However, if the adjustment leads to omission of some curriculum content, the process disadvantages the students as programmes learning outcomes may not be effectively achieved among the different students. Since the management staff was not for adjustment of the content, this may imply that they were not fully aware of how the teaching and learning process was done especially in catering for students with diverse academic backgrounds. Some of the lecturers were in agreement with the quality assurance directors and indicated that they did not do anything to the programme content as they committed themselves to assist those students who needed assistance. These lecturers shared the same sentiments with questionnaire lecturer respondents who indicated that they assisted the diverse students by adapting time allocated per task, skill level, problem type, and rules on how students approach content, and adjusted the level of individual assistance. However, the lecturer interview respondents elaborated that it was up to them to help those students who needed assistance as they had other things to attend to. This reflects that the TCD management team was not much concerned with the teaching and learning of the students who joined the TCD programmes from diverse academic backgrounds. This is shown by the way the timetable was designed as the curriculum implementers were not afforded time to assist the students.

Attending to students with challenges in learning is critical because the process ensures achievement of lesson objectives among all students in a class. It also leads to effective teaching and learning among the students with different academic backgrounds as they have different learning needs. The process of individual assistance requires adequate resources and well oriented lecturers able to deliver set subject and skills content knowledge among all students in classes that comprise students from diverse academic backgrounds.

Adapting content by drawing content from the programme and emphasizing specific aspects may lead to inadequately trained graduates. Some relevant subjects' content may be left out because there is no laid down monitoring process being followed. Leaving out some curriculum content may lead to inadequacy in coverage of curriculum content. Breaking down programmes content from simple to complex and

having core subjects which was noted by most interview respondents assist lecturers to capture all students during lessons since the core basic courses were taught in the first semester in all the TCD programmes offered by the sampled universities.

Although the lecturers noted what they considered in designing TCD content at university level and how the content was adapted to cater for the diverse backgrounds of students, the curriculum recipients (students) were asked to put across their views on whether the content was adapted to meet their diverse needs or not.

The students confirmed that the programmes' content was broken down into courses such that they had simple introductory courses in the beginning semesters for them to understand the concept better. The students' responses are presented in the quotation below.

SFG2 added that:

> *The way in which the curriculum is structured is alright. It has the background knowledge, no matter where you are coming from or what you have done. In the first year, you are introduced to the programme. It begins with Introduction to Design and the like. It is very relevant and very good. If we have that background, it's catering for everyone. However, there is need for the lecturers to keep updated on the internet and maybe do exchange programmes so that they are up to date with technology, be it new information, theoretically or practically. There is need for lecturers to do extension programmes as well for them to present up to date, relevant information.*

Most of the students shared the same sentiments with the interview and questionnaire respondents, that the programmes' content is structured from simple to complex, from introductory courses to those that are challenging. However, most students argued that the lecturers lacked knowledge in advanced technology and skills in curriculum delivery. Integration of technology in teaching and learning is relevant as it may enable curriculum implementers to effectively cater for students with diverse backgrounds. Most teaching and learning Information Communication Technology (ICT) packages facilitate varying delivery methodologies and instructional approaches by the lecturers,

which enable them to cater for different learning styles and learning needs among diverse students.

5.4.4 Teaching strategies used by lecturers to cater for students with diverse academic backgrounds

Teaching strategies used by lecturers in class differ from subject to subject. Since the TCD field has programmes that train professional individuals, it is critical that the lecturers have knowledge and skills on how to deliver the programmes' subjects. In this regard, the lecturers should design the teaching strategy that suits the academic level of the students as well as the nature of subject being taught. Design oriented subjects may require different teaching approaches from theory oriented subjects.

The strategies are broken down into instructional approaches and teaching methodologies. Instructional approaches are those curriculum-related practices and professionally-informed decisions and practices that teachers purposefully use to enhance learning opportunities for students. The teaching methods are embedded in the instructional approaches. Therefore, the instructional approach selected by the lecturers should link with the teaching methodologies engaged. The instructional approaches engaged by lecturers reveal how the lecturers interact with the students and how the students interact with the subject content throughout the lesson to facilitate effective teaching and learning among the students. Effective instructional approaches and teaching methodologies are interactive and designed to accommodate students' learning needs and learning styles (Macgregor, 2007). There is no best way of practicing teaching and learning practices, and as a result, teachers use different instructional approaches and teaching methodologies to meet the needs of the diverse students to enhance learning among them.

The study sought to establish teaching strategies used by university lecturers in TCD curriculum implementation because they are an important component in the implementation of differentiated curriculum instruction to classes which comprise students with diverse academic backgrounds. The Data in Tables 5.15 and 5.16 shows teaching strategies used by TCD lecturers for delivering curricular to students with diverse academic backgrounds.

Table5-15: Instructional approaches used by lecturers to cater for students with diverse academic backgrounds

Instructional approaches used	YES	%	NO	%	Total	
Alternative representation of teaching and learning.	14	38.9	22	61.1	36	100
Motivation through engagement with personal interest.	21	58.3	15	41.7	36	100
Modeling & demonstrating skills.	22	61.1	14	38.9	36	100
Explicit systematic instruction	11	30.6	25	69.4	36	100
Levels of promoting concepts	9	25	27	75	36	100
Modeling problem solving	15	41.7	21	58.3	36	100
Opportunity for students to think aloud	14	38.9	22	61.1	36	100
Scaffolding student learning through guided practice and support	15	41.7	21	58.3	36	100
Providing feedback and correction	25	69.4	11	30.6	36	100
Identifying key vocabulary for explicit instruction.	12	33.3	24	66.7	36	100
Organizing and connecting knowledge, skills and values to promote generalisation	14	38.9	22	61.1	36	100
Using cross curricular. and naturally occurring learning opportunities to enhance individual Learning goals	10	27.8	26	72.2	36	100
Providing alternative opportunities for students to represent their learning	12	33.3	24	66.7	36	100
Frequent cumulative review	8	22.2	28	77.8	36	100
Providing opportunities for generalisation and maintenance.	10	27.8	26	72.2	36	100
Encouraging inter-student demonstrations.	1	2.8	35	97.2	36	100

In Table 5.15 above, 25 (69.4%) lecturers said they employed the instructional approach of providing feedback and correction to the students to cater for students with diverse academic backgrounds in the provision of TCD programmes. Twenty-two (61.1%) respondents indicated that they used modeling and demonstrating skills, strategies in their classes as an instructional approach to cater for students with diverse academic backgrounds. Motivating students through engagement with personal interest was used by 21 (58.3%) lecturers as a teaching strategy in the TCD classes. Fifteen (41.7%) lecturers indicated that they catered for students' diverse academic backgrounds by using modeling problem solving teaching strategy. The other 15 (41.7%) lecturers claimed that they engaged scaffolding student learning through guided practice and support. Fourteen (38.9%) lecturers indicated that they catered for diverse academic backgrounds of students by providing opportunities for students to think aloud during lessons. Fourteen (38.9%) lecturers noted that they used a teaching strategy, provision of alternative representation of teaching and learning materials using multimedia, illustrated texts, simplified texts or captioned videos for the TCD classes that comprised students from diverse academic backgrounds. Another 14 (38.9%) lecturers said they used a teaching strategy that involved organization and connection of knowledge, skills and values to promote generalization in their TCD classes.

The lecturers who indicated that they used identification of key vocabulary for explicit instruction as a teaching strategy in their classes were 12 (33.3%). The other 12 (33.3%) lecturers said that they used the strategy of providing alternative opportunities for students to represent their learning. These included the use of technology and augmentative and alternative communication systems to cater for the students with diverse academic backgrounds. Those who utilized explicit systematic instruction were 11 (30.6%). Ten (27.8%) lecturers indicated that they used cross curricular and naturally occurring learning opportunities to enhance individual learning goals as a teaching strategy for the TCD classes. Another 10 (27.8%) lecturers said they provided opportunities for generalization and maintenance as a teaching strategy. Nine (25%) lecturer respondents noted that they utilized levels of promoting concepts to cater for students with diverse academic backgrounds in their classes. Twenty-two percent of the lecturers said they employed the frequent cumulative review teaching strategy to cater for students in the TCD classes that comprised students with diverse academic

backgrounds. Only one (2.8%) lecturer indicated that he/she used the teaching approach that encouraged inter-student demonstrations. The next table, Table 5.16, shows the selected teaching methodologies by the lecturers in implementing the instructional approaches.

Table5-16: Teaching methodologies used by TCD lecturers

Teaching methodologies used	YES	%	NO	%	Total	
Group discussion	24	66.7	12	33.3	36	100
Lecture	32	88.9	4	11.1	36	100
Problem solving	20	55.6	16	44.4	36	100
Guest lectures	5	13.9	31	86.1	36	100
Field trips	18	50	18	50	36	100
Research project	20	56.6	16	44.4	36	100
Others	1	2.8	35	97.2	36	100

The highest number of lecturers 31 (86.1%) indicated that they used lecture method in teaching the TCD classes. The other lecturers 24 (66.7%) said that they used group discussion in their lessons. Twenty (55.6%) lecturers indicated that they used problem solving when teaching the TCD classes and the other 20 (55.6%) lecturers said they used research project in teaching methodology in their classes. Eighteen (50%) lecturers indicated that they used field trips to teach the students. Five (13.9%) lecturers used guest lecturers, whereby they invited some individuals to come and teach the students. Interactive lecture methodology was used by only one lecturer (2.8%). One (2.8%) of the lecturers indicated that he/ she used other teaching methodologies in teaching the students. In this context it would refer to the fact that the lecturers were using various methodologies in teaching the TCD students, with the majority of them using lecture method combined with group discussion, problem solving, research project, and field trips, as reflected by the results in Table 5.17

above. Lecture method, used by most lecturers limit students' involvement in a lesson since it is teacher centered. Integration of teaching methodologies by the lecturers provides students with wider opportunities for participation in order to understand subject content.

In addition to combining the teaching methodologies, the lecturers employed various instructional approaches for effective interaction between the lecturers and students, and between students and the subject content. Use of teaching methodologies that enable lecturers to engage higher levels of interactive teaching and learning yield better results in terms of catering for student diversity, especially those with diverse academic backgrounds.

The results in Tables 5.15 and 5.16 reflect that the most used instructional approaches and teaching methodologies match the design and practical based courses which dominate in the TCD universities' programmes. Providing feedback and correction, modeling and demonstrating skills, and motivating students through engagement instructional approaches connect well with the teaching methodologies; lecture method, group discussion, and problem solving. The teaching strategies enable lecturers to cater for students with diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe as they engage students in participatory activities during lessons. The interviews carried out with quality assurance directors, deans, chairpersons, lecturers and students, revealed the following data on teaching strategies used to cater for students with diverse academic backgrounds.

QAD1 said that:

> ….one of it may be through tutorials since the students originate from diverse backgrounds. That component is only catered for when one is delivering rather than us doing it. We assume they are taken at par so it would be now after they have discovered that there are aspects that have the component under discussion. But from the nitty grities, they may go on one to one if time allows when they identify some weaknesses. If they are on industrial attachment, they are helped individually because the lecturer will be assisting each student. When students showcase their designed products, they are also assisted as

individuals, but the moment one is presenting she/he is assisted by a group of lecturers.

QAD2 pointed out that:

Like I said in the first part, LCD is practical in that there is visual recognition of things for students to pick up and comprehend. In terms of simulation, we have taught students in terms of who they are. Also students have been attached with textiles companies and chemical plants and they are free to swap companies. The students are connected to lecturers because they mix during attachment visits. We talk to students across the board to be able to pick up students with different backgrounds and assist them.

The quality assurance directors commented that they assumed that the diverse students are treated in the same way during the teaching and learning processes although the lecturers were using some teaching approaches that reflected accommodative practices. Project presentations and industrial assessment visits carried out by the lecturers enabled the lecturers to attend to students' different needs for the enhancement of their learning.

FD1 highlighted that:

In most cases a lecturer prepares materials, gets into the class and asks students about what they have covered… becomes very important rather than assuming that the students know something that is generally expected to have been covered at lower level before coming to university. If the student didn't cover that, tutorials are supposed to cover that and also whatever is taught through lecture format has to be followed up in tutorials. The tutors are supposed to demonstrate and exemplify what the lecturer was talking about and guide the student in the practicals. The students are also encouraged to have time outside of class where they can catch up with deficiencies they have.

FD2 shared the same sentiments as QAD1 while FD1 revealed that the students were helped by tutors to cope with the concepts delivered by the lecturers. The students were also expected to cover basic concepts on their own outside lesson time. The

department chairpersons revealed that the lecturers taught from known to the unknown, and employed mixed ability group activities to assist students with challenges due to their different academic backgrounds. DC1 further commented that their department had not critically considered use of teaching methodologies to cater for students from diverse backgrounds.

DC1 said that:

> *What I have observed is, the first few weeks of the beginning of the semesters, lecturers try to go through simplest concepts to allow students to learn from the simplest concepts and progress to the more complex processes. We have observed different methods where we have mixed different groups of those who have done fashion and fabrics at O' level and those who have not done it at "A" level forming a group where students assist each other (mixed ability grouping). I think it's a weakness as department where we have not focused on methodologies in catering for students with diverse backgrounds. I think your research will open up the need to address such issues.*

DC2 added that:

> *Always their backgrounds are different, so when I give them assignments, I emphasize on students' various needs, developing further into their individual challenges (special issues) even if their challenges are different from one student to the other.*

TCDL1 outlined that:

> *I give them one to one approach whereby I assist them as individuals and sometimes I ask some of the students, the more gifted ones to assist those with challenges. I also encourage them to do research and also look around especially if they are in discussions. The less gifted ones; I encourage them to say something rather than to listen to others. So I encourage participation by all members.*

TCDL2 unveiled that:

Demonstrations will actually help those students who may not have a strong practitioner's background or those students who have not worked in production industry for a long time. Lecture method also covers much and gives you a chance to talk to them about many things that they may have missed maybe as a result of lack of experience. The use of peer presentation allows the students to interact among themselves. It allows them to bridge the various gaps between the students from different backgrounds.

TCDL3 and TCDL4 confirmed use of mixed ability grouping teaching methodology to enhance teaching and learning among the TCD students.

TCDL4 noted that:

…streamlining content is also another method, but you find that even though we are streamlining content, we find that you end up covering a lot of ground in the area because the content planned for the undergraduate students will have to be covered. It's very difficult to manage students with different academic backgrounds, but still because the fact that we have taken them it means we have to find strategies we can use to cope up with the student. First strategy I have discovered is through grouping students into different tutorial groups.

TCDL5 stated the same aspect of using group discussion and tutorials to effectively achieve teaching and learning goals among all the students. TCDL6 observed that catering for the students was not always done as all the students were exposed to similar examination at the end of the semester.

TCDL6 echoed the same sentiments by saying:

Normally, we don't usually cater for the diverse academic backgrounds, simply because at the end of the semester they write the same exam and the assessment criteria is the same for all despite their diverse academic backgrounds.

The quality assurance directors, faculty deans and the chairpersons confirmed the lecturers' views on teaching strategies used to cater for students with diverse

academic backgrounds as they revealed same instructional approaches and teaching methodologies. The interviewed lecturers confirmed the questionnaire respondents' views, but pointed out that streamlining content was very demanding as they had to cover the planned degree content and lower level content within the limited time. They commented that catering for students with diverse academic backgrounds was not easy though they had to commit themselves to assist the students. This meant that the lecturers were overwhelmed with work that demanded them to go an extra mile to cater for students who entered TCD university education with diverse academic backgrounds. Thus, the lecturers' ability to meet the needs of the students and those of the curriculum depended on one's commitment to the work, professional training and support provisions.

It has emerged from the interviews that quality assurance directors were not aware of how lesson delivery took place in the classrooms and that they had not considered the aspect of student diversity in programmes provision. This shows that the quality assurance directors were not checking on quality of teaching and learning of students with regards to inclusion of diverse learners. However, all the interview respondents confirmed the questionnaire respondents' views as they revealed that lecturers were offering tutorials, individual assistance, presentations, simulation, and also guidance and counseling to assist students to cope with the learning process. These instructional approaches informed the way the lecturers conducted instruction to the students like the use of group discussion and problem solving teaching methodologies indicated by the questionnaire respondents as the most widely used in catering for students with diverse academic backgrounds. The instructional approaches and teaching methodologies used by the lecturers in catering for students with diverse backgrounds were student centered and they could engage full participation of students if well planned, monitored and supported through provision of adequate resources.

Teaching from the known to unknown (beginning with basic concepts) reflect that the teachers made effort to connect students to background subject content knowledge in their teaching process. Use of mixed ability grouping in group discussions and group assignments paved way for students with different backgrounds to share information, thereby enabling peer tutoring and teaching. The idea of encouraging students to work extra time to cover up content gaps also made students to be responsible for their

learning as they would catch up with basic concepts taught at various levels of education before joining university.

5.4.5 Effectiveness of the teaching strategies used to cater for students with diverse academic backgrounds.

The researcher sought to establish the perceived effectiveness of the teaching strategies used by the TCD lecturers in delivering their lessons to students with diverse academic backgrounds. The effectiveness of the teaching strategies determines students' interaction with curriculum content, acquisition of knowledge and skills, and their performance in the programme courses. Table 5.17 shows the lecturers' views on the effectiveness of the adopted teaching strategies.

Table5-17: Effectiveness of the adopted teaching strategies

Effectiveness	Frequency	Percentage
Involve student activities	8	22.2
Enhance student learning	7	19.4
Express student's realistic problem situation	1	2.8
Encourage inter-student, and lecturer to student demonstration (effective for practical courses)	1	2.8
Involve modeling problem solving	1	2.8
Cater for different students	3	8.3
Engage students in activities & enhance their interest	3	8.3
Good but should be used with other methods to avoid boredom	1	2.8
Very relevant, guide students, motivate & stimulate interest in them	1	2.8
Best ways to teach & impart knowledge to students when resources are available.	3	8.3
Help low performing students gain more confidence & stimulate critical thinking	2	5.6
Effective but some not very effective	1	2.8
No answer	4	11.1
TOTAL	36	100

The data in Table 5.17 indicates the perceived effectiveness of the teaching strategies used by university lecturers in delivering TCD curriculum to students with diverse

academic backgrounds. Eight (22.2%) lecturer respondents said the instructional approaches involved students' activities. Seven (19.4%) lecturers pointed out that the instructional approaches were effective because they enhanced students' learning. Four (11.1%) lecturers did not give any explanation on the effectiveness of the teaching strategies they used to teach their inclusive TCD classes. Three (8.3%) lectures argued that the instructional approaches were effective since they catered for different students. Three (8.3%) respondents echoed that the instructional approaches were effective because they engaged students and also developed students' interest in the programme. The other three (8.3%) noted that the instructional approaches were effective as they were the best teaching approaches when resources were available and they also assisted in imparting knowledge to students.

Six lecturers gave different explanations on the effectiveness of the instructional approaches they used in delivering lessons to students with diverse academic backgrounds. One (2.8%) lecturer said the instructional approaches he/she used were effective because they expressed students' realistic problem situation so that the lecturer would assist the student. One (2.8%) of them pointed out that the approaches encouraged inter-student and lecturer to student demonstration and also that they were effective for practical courses. The other one (2.8) highlighted that the approaches were effective because they involved modeling problem solving. One (2.8%) noted that the instructional approaches were good but they should be used with other methods to avoid boredom. The other lecturer (2.8%) said that the approaches were very relevant since they guided students, motivated them and also stimulated them to learn. One (2.8%) of the lecturer respondents commented that although the approaches were effective, some of them were not very effective for catering for students with diverse academic backgrounds. Most lecturers 8 (22.2%) commented that the teaching methodologies and instructional approaches used were effective because they involved student activities. Teaching strategies that involve students' activities ensure achievement of lesson objectives by the lecturers. The lecturer can easily assess understanding of taught concepts among students through the activities/tasks performed by students during the lesson. Hence the lecturer needs to thoroughly plan students' activities for each lesson to make sure that the activities/tasks measure and fulfill set objectives for the lesson.

While individual lecturers gave different comments on the effectiveness of the adopted teaching strategies discussed earlier on, the interviews carried out with the quality assurance directors, dean of studies, chairpersons, lecturers and students revealed their own views on the effectiveness of the teaching strategies used for catering for the TCD students with diverse academic backgrounds.

The quality assurance directors confirmed that the teaching strategies were effective because the approaches engaged involved individual students' activities in which students' unique learning issues were resolved. Eventually, most of the students sailed through the programs and a few managed to secure jobs in the industry. The quality assurance directors revealed that:

QAD1 commented that:

> *Even if you the students have the same qualifications, there is a variation in the exposure depending on schoolsthey attended.When the lecturers give them practical work they offer them practical assistance. The offered assistance by the lecturers caters for particular needs of individual students. Inproject presentation, so many of the students are assisted on an individual basis. Use of assignments also enables lecturers to cater for the diverse students as the students help one another through discussions.*

QAD2 declared that:

> *I wouldn't measure effectiveness, but when they pass the courses, we talk of pass rates. We have students applying to the industry and getting jobs. We supervise students. We have students working at Kadoma Textiles, we have students working for Zimbabwe Steel Company, showing they can apply the learnt knowledge. Sometimes we go with students for conferences.*

The faculty deans of studies agreed with the quality assurance directors that the most commonly used teaching approaches for students with different academic backgrounds were effective since most of the students were completing the programmes. But the deans of studies intimated some degree of ineffectiveness of the teaching strategies as they noted that some few students quit their studies, while the

other few could not complete the programmes on time due to failure. The deans of studies also argued that the teaching strategies were not quite effective because the students lacked adequate creative aspects that are relevant in the textile and clothing design field.

FD1 said that:

> *Since we have students who graduate and we have very few who don't graduate, very few who drop out, we assume that our methods are effective. Probably one area I would think probably needs more attention is the area of creativity. Basically, where we would probably want to have students go beyond the practical knowledge to designing, clothing fashion and go beyond the everyday processes to studying designing of outrageous things where nobody else can wear things that are simply fashion items but not necessarily clothing.*

The department chairpersons stated that the curriculum delivery strategies employed by the lecturers were quite effective because they involved students through students' interaction with subject content and students' interaction among themselves in assigned individual work and in group activities.

DC1 commented that:

> *Lecture method is effective in that it tries to cover more concepts in a shorter period. Then use of demonstration methods is meant to impart skills on the students through observing what the lecturer is doing. Use of individual work that's encouraging students to read widely to answer the question, helping them with research skills and also the ability to interpret questions and give information. Group work, as I have said, tries to encourage students to socialize, assist each other in learning as well as share abilities so that the others imitate what others will be doing. My observation is that they are very effective. Then the field trips help them to conceptualize what they have learnt theoretically in the classroom by viewing areas with what they have done. It helps them to understand more and it motivates them.*

DC2 also noted that:

I think they are effective because it's the students who do most of the work. We only teach them the techniques in their special subjects and because I don't know all the areas but when they finish they tell what they have learnt. It's because we use the design process so we apply the design process where the student should identify a problem within a special subject and then go to research in that process. They come up with artifacts. Students develop through activities. Elements of design enable students to identify problems and produce real, usable products.

TCDL1 pointed out that:

When I am using the LCD, I think it's quite effective in the sense that students can listen and see diagrams or images which I want them to see and can take instructions one by one as I explain to them. Research encourages students to read ahead and keep abreast with current information. Then demonstration gives the students an experience of hands on. I have found demonstration to be a bit not that effective in the sense that if students perceive things differently, some may not benefit from the process.

TCDL2 confirmed that the teaching approaches used were relevant as they involved students' active participation and also added that they:

….provide mature students a chance to explore on the things you have presented to them and also beef up the information by asking or interacting with their peers. I assume that the students who are coming from "A" Level, may not compare with those coming from work environment, as I have observed that they have an element of maturity.

TCDL3 confirmed that the teaching strategies engaged involved students' active participation and:

…also enhance teacher pupil interaction in those small groups. Students widen their scope when they go for field trips. The lecture method has its own disadvantages, but the only advantage is that they get more information from the lecturer.

TCDL4 asserted that the delivery methods were effective in that:

I have discovered that students tend to benefit from each other especially if they are doing practical processes. They get information and assistance on some of the practical processes which they normally do at graduate level like pattern making. When we are doing product development, we adopt the design. There are students with challenges in doing pattern making, especially those who hold "A" level background, so by grouping them with those who have done Diplomas, of which at Diploma level they have done pattern making techniques, these students get ideas on how pattern making is done.

TCDL5 and TCDL6 agreed that the methodologies were effective since they enabled student participation.

The students shared the same sentiments with the faculty deans of studies that, although the teaching strategies used by the lecturers for the students with diverse academic backgrounds were effective, the lecturers lacked knowledge and skills in some components of the curriculum and also in the use of current technologies in teaching and learning.

SFG1 confirmed that:

The methods are relevant, though there is need for research on the lecturers. Some of them do give us very little information. The methods help for further research rather than depending on lecturer notes. Research also helps in extension of concepts and learning.

SFG2 pointed out that:

Especially presentations are good because they provide room for students to understand. But some of the methods being used are so way backward but we can't blame our lecturers. Well, like some we have presentations on a laptop instead of doing a PowerPoint. But still in presentations of practicals, we need some people from different fields with different views so that we don't rely on the same information. We need to have some people to see our work before the final year such as

> *professionals like fashion photographer, professional fashion designers, and scientists.*

SFG3 outlined that:

> *Lecturers contact with students is so limited. If we were carrying out experiments we would be learning more than we learn in theory lessons. Lecturers' teaching methods do not marry with the practical subjects/courses. We are being trained in a practical subject, so we cannot just listen. If in Pattern making, we don't even make a pattern on full scale, so we are not getting anything. Actually we are using our previous knowledge back from our diplomas. We are not coming across new knowledge. If it were more of science and technology, I think it would be benefitting us.*

The results from the interviews carried out with the quality assurance directors, deans of studies and chairpersons confirmed the lecturers' views that the teaching strategies used for TCD classes were effective because they involved students' participation and that way they catered for students' different backgrounds. High student participation encouraged sharing of ideas among the students, exploring of subject content knowledge and lecturer student interaction. Enhancement of student interaction among themselves and with the subject's content knowledge through interactive teaching methodologies and instructional approaches paved way for effective teaching and learning among the diverse students. However, the effectiveness of the adopted teaching methodologies and instructional approaches were said to be hindered by lack of adequate resources, inadequate lecturer training and lack of technological skills by the lecturers to integrate ICT in curriculum implementation. Therefore, in some instances, the teaching strategies were only effective for equipping students with basic skills but they were not effective in adequately enhancing design innovative skills among the students.

Design and innovative skills are relevant components in TCD programmes implementation because the students should come up with unique products that may solve challenges faced by the clothing industry and the consumers. Therefore, the dropping out and failure of some students can be attributed to inadequate training among lecturers in aspects of strategies to cater for students with diverse backgrounds

and in innovative design aspects. The issue of inadequate resources and lack of proper training for lecturers reflect that the lecturers could not effectively meet the needs of the students with diverse academic backgrounds, although highly committed lecturers were trying their best to cater for the students' diverse needs.

The students' focus group interviews revealed that the teaching strategies employed by lecturers were effective in some instances and not effective in other instances due to inadequate resources. The issue of inadequate resources is critical in the two universities as it has been revealed that the lecturers ended up teaching theoretical subject content knowledge instead of marrying the theory with practice. The linking of theory with practice is relevant in TCD programme delivery since the area is practically oriented. The suggestion by the students for inviting industry professionals and involvement of technological approaches to teaching and learning is very important as the students may be exposed to real industry situation by sharing production trends and techniques with industry professionals. This enhances students' learning and prepares students for the industry work environment.

5.4.6 Assessment techniques used to assess students with diverse academic backgrounds

Lecturers assess students in order to evaluate effectiveness of teaching and learning (O'Farrell, 2015). Through assessment processes, lecturers measure students' understanding of main knowledge and skills outcomes so that they can amend teaching methodologies, time allocated per topic, and level of content. Assessment is also important for determining successful differentiated curriculum implementation practices. The researcher investigated the techniques used by TCD lecturers to assess students with diverse academic backgrounds to find out the methods that were frequently used. The information was sought through a questionnaire to lecturers and interview with lecturers, quality assurance directors, deans of studies, chairpersons and students. The data is presented in Table 5.18 next.

Table5-18: Assessment techniques used to assess students

Assessment technique	YES	%	NO	%	Total	
Summative assessment -end of semester examination	20	55.6	16	44.4	36	100
Formative assessment- observation, oral questions, discussion, presentations, demonstrations	28	77.8	8	22.2	36	100
Continuous assessment- individual assignments, group assignments, projects, tests	28	77.8	8	22.2	36	100

The data in Table 5.18 above shows that 77.8% (28) of the lecturers indicated that they were assessing the TCD students using formative assessment technique that encompasses observation of students' work, oral questions between individual students and lecturer, discussion and demonstrations. Some of the lecturers, 77.8% (28) showed that they were utilizing continuous assessment to assess the students through provision of individual assignments, group assignments, projects and tests. Twenty (55.6%) lecturers highlighted that they employed summative assessment to assess students with diverse academic backgrounds through semester examinations to test if the students had acquired the set learning outcomes for the semester. The results indicate that all the three methods of assessment were used to assess the TCD students although most of the lecturers indicated that they were using formative and continuous assessment. The two assessment methods can be used to cater for students with diverse academic backgrounds if the lecturers plan students' activities well and if the learning environment and nature of subject permit the use of the techniques. Both assessment techniques permit use of various students' activities which enhance students' interaction among themselves and with the lecturer, thereby catering for diverse needs of students.

The interview respondents gave their views on the assessment techniques they used to assess the students.

QAD1 pointed out that:

> *It's a diversified assessment technique. You have basically the normal based assessment where you have group work. You have individual assessment where an individual performance is measured.But then this is achieved through a number of activities like there are practical and experimentation, the design projects, and many others.*

QAD2 confirmed that:

> *…types of assignments could be practicals, field work reports, projects because they are all ways of assessing people.*

The quality assurance directors confirmed the questionnaire respondents' views that both continuous and formative assessment techniques were used to assess students with diverse academic backgrounds through experiments, projects and the like. The techniques enabled lecturers to determine the level of performance of the students, thereby ascertaining whether students have achieved the learning goals and competencies or not.

FD1 gave the same views as above and added that:

> *…They have their portfolios; they make garments that are then examined. Some of the assessment methods would also be oral group presentations. There is also a high level of continuous assessment where it's not just the end of the semester and you sit for an exam but the process itself is also part of examination. All our practical courses have a 50% contribution to coursework and another 50% from examination so that we do not have students who simply pass examinations without attending class or without doing anything in class. We want to promote that level of engagement in the whole process from within year one to the last. Then, of course, there are theory courses in which there are examinations like essay type.*

FD2 confirmed that students were given practical assignments and "….field work reports and projects assignments."

The deans of studies confirmed that the lecturers used continuous assessment, formative and summative assessment to assess the students. They revealed that continuous assessment and summative assessment complement each other in coming up with students' final grade after completing the programme. This shows the value assigned to continuous assessment which ensures attainment of programme learning outcomes by the diverse students. If regular performance levels of students were used by lecturers to review their teaching strategies, they would adjust their teaching approaches for effective teaching and learning among the students. The chairpersons also gave their responses.

DC1pointed out that:

> *We give Individual assignments. These are usually one or two per semester. We give group assignments, group presentations. These could be written or oral. Then the issue of tests, theory or practical. Then at the end of semester we also give theory examination papers which are usually three hours, then the practical examinations of seven to fourteen hours depending on levels.*

DC2 noted that:

> *We use course work or continuous assessment. Some of our courses are all practical. But they must come out with patents, tangible products. There are many practical courses but the strategy that we adopted right from the beginning is that every year we give students those practical courses or a studio course. But sometimes there maybe two practical courses but usually they take three practicals.*

The chairpersons confirmed the assessment techniques indicated by the lecturers which are relevant for diverse students since they enable the lecturers to assess performance of students in theory, practical and design subjects in the TCD programmes. The assessment techniques are also used to measure performance of students and motivate them to work hard to improve, although it depends on individuals' attitude towards work and support provided for teaching and learning. Lecturers also gave their input.

TCDL1 confirmed that:

I use tests, assignments. Now these assignments can be in form of group work or individual. I also give them presentations; group presentations whereby I give them a topic. They can be in groups of three or four and then they research thoroughly on that topic and then present.They can co-present/ or choose between the two to present. Now in the case of practicals, because some of those programmes are practicals, I give them a mini practical before the actual one in preparation and also have progress reviews especially on other courses like specialization, exhibition. We give the students the opportunity to show us what they have done or what they have mastered so that we pave way forward.

TCDL2 commented that:

…the ordinary structure examination or essay questions. You know the ordinary question. We require them to narrate and explain and then sometimes I have used approaches where students will be actually assigned to go and read about a topic, read about the topic, gather as much information as they could and then summarize the information in an essay form. That allows us to assess their comprehension of the topic.We also assess students through practical in which they produce something which is close to what is produced for daily use in the context of the field.

TCDL4 explained that:

…the theoretical assignments where students write short assignments, then the multiple choice questions, especially if you want to test the knowledge acquisition of the students, then the very commonest one which we normally apply is the project method where students are given some projects to work on. In this case, students are tested on time taken and on the process they take to reach the outcome of the project.

TCDL5 pointed out that:

I think there is the summative, continuous assessment, industrial based assignment. Summative is an examination, when they write a final

examination at the end of the year. Continuous assessment is based on 3 assignments or projects depending on the nature of the course and then at the end it's weighted. Sixty percent exam, forty percent coursework is okay. In terms of relevance to the industry, they are very relevant. Because those are the ones who give us directions and in terms of weighting it's ok because some students copy each other in the assignments.

TCDL6 indicated that:

During the course of the block, we give them in-class tests. We give them in-class tests. They *also carry out presentations which we consider as part of assessment. They also write assignments and also do practical assignments or projects when they are out there; especially on their vacation. They are given assignments which they submit when they are out there.*

The lecturers also confirmed the assessment methods stated by the other respondents above. The issue of setting number of assessments per semester reveals quality control in assessment of students, which is important to make sure that the lecturers deliver subject content and measure effectiveness of teaching strategies used, as well as achievement of learning goals among the students. If effectively utilized, assessment results can be used to plan remediation strategies for students lagging behind in content and skills mastery. However, the lecturers did not reveal how they differentiated the various assessment techniques to address the different learning needs of the diverse students in their classes. The students' focus group discussions identified assessment instruments that were used as captured below.

SFG2 said that they were assessed through:

Assignments, presentations during specialization progress reviews, examinations at end of semester – coursework and final assessments, examinations can be theoretical or practical.

SFG3 indicated that they were exposed to:

Three assignments, in class test, presentations, and examination atthe end of semester

The students were in agreement with the lecturers, faculty deans and chairpersons of departments on the nature of assessment methods used to assess the TCD students. Assessments that are regularly carried out during lessons test achievement of lesson goals. Those that are regularly done at the end of subjects' broad topics assist in keeping stock of the level of one's work in relation to lesson goals. Such assessments are crucial for checking students' understanding during learning process. Those done at regular intervals assess students' progress at intervals to check achievement of set competencies. Since the assessment methods used combine both individual and group interaction, they pave way for peer tutoring, collaboration, and critical thinking among the diverse students. However, the techniques require thorough planning, adaptation, monitoring and support for them to effectively cater for students with diverse academic backgrounds who have wide content gaps. The assessment methods such as projects fit well with the TCD programme courses since most of the subjects are design oriented requiring students to research, think critically, link their ideas with literature, and come up with creative innovative products. Employing a combination of assessment techniques enables lecturers to cater for the diverse students as students' gray areas can be identified and corrected at each interval of teaching and learning. Lecturers are guided in decision making throughout the whole programme's implementation intervals on best strategies to engage to ensure effective teaching and learning in order to meet the needs of the diverse students. Therefore, the assessment methods used by the lecturers were quite relevant for catering for the various needs of the TCD students enrolled at the two universities of technology. However, the effectiveness of the assessment methods depend on lecturers' pedagogic content and skills knowledge in handling classes with students who have diverse academic backgrounds and institutional support.Techniques such as differentiating levels of difficulty of questions while seeking for same content mastery among students who have different learning readiness levels, which would have suited the academic background characteristics of the TCD students, were however, not employed by the lecturers. The researcher sought to establish the effectiveness of the assessment techniques to find out how the assessments catered for the needs of the students.

5.4.7 Justification for use of assessment techniques

The study sought the reasons for use of assessment techniques utilized to assess the TCD students. This was relevant because the researcher wanted to establish whether the lecturers took cognisance of the diverse backgrounds of the students in designing assessment processes or not. The justification for choice of assessment techniques was also important as the study sought to find out assessment techniques employed by the curriculum implementers to cater for students with various academic backgrounds. The reasons for use of the summative, formative and continuous assessment forms by the TCD lecturers are presented next in tables 5.19, 5.20 and 5.21.

Table5-19: Justification for use of Summative assessment technique

Justification	YES	%	NO	%	Total	
grading students	4	11.1	32	89.9	36	100
assessing gaining of knowledge and skills	11	30.6	25	69.4	36	100
students will have gained knowledge	2	5.6	34	94.4	36	100
exams at end of courses carry more weight	1	2.8	35	97.2	36	100
show growth in knowledge accumulation	2	5.6	34	94.4	36	100

In Table 5.19, most lecturers (11, 30.6%) indicated that they assessed the students using summative assessment in order to assess acquisition of knowledge and skills by the students. Four (11.1%) lecturers noted that they employed the summative assessment in the TCD classes for the purpose of grading the students. Two (5.6%) lecturer respondents argued that the summative assessment was most appropriate because it is carried out after the students would have covered subject content for the semester. The other two (5.6%) lecturers justified that the summative assessment showed growth in knowledge accumulation by the students. One (2.8%) lecturer respondent said that he/she utilized the summative assessment because he/she had realized that examinations written after teaching the courses carried more weight. Therefore, use of summative assessment was targeted at finding out content mastery

among the students. It is critical to find out if the students have acquired subject content knowledge and skills for the semester to ascertain achievement of programmes' learning outcomes at the end of every semester. It is the structure of questions asked that matter in addressing the different learning levels and learning styles among the diverse students. The next table, Table 5.20 presents justification for use of formative assessment in assessing the students with diverse academic backgrounds.

Table5-20: Justification for use of formative assessment technique

Justification	YES	%	NO	%	Total	
Getting levels of performance	2	5.6	34	94.4	36	100
Including assignments, tests & projects	1	2.8	35	97.2	36	100
Ensuring learning progresses as planned & having some changes if required.	4	11.1	32	89.9	36	100
Helping students to prepare in advance & showing their skills at a given time	1	2.8	35	97.2	36	100

Table 5.20 reflects that most of the lecturers (4, 11.1%) used formative assessment because it enabled them to judge whether student learning progressed as planned and if there was need for some charges. Two (5.6%) lecturers showed that they employed the formative assessment to assess the students so that they would get students' levels of performance. One lecturer (2.8%) noted that the reason for using the formative assessment was that it includes a variety of assessment items like assignments, tests and projects. The other one (2.8%) indicated that the assessment technique assisted students to prepare in advance and showed their skills at a given time. The questionnaire results show that the formative assessment was effective in catering for students' diverse academic backgrounds as the planned learning outcomes for the students can only be achieved if students' performance in the question and answer oral tasks, and in other questioning techniques, show achievement of lesson objectives. Those lecturers who assessed students using

continuous assessment indicated their reasons for their choice of the approach as presented in Table 5.21

Table5-21: Justification for use of continuous assessment technique

Justification	YES	%	NO	%	Total	
to check progress	15	41.7	21	58.3	36	100
assist students and lecturers to identify individual strengths and weaknesses.	2	5.6	34	94.4	36	100
assignments, tests & projects are computed for coursework	1	2.8	35	97.2	36	100
to foster individual participation, research skills & creativity	4	11.1	32	89.9	36	100
enable students to see how they are performing	2	5.6	34	94.4	36	100
ensure that all students' work is catered for & appropriate feedback & support is provided at each stage	3	8.3	33	91.7	36	100
enable assessment of acquired skills in practical courses	1	2.8	35	97.2	36	100

Most of the lecturers (15, 41.7%) used continuous assessment for assessing students with diverse academic backgrounds because they wanted to check the progress of students in acquiring knowledge and skills and progress in achieving learning outcomes. Some of the lecturers, 4 (11.1%) noted that continuous assessment assisted the lecturers to foster individual participation, research skills and creativity among the students. The other 3 (8.3%) indicated that they used continuous assessment because it catered for all students' work and enabled lecturers to give

students appropriate feedback and support at every learning stage. Two (5.6%) lecturers noted that the continuous assessment enabled the students to see how they were performing in the courses throughout learning periods. The other 2 (5.6%) lecturers indicated that the assessment technique assisted students and lecturers to identify individual strengths and weaknesses. One (2.8%) lecturer indicated that the justification for use of continuous assessment to assess the TCD students was due to the fact that coursework marks for students were computed from assignments, tests and project work done during the course of the semester to engage students throughout the semester. The other lecturer (2.8%) noted that it was important for practical courses to assess skills acquired by the students during the teaching and learning process. The main reason given by the lecturers for using continuous assessment shows they were concerned about the students' achievement of learning outcomes. It is relevant to continuously check the progress of students in attainment of the desired competencies so that the lecturers can redirect their delivery strategies to achieve set learning outcomes.

The researcher interviewed the quality assurance directors, TCD deans of studies, department chairpersons, and lecturers to get their views on selected assessment techniques for TCD diverse students' classes.

The quality assurance directors revealed that several assessment procedures were carried out on the students to provide them with higher chances to work harder to improve their performance and to cater for their different levels of content understanding.

QAD1 commented that:

> I want to believe at the moment we have several assessments. It means we are trying to cater for individual differences so that if one does not perform well in the other, he or she has the chance of doing better in others.

The same quality assurance director justified the use of projects and presentations by saying that:

> Project work and presentations assist students through team working. Students are able to consult one another and by doing so, students'

differences are levelled. Presentations are visual data, in which the individual student is scrutinized on the basis of theory using his/her video. Individual's behaviour is also assessed. Their ability to self-actualize and to build confidence is assessed. This means individual differences are catered for effectively.

QAD2 argued that:

It gives them a program understanding because with just examinations, students may be disadvantaged. There must be some with practical, that diversion in terms of acquiring knowledge that has been taught.

The faculty deans of studies observed that the assessment techniques mostly used were effective for accommodating students with different backgrounds because the assessments covered both the theoretical and the practical components of the programmes.

FD1 commented that:

Our programmes in this school tend to be highly practical. I don't think it's the best way to examine a practical. In engagement, the best way is to ask students to write things down, so that we have that practical element taken care of by way of practical examinations and we have theoretical that is like paper writing kind of content because we are a university not a school system. That means we are engaged in scholarship, we are engaged in intellectual development and that intellectual development needs theorization. So we blend the two because we want to have students with practical knowledge and conceptual knowledge which is taken care of by theory examination.

FD2 concurred by saying:

Students get program understanding because students may be disadvantaged. There must be some with practical diversion in terms of acquiring skills knowledge that have been taught.

The department chairpersons noted that the assessments enabled them to find out the students' level of understanding and to measure the skills acquired by each

individual. The chairpersons also reasoned that the assessments were effective because they catered for the two programmes' components; practical and theoretical.

DC1commented that:

> *When we give assignments, we test how students are able to research, present and answer questions as individuals, and encourage individual commitment to answering questions. Group assessments help them to develop skills and build teams to work together. Work presented orally and in written tests during the semester assesses how much students have grasped concepts. End of semester tests test conceptualization of taught content. Practical tests test how much skills have been acquired during the whole semester. At the end we may get a holistic student approach to teaching and learning in both theory and practical content.*

DC2 elaborated that:

> *I think assessments are effective. They are effective in that when they are practical type students do the practical and are assessed. The students write assignments when they do practical projects.Theprojects make up for the examination and the method is half their theory and half practical to attain a full mark. The students also do practical examination where they use computers to design, for example in CAD……*

The TCD lecturers commented that they mostly used the continuous and formative assessment to test level of understanding of the students, like the faculty deans of studies, department chairpersons and quality assurance directors. The lecturers also said some assessment procedures such as group assessments enhanced collaboration, enabling peer teaching and learning among the students. Through the assessment results, the lecturers are able to see those students who have attained the subjects' learning outcomes and those who need more assistance. However, it emerged that some assessment techniques were unreliable because most of the students duplicated texts' content and other students' work when they did individual assignments.

TCDL1also explained that:

….on the test, the lecturer would like to see how much of the content he/she has given them and how knowledgeable they are on topics covered. And then on presentations, the lecturer would want to see their presentation skills and test if they are able to research and come up with something and present it in a scholarly way. And on the practical, I want them to apply all the knowledge gathered. Can they apply it? E.g. when talking of fashion challenges, I want them to apply how they deal with fashion challenges when it comes to product making up. Then on the theory, they theorize, but then they should give us a product.

TCDL2 commented that:

….when you assess, you want to be able to evaluate the student and characterize them. The structured question or essay question enables you to establish if they have understood the crucial content in the area. When you ask them to read a topic and summarize it you test their ability to get facts and synthesize them in the context of the field. In practicals, they are given a task that enables them to produce something close to what is being used daily, so that they are able to tell this one has blossomed in the field and this one has not.

The same lecturer further commented on the level of students' performance by saying that:

If you discover that a student is really well below the standard of that field, it allows you to create a segment of those students who have not comprehended the major concepts in the field. Then you are given achance to group those students and really take them at their pace to make sure you do the best to make them pull to the level of other students. If they fail during the terminal examinations, what it means is examinations discriminate. Those who fail examinations are discriminated and asked to repeat the course or maybe fail in supplementary range, they would supplement. If they fail the course, they are given a chance to do those courses again, to enable them to master the course content.

TCDL3 highlighted that:

We want to see how much the students have mastered or even the in-class tests we want to see how much the student has mastered without the aid of the notes that we have given them or the internet. Then the group work makes them discuss as a group because student A and student B and student C have different ideas on something so when they put those together, they come up with various ideas per question.

TCDL4 indicated that:

…..I was giving the different assessment techniques in order of knowledge acquisition like, for example, multiple choice questions test the student on recall. Project method means students are being tested from recalling up to the application stage which is higher order. Application tests whether students are applying the content which they have covered within a particular discipline. Mostly theoretical assignments test on recall. Assignments test cognitive skills of students. They tend to work but what I have discovered is that students duplicate information from text books or internet and do not give themselves time to analyze or to think critically. So they are working to a limited extent.

TCDL5 pointed out that the students copied when given assignments; a point highlighted above.

TCDL6 noted that:

Most of the assessments are participatory. As the students do them, they get to understand more.

SFG1 commented that:

The assessments are adequate and they make us realize what we can do to improve skills. Assessments are adequate in the sense that the lecturers assess in every mode of assessment that fits the courses. The assessments also encourage students to work harder and help students to perform better in industry.

SFG2 postulated that:

I think during the 1st and 2nd year, they are relevant. At the final year they are too much, but for the final year they enhance students' understanding of concepts and are slightly independent. I think at final year they are flexible. They are relevant because they help students and lecturers to evaluate work done. For practical assessment, they should invite professional designers, photographers, anyone from the artistic side to mark and evaluate our work. At least if they can have at least one person from outside like within the industry, especially when doing specialization presentations, product development viva voice etc. that would help us as well to grow and develop ourselves.

SFG3 argued that:

Sometimes we donot perform well in the too many, 3 assignments and in class test because we don't have information for some things we have never heard of. Sometimes questions are poorly structured and we end up writing what have not been asked for. The lecturers don't want to revise the work and they don't have standard marking guides to show us how they were marking. You ask for clarification, they ask us to go and research. We can research but we want to find out question demands and lecturers' expectations. When we ask them, it's like we are waging war. The lecturers just teach from the surface instead of deeper concepts so that we can teach the subject at 'A' level at our schools. Some assignments are given back a day before writing examinations, too late for us to revise.

The interviewed TCD department chairpersons and lecturers commented on the performance of the students in the assessments carried out.

DC1also added that:

I have observed generally, that in semester one, students who have no background in textile fashion programs, it's a very difficult semester for them. The time to adjust for the course at university at the same time trying to understand a completely new area where skills are also very

important but as time progresses, especially from semester 2, 3, you see that students are improving their performance, especially those with no background knowledge, because of the assistance they get from their peers in group activities they engage during their learning. So, I think generally, students' skills performance improves as they progress to higher different levels during the course.

DC1 added that:

There are some who do not progress, who do not improve, not because they have not been taught well, but because of their attitudes, and I have seen one or two students dropping out of the course due to attitudinal causes, where they do not want to work with others, abscond lectures, do not do their assignments and don't attend lessons...

TCDL3 said:

...I can simply comment that students' performance depends on one's attitude. Some they perform very well. Yes, they struggle but when they master the content, they perform very well but others, because of negative attitude, they also perform in the mediocre range. Some perform badly because they are not much passionate about the subjects as they say "you know what, I didn't apply to do clothing fashion Design, I wanted maybe to do accounting but I didn't qualify then I ended up being here..."

TCDL2 commented that:

...you will discover that those who have gone through polytechnic are good in the practicals, those who are coming straight from 'A' level are usually weak in practicals, and those from teachers' colleges fit in both groups. So the level of performance, generally kind of favors those who have a practical background from polytechnics.

TCDL4 noted that:

..From what I have discovered, it just depends on how gifted the student is. I have discovered that there are some students who have passed Certificate level and also some who have passed through Diploma level,

but they are not even excelling like what "A" level students are doing. Also there are some 'A' level students who produce very poor work. So it depends on how gifted the student is and the passion the student has towards the area.

The interview respondents' views on why the lecturers mostly used formative and continuous assessment to assess the TCD students with diverse academic backgrounds elaborated the lecturer questionnaire responses. The engagement of interactive strategies in assessing students during lessons and at intervals during the course of the semester encouraged the lecturers to design corrective and enhancement delivery strategies and content adaptive strategies to cater for students with different backgrounds. The respondents' views reflect that the lecturers applied their maximum effort to vary the assessment methods through oral question and answer discussion, observation peer assessments, projects, tests and demonstrations to identify students lagging behind in content mastery. However, the respondents' views neglect the concept of differentiating questions to meet the learning levels of the students. Differentiating questioning techniques was needed as some of the students complained that they could not fully understand some of the questions in assignments and tests because they were not clear to them.

Continuous assessment is also important as revealed by the respondents, but its effectiveness is dependent on the formative assessment results. There are high chances of attaining high passes in continuous assessment among the students who perform well in formative assessments. If the students have performed well in the continuous and formative assessments, the chances of them failing the end of semester examinations become slim as the lecturers indicated that they assisted students to achieve the lesson goals and topic competencies at regular intervals, although assessment items were not adequately differentiated to meet diverse academic levels of the students. It emerged from the lecturers that adaptation of assessment techniques to cater for students' diverse academic backgrounds is critical as lack of this may lead to failure of some students in the end of semester examination. Students' failure in end of semester examinations affects their progression to the next semesters.

The department chairpersons commented that the effort applied by the lecturers in catering for the students' needs in designing accommodative teaching strategies and assessment strategies enabled them to attend to the diverse needs of the students. Since the first semester was a very difficult phase in the TCD students' university academic career, the results from department chairperson showed that the lecturers managed to cater for the students using interactive teaching and assessment methods. This resulted in improvement of students' performance in the next semesters. However, the other lecturers argued that the performance of the student was not affected by their diverse backgrounds only, but was also attributed to students' level of intelligence and attitude towards the subject. Some lecturers' comments on the performance of the students reveals that, not only students without adequate background knowledge should be catered for, but even those with advanced knowledge and skills needed to be accommodated for effective teaching and learning among the students.

The lecturers noted that various levels of TCD background knowledge among the students are relevant when designing strategies to cater for the students as the students can teach one another during group discussions. The next section presents the respondents' views on the support provided by the institutions to the lecturers and students for effective implementation of the TCD curricular to the diverse students.

5.5 How universities support the provision of TCD programmes to ensure that all the various qualifications of students are catered for

The study investigated the support provided by the universities in the provision of TCD programmes since the availability of resources is likely to affect full implementation of TCD programmes to students with diverse academic backgrounds. The infrastructure, available manpower and material resources determine the choice of teaching methodologies that may cater for the diverse students in the teaching and learning process. The capacity of lecturers also influences the selection of appropriate strategies to implement the programmes' curricular (Caine & Caine, 2014). However, it has been revealed that there were no special programmes for students with diverse

academic backgrounds at the universities of technology that were offering Textile, Clothing and Design programmes. All the students were treated as the same regardless of their different academic levels. Table 5.22 shows the support provided by universities in the training of students in the TCD programmes.

Table5-22: University support for training students in the TCD programmes

Support	YES	%	NO	%	Total	
Materials for teaching and learning	30	83.6	6	16.7	36	100
Infrastructure	23	63,9	13	36.1	36	100
Laboratories	25	69.4	11	30.6	36	100
Educational trips	31	86.1	5	13.9	36	100
E-learning platforms	1	2.8	35	97.2	36	100

Most lecturer respondents (31, 86.1) indicated that the university supported the training of TCD students by funding educational trips. Thirty (83.6%) lecturers indicated that universities supported the training of TCD students by providing materials for teaching and learning. Twenty-five (69.4%) lecturers stated that the university support was in the form of laboratories for experimentation and teaching purposes. Twenty-three (63.9%) lecturers pointed out that the university had set up infrastructure for provision of the programmes. Only one (2.8%) lecturer indicated that the university institutions offered e-learning platforms for use in the teaching and learning of TCD students with diverse academic backgrounds. The data presented shows that the sampled universities mostly supported the teaching and learning process of the TCD diverse students by funding educational trips and by availing teaching and learning materials. Support for carrying field trips is important because the students get exposed to real life TCD industrial processes where they observe some practical designing and production processes. Availing of teaching and learning materials enabled the lecturers to design teaching and learning strategies to address the needs of the students.

The study also sought to establish the support provided to the lecturers and whether the support enabled them to manage TCD content delivery. Curriculum implementers require relevant expertise such as subject content and skills, as well as pedagogical content, for them to function well in classrooms that comprise students with diverse academic backgrounds. Data in Table 5.23 shows the nature of support provided to lecturers by the universities of technology that offered TCD programmes.

Table5-23: Support for lecturers

Support provided	YES	%	NO	%	Total	
Staff development	27	75	9	25	36	100
Sabbatical leave	12	33.3	24	66.7	36	100
Accommodation	2	5.6	34	94.4	36	100
Teaching and learning materials	32	88.9	4	11.1	36	100
Research grants	15	41.7	21	58.3	36	100
Transport facilities	1	2.8	35	97.2	36	100
Others	1	2.8	35	97.2	36	100

Table 5.23 reflects that most of the lecturer respondents, (32, 88.9%) said that the institutions supported them by availing teaching and learning materials to enable them to teach the students. Seventy-five percent (27) of the lecturers indicated that the universities supported the lecturers by staff-developing them. Fifteen (41.7%) lecturers pointed out that they were given research grants to carry out research that benefited the students as well as the industry. Twelve (33.3%) lecturers stated that they were getting sabbatical leave to go to work at other institutions for exposure. Two (5.6%) lecturer respondents acknowledged that they were offered accommodation from the institutions. One (2.8%) lecturer noted that the university provided the lecturers with transport facilities to go to work and for visiting students on attachment. The other one (2.8%) lecturer indicated that the university provided other things that he/she did not spell out. The respondents were further asked to rate the adequacy of

the support they got from the institutions to enable them to cater for the needs of the students. The next table, Table 5.24 presents the lecturers' views.

Table5-24: Comments on adequacy of support

Response	Frequency	Percentage
Yes	2	5.6
No	32	88.9
No response	2	5.6
Total	36	100

Many lecturers (32, 88.9%) indicated that the support they got from the institutions in order to teach students with diverse academic backgrounds was not adequate. Two (5.6%) lecturers showed that the support they got was adequate. The other 2 (5.6%) lecturers did not give any response to the question.

The lecturers were further asked to give the support they would have needed to effectively cater for the students' needs in TCD curriculum provision at the sampled universities. The next table, Table 5.25 presents their views.

Table5-25: Support required by lecturers to cater for students with diverse academic backgrounds

Support required	YES	%	NO	%	Total	
Practical skills & current knowledge in technologies	17	47.2	19	52.8	36	100
Labs, technicians & current machines	5	13.9	31	86.1	36	100
Adequate resources	20	55.6	16	44.4	36	100
Adequate resources & allowing students to manipulate processes	5	13.9	31	86.1	36	100
Technical support, equipment & prior design skills by students	5	13.9	86.1	97.2	36	100
Ample time, resources & team teaching	8	22.2	28	77.8	36	100
Regular staff development, workshops, demonstrations, peer teaching & evaluation	17	47.2	19	52.8	36	100
Additional learning materials & bridging courses	10	27.8	26	72.2	36	100
E-learning facility, tutors & teaching assistants	17	47.2	19	52.8	36	100
Parents, guardians/ friends to assist in homework	5	13.9	31	86.1	36	100

From Table 5.25 above, most lecturers, (20, 55, 6%) indicated that they needed adequate resources to effect instructional approaches that could enable them to cater for students with diverse academic backgrounds. Seventeen (47.2%) lecturers said they needed practical skills and current knowledge in technologies being used to implement instructional approaches that cater for students with diverse academic backgrounds. The other 17 (47.2%) lecturer respondents noted that they required regular staff development, workshops, demonstrations, peer teaching and evaluation

for them to implement teaching strategies to cater for students with diverse academic backgrounds. Another 17 (47.2%) of the lecturers required support in the form of e-learning facility, tutors and teaching assistants in order to employ teaching strategies that cater for students with diverse academic backgrounds. Eight (22.2%) lecturers stated that the institutions should support them by providing ample teaching time slots on the timetable, resources and team teaching facilities so that they would employ instructional approaches that cater for the students with diverse academic backgrounds. Ten (27.8%) lecturer respondents said that the university should provide additional learning materials and offer bridging courses.

Five (13.9%) lecturers said that the lecturers needed support in the form of laboratories, technicians and current machines for them to apply teaching approaches to cater for the diverse students in TCD classes that comprised students from diverse backgrounds. The other 5 (13.9%) lecturers indicated that the university should provide adequate resources that would allow students to manipulate processes on their own. Another 5 (13.9%) of the lecturers echoed that the universities needed to avail technical support, equipment and should enroll students who have design skills for TCD programmes so that the lecturers would be able to handle the students from diverse backgrounds, in the TCD classes. Another 5 (13.9%) indicated that they needed support from parents, guardians and friends in students' homework. However, two (5.6%) lecturers did not give any response. The lecturers' responses reveal that they needed continuous and responsive staff development in pedagogic content knowledge and subject content knowledge, and support staff for them to effectively cater for the needs of the students.

Interviews were also held with the quality assurance directors, school deans of studies, department chairpersons, lecturers and students to get their views on the level of support provided for delivering TCD programmes at the two universities to make sure all the students with different backgrounds are catered for.

The quality assurance directors commented that the universities supported the provision of the programmes to the students through resource provisions although they argued that staff development support was hindered by inadequate funds across the two sampled institutions.

QAD1said that:

The institutions provide resources such as machinery, material and human resources, and ICT based materials. Though not in practice but on paper, the lecturers have to undergo industrial experience as well. Currently, because of economic hardships, we are not doing it but initially lecturers are supposed to go on industrial attachment so that their skills are improved. Lecturers must have academic support through exchange programmes, although it has not been done because of economic hardships.

QAD 2 stated that:

We are a STEM, (science and Technology University). Our mandate is to do things that ensure support of technology. Therefore, we are supposed to increase number of programmes in terms of strategic direction, increase students' accessibility to learning and resources like ICT related equipment. The university provides lecturers with remuneration, labs and equipment, and allocates about 2% to 6% of university budget for research. The university also support industrial and attachment visits during the semester.

The deans of studies said that the universities provided resources for implementation of the TCD programmes in order to cater for the different needs of the students, but also shared the same sentiments with the quality assurance directors that the resources were not enough. The deans of studies noted that resources to further train the lecturers to cater for the diverse students were critical, although some lecturers were being sponsored in acquiring higher degree levels.

FD1 commented that:

There are various programmes that support them, some of them not so operational because of shortage of resources. For instance, staff development is very high on the agenda of the university. In fact, in our school, we have 4 people who are on staff development at the various levels like masters and PhD. Then we have the resources that lecturers need to a certain extent, like consumer staff and office space. We have challenges but we are always trying. Transport and subsistence

allowances for attachment visits are offered to them though there are challenges here and there. But I think in-house lecturer upgrading workshops are needed because students' natures of diversities change every year. Every semester we get a different set of diverse students with different needs,

FD2 suggested that:

I think that the highest support an institution can have, currently, is e-learning. With e-learning students can do recording of learning and teaching extracts and other relevant information, from different sources.

The department chairpersons said the institutions supported the provision of the programmes by availing resources for assessment, but the lecturers lacked adequate training on strategies for catering for diverse students. The chairpersons also complained that the lecturers were facing challenges in catering for the students since their classes were too large to enable them to attend to individual needs in low resourced environments.

DC1 commented that:

The university has put in place an academy of teaching and learning which should be fully utilized in helping us to come up with assessment tools which will be used for students with diverse backgrounds. They should come up with seminars and workshops which equip the lecturers with methodologies to cater for learning differences in our students. It is not as proactive as a teaching and learning academy. I think the provision of tutorials is a way of trying to cater for student diversity. When you want to carry out practical lessons and practical tests; you are given all the materials required during assessment.

However, the same chairperson pointed out that:

Large classes make it very difficult to cater for student diversity, especially for our practical course. If we could have classes of fifteen students at most. It allows the lecturer to attend to each individual in the class. You understand each student more than when we look at a class

of 25 and above. Twenty-five and above is too large in practicals and it does not allow us to cater for diversity in our classes.

DC2 pointed out that:

> *Material-wise, we can order materials that we need. We also ask students to provide some materials since they are working. There is a certain allocation for lecturers for whatever we need resources like paper and internet to communicate with students. We also get materials for examinations. Sometimes we are given electronic resources to save on paper. But some courses may need more time.*

The lecturers also revealed that the universities supported the training of the TCD diverse students by providing resources and by funding seminars on teaching and learning processes, although the workshops were not adequately addressing issues of student diversity in curriculum implementation and issues of catering for the students with diverse academic backgrounds in the teaching and learning of students in environments that are inadequately resourced.

TCDL1noted that:

> *I am afraid to say this anyway, but let me just say it, now as lecturers we are given material to support teaching process, like we talk of the LCDs though they are not enough. We are also given bond paper. We talk of computers, though some of them are outdated. We also have a library and sometimes we have seminars relating to teaching and learning. Actually, we have an academy which holds seminars on the teaching of students. It could be on the teaching or setting examinations, marking of exams, marking of assignments and so forth.*

The same lecturer added that:

> *Sometimes we are given opportunities to attend seminars outside the university so that we can sort of mingle and interact with fellow university lecturers. We have technicians who sometimes assist by demonstrating practical processes. We are offered chances to go for staff development though not many are going because of financial constraints. Even*

research funds are also very limited though we may want to carry out research in areas that may improve our teaching. The grants are not enough.

TCDL2 remarked that:

…. they support the programs by financing the purchasing of training resources and payment of the manpower. These include provision of the infrastructure, availing of reading materials, purchase of new books, expansion of online connectivity, online journals and so forth, in a way to support effectiveness of the lecturers. The university provides transport to ferry people to and from work. Here and there, the university has funded educational and attachment visits.

The same lecturer added that:

…One crucial form of support needed would be teaching assistants. It will be easier to divide one's attention and share responsibilities. You can actually assign teaching assistants to attend to students and give remedial lessons to those students who may be lacking something from their past.

TCDL3 said that:

When we want some guest lecturers, the university always assists. And also we attend workshops and the university foots the entire bill for the workshop. But I think there should be some alignment on the time table. Give us extra time through the timetable if time permitting so that the lecturer can have extra time with these students so that they get to benefit.

TCDL4 remarked that:

I am not seeing any form of support since I joined the university in 2010 because the same types of machines which were being used are the ones that are being used currently, and yet we are saying Textile, Clothing and Design programmes must move with technology and with the current trends within society.It means we should have the current

machinery, of which support in that is not provided at all. And also there is nothing being done in terms of upgrading the staff who is teaching these students. Lecturers are also not provided adequate time for attachment visits such that the time they are supposed to be with students is limited because they end up rushing from one industry to the other.

TCDL4 further pointed out that:

I think if we have some sort of professional development courses and departmental courses which focus on understanding what diverse academic backgrounds call for because at times we don't consider that they are there. We just give students content that is just the same. There is also need for arranging some collaborative projects with other universities.

TCDL5 commented that:

The institutions' management teams are doing the best they can in terms of learning environment. I think if all things were ok, they would put in place the laboratories and classroom facilities.

TCDL6 suggested that:

The university should hold seminars which will most probably help on how best we can handle such students; teach in a low resourced environment like this one, as well as resource meetings.

The students confirmed that the institutions provided resources for teaching and learning, and for assessment purposes as has been highlighted by the quality assurance directors, deans of studies, chairpersons and lecturers. The students also disclosed that the resources were not enough to cater for diverse needs of the students, especially the learning facilities.

SFG1disclosed that:

The institutions provide materials for assessment and when we go for industrial attachment, they visit us and assess us twice for the whole period.

SFG2 explained that:

During 1:1, we are supported during examinations by being given some materials, but the materials are not enough. We learnt under a shed at Dilmitis building. If the university was supporting us, there wouldn't be having a production unit that is depriving us of our working space. The university should create another room for us rather than sharing with the production unit personnel. We are now forced to work during the night because of the existence of the production unit project. We should consult the Student Representative Council (SRC) for assistance so that we can be assisted with regard to the support in terms of learning space.

SFG3 argued that:

So far they don't support us. There are few textbooks. We have nowhere to get information, so the support is not much. Although, there is Wi-Fi, it's accessed at certain points within the university.

The interviewed respondents confirmed the questionnaire respondents' views that the sampled universities supported the provision of TCD programmes by availing teaching and learning materials for implementation of the curricular to students with diverse academic backgrounds. However, these respondents argued that the teaching and learning resources were inadequate and that most of the equipment was old and could not match the recent models as well as the number of students. Inadequacy of equipment, laboratories and classrooms made students to work at night in workshops and learn under sheds, which was not conducive time and environment. Most students needed more time to cover up for skills not addressed in their background learning. Inadequate learning materials and lack of staff development deprived lecturers from using variety of teaching and learning strategies that would adequately cater for the diverse needs of students who joined the universities with diverse academic levels. If students are trained using up to date resources, they will likely fit well in the industry as they would be having relevant knowledge and skills.

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It is important to note that one of the universities had a teaching and learning academy ear-marked for staff development needs among the lecturers, although the respondents commented that it was not quite functional. This department would function well if it responded to continuous staff development needs to equip lecturers with responsive curriculum delivering knowledge and skills (strategies) relevant for dealing with student diversities, among other curricular demands, in higher education institutions that offer TCD programmes in Zimbabwe. It also emerged from the lecturers that high student-lecturer ratio in the TCD classes deprived lecturers ample time for assisting the students during lessons. The lecturers needed more time with the students and teaching assistants so that they could offer remedial lessons to the students who had diverse needs emanating from their diverse academic backgrounds. The next section presents the support required by the students when they are on attachment.

5.5.1 Support for students on attachment

The researcher sought to establish how the university supported the students when they were on attachment to establish the level of assistance offered to the students. The lecturers' responses are presented in Table 5.26 next.

Table5-26: Support for students on attachment

Support	YES	%	NO	%	Total	
Attachment visits	34	94.4	2	5.6	36	100
Transport allowances	2	5.6	34	94.4	36	100
Workshops	26	72.2	10	27.8	36	100

Most of the lecturers (34, 94.4%) indicated that the institutions supported the students on attachment by supervising them during attachment visits. Twenty-six (72.2%) lecturers said the students were offered workshops to guide them on conduct of the attachment process. Two (5.6%) lecturers noted that the students were given transport

allowances for the period they were on attachment. However, the researcher went on to seek comments on the level of adequacy of the support provided and the data on the next table, Table 5.27 reflects the results.

Table5-27: Comments on adequacy of support

Response	Frequency	Percentage
Yes	9	25
No	26	72.2
No response	1	2.8
Total	36	100

Twenty-six (72.2%) lecturers indicated that the support provided to the students during attachment period was inadequate and 9 (25%) commented that the support was adequate. One (2.8%) lecturer respondent did not give any response to the question. The lecturers were further asked to justify their responses presented in Table 5.27 above and their comments are given below in Table 5.28.

Table5-28: Comments on how the support should be adequate

Comment	YES	%	NO	%	Total	
Offer remuneration for upkeep	10	27.8	26	72.2	36	100
Reward companies for them to attend to students	1	2.8	35	97.2	36	100
2 or 3 visits per student would be better	1	2.8	35	97.2	36	100
Offer allowances & stop them from paying fees	3	8.3	33	91.7	36	100
Secure workplace learning that suit students' backgrounds	4	11.1	32	88.9	36	100
Pay less fees for attachment period	1	2.8	35	97.2	36	100
More attachment discussion forum	2	5.6	34	94.4	36	100
More support than current scenario	3	8.3	33	91.7	36	100
Provide more attachment visits	1	2.8	35	97.2	36	100

Most of the lecturers 10 (27.8%) suggested that the university institutions should offer remuneration for upkeep to the students when they are on attachment. Four (11.1%) lecturers remarked that the support for students on attachment would be adequate if the universities secure workplace learning environments (attachment places) that suit students' nature of backgrounds. Three (8.6%) of the lecturers indicated that the universities should give allowances to the students and also stop them from paying fees when they are on attachment. The other three (8.3%) lecturers said that the support provided to students must be more than what was provided at that time. Two (5.6%) lecturer respondents recommended that the students be provided more attachment discussion platforms for the students to air the challenges they face and be assisted. One lecturer (2.8%) said that the support for the students on attachment would be better if the universities rewarded the companies that engage their students for workplace learning so that the industrial personnel can attend to the students. The

other one (2.8%) lecturer noted that the lecturers should make two or three attachment visits per student so that the students get better assistance from the university. Another one (2.8%) lecturer said the institutions should let students pay less fees for attachment period so that they can manage attachment expenses. It was also revealed that the universities should provide for more attachment visits so that the students get relevant support when they are on attachment.

The interviewed respondents gave their views on the nature of support that was provided to the students when they were on attachment in various industries.

The quality assurance directors commented that the students on attachment were supported through mentorship for professional development when they were visited by the lecturers. They, however, argued that the resources availed by the industries were not enough and equipment was not technologically advanced to train the students to operate them at the appropriate speed necessary for production purposes.

QAD1 said the students were supported through

> *Professional assistance, through one-on-one discussions. The way in which the lecturer conducts the discussion enables students to learn one or two things. There is also IT based communication. However, students take longer to complete set activities than they should take. For example, when they are designing and making a jacket, they take several hours doing that, including their extra time. So we would say maybe there could be some limitations in terms of resources that limit them. If they were using current technology; such projects would take a few hours of less than 6 hours.*

In response whether the universities supported students on attachment, QAD2 stated that:

> *Yes. Supervision by members of staff; that's the main support and otherwise nothing much. And obvious, mentorship. The students have their normal medical cover, standard for students' affairs. The medical cover is facilitated by university, and students pay for the cover.*

The faculty deans of studies agreed with the quality assurance directors that the students were assisted in areas they were facing challenges on the job and also on issues related to their social life.

FD1 commented that:

> *Some of it is social. We try to make sure that our students are not socially deprived, because when they go on attachment, it is like going into the wilderness where you meet challenges, meet people who think they can enslave one in one way or the other, by overworking one or in sexual terms. We equip our students with information by telling them that there are situations they do not have to tolerate and that they have to report certain things. We go and examine them twice throughout the process. We discuss where they are struggling in the work and even in social situation.*

The chairpersons contested the quality assurance directors' and the deans' views about attachment visits saying that the institutions were not giving the students adequate support because the visits were very limited for a year's period of attachment.

DC1 pointed out that:

> *In terms of attachment, I think we do not give them much support. We are not doing much because two visits in a year to me are inadequate to help students develop fully during attachment. I think if the university had enough money, we need at least four visits so that in a period of eight months, every two months the students are visited in order to understand and solve their problems, and give them information and guidance.*

DC2 added that:

> *E-learning during the school term; and even when they are on teaching practice they have e-resources through university library. Students are trained to use e-resources through the library.*

The lecturers confirmed the above respondents' views that the students were provided with resources, although the resources were not enough for the students to practice

all the skills learnt at the institutions since their academic backgrounds were different. The lecturers also echoed that they offered counseling services to students with problems when they went on attachment visits. The lecturers' comments are presented below.

TCDL1 stated that:

> *They are given resources by the industry, and not the university, like equipment, sewing machines, pattern paper, designing tools and so forth, though it's not enough.*

TCDL2 remarked that:

> *Lecturers are allowed to visit them twice although, the main thrust is to go and supervise the students for the whole attachment. When the lecturers visit these students, they also offer other forms of support e.g. psycho-social support. When a student has problems during attachment they also use this opportunity to talk about it. Therefore, the lecturers kind of mediate between the employer and the student when there are problems. Attachment visits become support because the university provides the transport and finances for the whole visit.*

TCDL3 highlighted that:

> *…. I think the only support that we give them is through the assessment. Yes, because we visit them twice when they are on attachment to check on their progress. We also do research with them; supervise their research when they are on attachment. Then to some extent we happen to have students with financial constraints. Maybe, the department assists on humanitarian grounds, not always. I am not saying exactly we have funds, but maybe we may contribute as members.*

The interviewed quality assurance directors, faculty deans, chairpersons and lecturers commented that they supported the students by visiting them for assessment and mentorship twice for the 8 months' student attachment duration. These respondents argued that the two attachment visits were inadequate for the lecturers to effectively assist all the students who had different needs due to their diverse academic

backgrounds. They proposed that the attachment visits be increased so that they can frequently visit the students in order to attend to their diverse needs continuously for smooth development of the designing talents of students. Linking of theoretical content with practical skills learnt at the institutions require reasonable monitoring and support which should be backed up by lecturers' frequent visits to the industries where the students are attached. It also emerged that the materials and equipment support provided by the industries was also not enough for proper training of the students with diverse backgrounds. Inadequate resources prevent students from maximizing their performance and abilities. The level of resources provided to students affects product designing and making processes among the diverse students. More often, limited resources affect the speed at which the students operate the quality of products and the grasping of concepts by the students.

The study further sought how the universities monitored the provision of TCD programmes to ensure that students with diverse academic backgrounds are catered for.

5.6 University monitoring process to ensure students with diverse academic backgrounds are catered for.

Monitoring is the process of ensuring that plans and policies are being implemented to ensure quality education. Universities use various monitoring processes in implementation of programmes' curriculum to maintain order within institutions. University management has the responsibility of monitoring the implementation of programmes' curriculum and also giving relevant support to the implementers.

Table 5.29 reflects the lecturers' responses on monitoring processes in place for effective delivery of TCD curricular to students with diverse academic backgrounds.

Table5-29: Monitoring processes to ensure students are catered for

Comment	YES	%	NO	%	Total	
External examination	30	83.3	6	16.7	36	100
Peer and student evaluation	18	50	18	50	36	100
Moderation of examination	16	44.4	20	63.6	36	100
Quality assurance department	31	86.1	5	13.9	36	100

The data in Table 5.29 shows that most lecturers (31, 86%) indicated that the monitoring mechanism in the two universities to ensure that students with diverse academic backgrounds were catered for was done by quality assurance department followed by 30 (83.3) lecturers who said monitoring of TCD provision was done through external examination process by appointed persons from other university institutions. Fifty percent (18) of the lecturers showed that the provision of the programmes was monitored through peer and student evaluation processes. Sixteen (44.4%) indicated that moderation of examination scripts was carried out to ensure that the diverse students were catered for. Therefore, examination moderation by lecturers and by external examinations, and use of the quality assurance department were the main programme monitoring mechanisms at the two sampled universities. However, the mechanisms are only effective if they address issues of student diversities, especially those pertaining to students with diverse academic backgrounds.

The quality assurance directors', deans of studies', department chairpersons' and lecturers' views on monitoring of TCD programmes provision were sought to find out whether the diverse students were catered for.

It was found that the quality assurance process was done through the ordinary supervision carried out by the dean's office, chairperson's office and through lesson assessments done by the peer lecturers and students to check on level of course coverage and lesson attendance by the lecturers. The quality assurance directors also said that external examiners checked on marking and moderation of end of semester examinations.

QAD1 said the university monitored the provision of the TCD programmes:

Through the normal monitoring process which is composed of the dean, chairperson, peer courses evaluation, lecturer evaluation, lecturer course evaluation, quality assurance just checking.

QAD2 pointed out that there are:

Things like assessment at faculty level, faculty body of examiner, we do have external examiners appointed by the university from outside the university. The external examiners go through the examination questionsand moderate the scripts to ensure quality.

The faculty deans of studies confirmed the existence of the ordinary monitoring structures, made available by the quality assurance directors, to generally monitor the conduct of lessons and end of semester examinations.

FD1 said that:

We have student evaluations, we have peer evaluations and though it it's not university policy, I am soon going to be encouraging or suggesting the school board that chairpersons and the dean have a, like a third layer of evaluation, in fact chairpersons should have one more layer of assessment of the lecturers and the dean has another layer.

FD2 pointed out that the universities have:

Faculty bodies of examiners, have external examiners appointed by the university from outside the university. They go through the examinations, go through the scripts so that they ensure quality. There are also advisory boards made up of industry people. They come to meetings. We have two meetings in a year; that is a way of checking that everybody in terms of stakeholders is taken care of.

The department chairpersons indicated that the monitoring structures in the sampled universities checked on effectiveness of the teaching and assessment processes with regard to laid down teaching and assessment institutional regulations that were relevant for fair practices.

DC1 stated that:

> *The monitoring is not specifically looking at different student diversity, but is putting in place mechanisms to monitor efficiency in teaching and learning by setting peer evaluation and assessment of learning needs for students. Where we have a demonstrator and a technician, it is trying to help us as lecturers to instill practical component, to demonstrate skills to students, and make sure equipment is in order by having technician who can be assisting students with problems in use of different tools and equipment. Then setting up an office of quality assurance is trying to encourage lecturers to do their best to promote teaching and learning environments that are effective. The quality assurance directorate members come to monitor how we do our assessments during examinations. We have seen them coming to see what happens during examinations.*

DC2 highlighted that:

> *Course outlines are assessed. Examination department assesses the examinations. External examiners get examination papers and look at them and they also come during the final year to assess students' work and make a report.*

The lecturers shared the same sentiments and commented that the institutions did not have adequate funds to support monitoring relevant for students with diverse academic backgrounds.

TCDL1 outlined that:

> *I can't think of any measures which are used to monitor the provision of this programme. It's always beginning of every year an opportunity to order some of the equipment, but sometimes nothing is bought because of financial constraints which restrict purchasing. The money is sometimes diverted to more pressing issues than some of the modern equipment. They always say "you can use what you have at the moment" though you will be crying for something modern to be advanced.*

TCDL2 said:

The university monitors using traditional quality control arrangement. For example, when all the staff that is used to direct and guide the training of students usually goes through a board that rectifies it like the course outlines. They are discussed and perfected by the departmental board and the school board and looked at by external assessor. The same goes with the examinations and the assignments that are looked at by the departmental board; the school and even we have instances where some samples of assignment briefs have been presented to the external assessor.

TCDL3 noted that:

When you apply for a field trip, they ask you to write a letter. It's a motivational letter where you write objectives of the trip. What exactly do you want to achieve? What are the students going to learn? How will they benefit from the trip in the subjects that they are doing at the university? How are you matching the trip with whatever you are teaching? There is also the group of quality assurance people to monitor the way we deliver lectures and everything.

TCDL4 said that:

I have never seen any form of monitoring. Maybe at department level, but I don't know if we sometimes work with that- the peer reviews which we normally do at departmental level. But I am not so sure whether we sometimes, as lecturers, discuss about that to really check if lecturers are taking that into consideration.

TCDL6 noted that:

When the lecturers have drawn out the course outline, the department board looks at it to make sure that it meets the requirements of the course synopsis. The department board also discusses the assignments drafted by the lecturers.If there is need for modification they advise accordingly.

The quality assurance directors, deans of studies, department chairpersons and lecturers confirmed the questionnaire respondents' views on existing monitoring mechanisms for programmes implementation which comprise the quality assurance directorate, the faculty deans of studies and the department chairpersons. These management personnel supervised the lecturers' lesson attendance, submission of examination items to departments, and conduct of examination process. Peer and student lesson evaluations were also carried out to ascertain curricular coverage by the lecturers in all the programmes' subjects. However, the interviewed respondents revealed that the traditional monitoring procedures were not addressing the strategies for catering for students' diverse needs. The data collected revealed that the monitoring process was aimed at supervising how the teaching and assessment was done to meet institutional regulations pertaining conduct of lessons and examinations. If the quality assurance directors' department, deans of studies, and department chairpersons were incorporating issues of student diversity in their monitoring process, they would make sure that effective ways of catering for the students are practiced, and they would plan and supervise how the diverse needs of students were catered for in curriculum implementation within the institutions. The discussion of course outlines, assignments and examination papers was done by the departments, faculty and university boards of examiners and was aimed at checking whether the lecturers' assessment items were in line with curricular content.

The idea of examination moderation was quite impressive. Although the correction of identified errors assisted some students to pass, they did necessarily assist the affected students to fully acquire subject content concepts and skills of work already covered. Moderation reports sometimes necessitate change of implementation policies, which may be in favor of students' academic welfare. Peer evaluation and students' evaluation reports are relevant if they are used to identify curriculum implementers' weaknesses and to find ways of rectifying such weaknesses promptly. Such corrective measures may benefit the students who have different learning needs. Sometimes peer and student evaluation may be aimed at faultfinding or the evaluation reports may be dumped somewhere and the process goals may not be achieved. Such monitoring techniques require thorough tracking for them to be effective in making sure that students' diverse needs are catered for. In the next

section, the researcher presents challenges faced by the curriculum implementers in catering for students with diverse academic backgrounds.

5.7 Challenges encountered in catering for students with diverse academic backgrounds

Identification of challenges encountered in delivering of curriculum to classes comprising diverse students is a significant factor in the implementation of TCD programmes. Lecturers use different delivering methods that may enhance or hinder the learning of students. Identification of problems faced in the delivering of TCD curriculum to students with diverse academic backgrounds assist in coming up with relevant delivering approaches that may benefit the teaching and learning processes of TCD programme courses/ subjects at university level. The information is considered important as it makes it possible for implementers of policy to assess the level and extent of support needed to maximize acquisition of knowledge and skills among students with diverse academic backgrounds. The next table, Table 5.30 presents challenges experienced by lecturers in teaching the TCD students with diverse academic backgrounds.

Table5-30: Challenges faced in catering for students with diverse academic backgrounds

Challenges	YES	%	NO	%	Total	
Inadequate resources to cater for students	35	97	1	3	36	100
Slow pacing of lectures	33	91.7	3	8.3	36	100
High student to lecturer ratio	30	83.3	6	16.7	36	100
Working overtime	25	69.4	11	30.6	36	100
Lack of knowledge of subject content and knowledge on how to cater for diverse students	34	94.4	2	5.6	36	100
Inadequate manpower i.e. lecturers and support staff	24	66.7	12	33.3	36	100
Difficult to motivate students to learn	25	69.4	11	30.6	36	100
Wide students' performance gaps, drop out and absenteeism	20	55.6	16	44.4	36	100

The data in Table 5.30 shows that most of the lecturers (35, 97%) faced challenges of shortage of resources to cater for the students. Thirty four (94.4%) lecturers said they were facing problems in designing accommodative strategies and in adapting subject content to meet the needs of the students because they lacked knowledge on strategies for catering for diverse students. The same lecturers also indicated that they did not have adequate TCD subject content knowledge. Thirty (83.3%) lecturers indicated that they had problems of high student to lecturer ratio which prevented them from attending to all the needs of the students during the lessons. Twenty-five (69.4%) lecturer respondents reflected that they were experiencing problems of working extra time outside the timetable in order to assist the students to cope with university content as well as background content in the TCD field. The other 25 (69.4%) lecturers said they had problems in motivating the students who lacked background exposure to TCD subjects' knowledge and skills since most of those students quickly lost hope and

focus. Twenty four (66.7%) lecturer respondents noted that they had challenges of inadequate manpower in the form of lecturing staff, teaching assistants and technicians. Twenty (55.6%) lecturers indicated that they were worried by the wide performance gaps among the students, drop outs, and absenteeism. The respondents' views reveal that they were mostly affected by inadequacy of resources and lack of knowledge on how to deal with student diversity at the two sampled universities that offer TCD programmes. These challenges are critical because resources enhance students' interaction with subject content and skills as they pave way for optimum teaching and learning among the students.

The researcher further investigated challenges experienced by lecturers in catering for students with diverse academic backgrounds in universities that offer TCD programmes in Zimbabwe. The students stated the challenges they faced in the teaching and learning process. Such challenges would assist university management and lecturers to seek relevant support for them to effectively cater for them and enhance achievement of programme learning outcomes.

QAD1highlighted that:

> *Basically we do not have resources. We critically need resources, such as ICT learning packages to virtualize teaching and learning processes, and to cater for the diverse students. Pacing of lessons and timing of the end period of projects is very difficult in poorly resourced learning environments. You find the time variable is not achievable among the different students due to resource limitation. Some students do not get to optimum achievement due to the time issue. Management of that particular diverse group becomes a problem because of the diversity. Lecturers work overtime going up to 20 hours instead of 8 hours a day.*

QAD2 pointed out the challenge of slow lesson pacing and added that:

> *The student to lecturer ratio is generally high. It may have an impact on the issue of diversity in the sense that the lecturer's efforts is spread across a wide number of students which impacts on the effectiveness of the supervision of the activities. Therefore, the time the lecturer spends on an individual becomes very limited. Some students fail to get*

maximum assistance and lecturers have challenges of teaching in depth subject content. The large numbers of students do not fit well in available facilities. Even if we want to give them a 24-hour laboratory, the ratio of equipment to students is the greatest challenge. The other challenge is inadequate industrial attachment places because the textile industries are affected by our colleagues, China.

FD1 outlined that the collapsed industry affected securing of attachment places for students and lack of resources such as computer laboratories compromised teaching and learning. FD1 further stated that:

The greatest challenge is that of curriculum structural deficiency by staff. The staff is failing to understand the courses and our focus as a school, which is in the context of art and design. Then I think training also comes into being part of that deficiency in which we did not have clothing fashion design degree programme that focuses on the artistic aspect. The university training programmes we have at Master's level, at University of Zimbabwe, Solusi University, and Midlands State University are not so much intended on fostering creativity aspect. We also have attitude problems that clothing is a women's thing and for people who can't do anything else.

FD2 noted a challenge of slow lesson pacing leading to teaching surface subject content and inadequate resources as above. The department chairpersons also shared the same sentiments as the quality assurance directors and deans of studies.

DC1 said that:

Our major challenge is we do not have adequate resources. We have challenges in terms of teaching space, ICT teaching technologies, laboratories, software for pattern making and fashion illustration, sewing machines, such as button sewer, flossing machine and sewing machine attachments like, buttonholer, button sewer, flossing machine, and LCD projectors. On human resources, we are lacking in terms of senior academics, PhD holders and professors, to boost research output, to teach pattern making, fashion illustration, textile science, and to develop

Textile Designing programme to complement Fashion Design programme. Our assessment is not catering for the diversity in our students.

DC2 noted that:

The most challenge we have is learning space. We do not have a studio. We use ordinary rooms. Our computer laboratory is not equipped. Students use their laptops. Manpower issue is also the greatest challenge we have. That's why we teach outside the normal timetable. There has been a freeze so we cannot get fulltime lecturers. We do not have tutors in the department. The lecturers do the tutoring.

TCDL1 said that:

Sometimes the lecture is not smooth flowing because you may call for repetition of what you will be saying. The students' diversity gap is just too much, as assessment results sometimes do not produce a normal curve. Sometimes, I really get worried with someone scoring 90% with the lowest scoring 51%, you know. You feel as if you have short changed someone. Other students sometimes feel as if there is favoritism. Some of them actually say "I also answered very well, but I don't know how I got low marks" Some of them are actually demotivated and it is a challenge to really motivate them. Some of them drop out, if they feel they are not making it, or they just absent themselves from lectures.

TCDL2 pointed out that:

I think the main challenge is the large number of students in a class which limit individual attention to students. Then second challenge obviously is the issue of machinery which is not healthy, for example 4 to 5 students sharing one machine. The other challenge is to have extra time to offer tutorials to students. Then the challenges of having to strain the limited resources like machines and consumables to meet the needs of the students.

TCDL3 stated that they had challenges of large classes, inadequate resources in terms of time, equipment and human resources as was said by the other lecturers above.

TCDL4 mentioned the problem of learning space for the students and noted that:

> *We end up covering a lot of content, to cater for the different academic levels of the students. We also experience shortage of time to cover everything that we would have planned, and even an extra workload on the part of the lecturer. We do not have enough materials for assessment of students in projects. The other critical challenge is on aligning curriculum content to suit the different backgrounds of students. We do not have enough resources such as physical infrastructure and teaching assistants to cater for the students with different academic levels. The lecturing staff has limited knowledge on how to cater for the students with diverse academic backgrounds. There is lack of support from the university management and administrators for the TCD departments.*

TCDL5 revealed the problem of wide knowledge disparity among the students and attested that:

> *…The students who have not done Fashion and Fabrics at 'O' Level take time to really catch up with the artistic component of the curriculum. But it also depends with the individual. If they are willing to learn, they usually catch up. Those from Technical and Vocational Education are fine, but those with Home Economics background lack the artistic background. We have to do an extra job. Some assignments are not well tackled; they have to redo. It gives extra work because you have to do a double job.*

The TCD students also went on to identify problems they were facing as the recipients of the programmes.

SFG1 confirmed the issue of wide knowledge gaps among students and argued that:

> *We have very little time for practicals. These are done once a week and there is very limited time for some of us to practice the skills being taught.*

It's a big challenge really. Some of us who have not done "A" level have challenges of getting concepts since we have less experience with concepts and equipment. We also do not have enough equipment and even lecture rooms. We are always moving up and down wasting a lot of time. Some lecturers don't even mind that some of us have this little knowledge, they just teach from scratch.

Besides the problem of inadequate time to cover up basic content in the TCD field, SFG2 said that:

When they present courses and information to us, they assume that we already know because some people would have already done that in industry or at Higher Diploma levels. So the lecturers just leave us and we become demotivated, lose self-esteem, and demoralized to participate because of the underdeveloped background. However, those from developed backgrounds need assistance in designing, so all of us need assistance. Lecturers have other commitments and some do not have knowledge in other courses like Pattern Making and it is a critical challenge. Some lecturers are not friendly and some do not want to help while others are willing to help.

SFG3 outlined the problem of lack of adequate subject content knowledge among lecturers, absents of monitoring and lack of enough time for lecturers to attend to the various needs of the students as they revealed that:

Absenteeism of lecturers, lack of knowledge, highly committed somewhere, late coming for lessons and they do not want to classify points. Some of us lag behind due to diverse background. When I see something new its better I get it cleared and move on. I am left behind thinking while the lecturer moves forward. Communication between lecturers and the university lacks. Last semester, we had 2 lecturers teaching the same course. They do not tell the lecturers the changes on the timetable yet the timetable continuously changes. The university does not monitor whether these part time lecturers are coming for lectures or not.

The respondents' views show that the lecturers were committed to cater for students but were deprived by limited resources, especially time, to assist all the students during the lessons. The challenge of inadequate resources led to challenges of selecting relevant teaching methods to cater for students' needs and affected smooth flow of lessons as some students did not understand the planned concepts. Absence of enough LCDs, infrastructure, computer laboratories, relevant software for the courses/subjects, teaching assistants and inadequate workshops were among the deficiencies that hindered effective teaching and learning of TCD students with diverse academic backgrounds. For instance, one of the TCD departments had only one workshop for four groups of students from year one to year four, in which the students worked at night after lectures to complete assignments and exercises. This was not appropriate time, especially for some students who stayed off campus. Inadequacy of LCDs resulted in delays in commencement of lessons as indicated by the lecturers.

It also emerged from the respondents that management of class activities was a problem due to inadequate resources and lack of diverse class management skills among the TCD lecturers in the two universities. This affected teaching and learning processes, and performance of most students. Teaching in well-resourced environments especially those backed with ICT teaching and learning packages would enhance effectiveness in management of classes with diverse students.

Therefore, inadequacy of resources impacted negatively on achievement of programmes' learning outcomes among the students with diverse academic backgrounds at the two sampled universities, as alluded to by all the study respondents including the students.

It was noted that there was lack of support from university management and even from administrators within the department in initiating strategies to cater for students with diverse academic backgrounds among the lecturers. This was evidenced by lack of staff development in line with catering for students' diverse backgrounds. Most respondents, including the students, revealed that the lecturers had limited knowledge on how to cater for students with diverse academic backgrounds as well as limited subject content knowledge in the TCD field. Due to lack of responsive continuous staff development among the lecturers, lecturers had challenges in

adapting curriculum content and assessment techniques to suit different academic backgrounds of the students. The lecturers also revealed that they had challenges in teaching larger classes in low resourced classroom environments, which limited individual student attention. Low resourced environments deprive students from participatory interaction with subject content and skills knowledge; the basis for effective teaching and learning among students especially those from diverse backgrounds. The section that follows presents suggested solutions to most of the problems cited by the study respondents.

5.7.1 Solutions suggested by the respondents

The respondents proposed the following solutions to the challenges experienced by the lecturers highlighted above. These may guide the management teams in the universities that offer TCD programmes to set up support mechanisms that may enhance teaching and learning of students with diverse academic backgrounds.

Table5-31: Solutions suggested by the respondents

Solutions suggested	YES	%	NO	%	Total	
Provide resources to cater for students	30	83.3	6	16.7	36	100
Curriculum review to cater for all students	5	13.9	31	86.1	36	100
Have foundation courses	26	72.2	10	27.8	36	100
Have exchange programmes	6	16.7	30	83.3	36	100
Adapt implementation techniques	34	94.4	2	5.6	36	100
Enhance supervision	4	11.1	32	88.9	36	100
Have workable student to lecturer ratio	19	52.8	17	47.2	36	100
Staff develop lecturers	32	88.9	4	11.1	36	100
Engage team teaching	8	22.2	28	77.8	36	100
Use technologies in teaching	30	83.3	6	16.7	36	100

The data reveals that adaptation of curriculum implementation strategies, indicated by 34 (94.4%) lecturers, is the best method of catering for students' diversity to enhance their learning. Staff development was indicated by 32 (88.9%) lecturers as another solution to the challenges faced by the lecturers in catering for the diverse TCD students in curriculum implementation. Thirty (83.3%) lecturers highlighted that the university institutions should avail adequate resources relevant for catering for the diverse needs of students. Another 83.3% (30) of the lecturers showed that the lecturers should integrate technologies in their teaching and learning processes in order to effectively cater for the needs of the diverse students. Twenty-six (72.2%) lecturers noted that the universities that offer TCD programmes should provide foundation courses/ programmes so that those students who have limited or no TCD background qualifications can get exposure to the background knowledge and skills before engaging in degree courses/subjects. Nineteen (52.8%) lecturers reflected that their classes should have workable student lecturer ratio which would enable them to attend to students' individual needs during the lessons. The sharing of equipment

would also be reduced to minimal numbers. Engagement of team teaching was highlighted by 8 (22.2%) lecturers as one of the possible solutions to the problems cited by the respondents in catering for diverse TCD students. Six (16.7%) lecturers indicated that the institutions needed to support exchange programmes to pave way for collaboration among the TCD lecturers and students. Five (13.9%) lecturers indicated that there was need for curriculum review so that students' diverse academic backgrounds would be incorporated in the programmes content. The least number of lecturers (4, 11.1%) indicated that the universities needed to enhance supervision procedures to make sure diverse students are catered for effectively. The lecturers' views reflect that adaptation of curriculum implementation methods is the main technique that may enable the lecturers to cater for the TCD diverse students complemented by manpower development.

The interviewed quality assurance directors, TCD faculty deans of studies, chairpersons and lecturers suggested their solutions to most of the challenges experienced by the lecturers in catering for students who joined TCD programmes with diverse academic backgrounds.

QAD1 suggested that:

> *Most of the processes can be virtualized so that they are IT based and packaged in a way that they are accessed continuously for one to try or imitate alone, out of the normal working hours. Have an open laboratory system for 24 hours to facilitate activity at any time. Provide self-assessing activity based items. Have extra assessment and evaluation procedures in the department to accommodate individual differences. Because government funding is dwindling, parents have to chip in. We should do entrepreneur, technopreneur activities that bring more money.We need to come up with an instrument that takes on board, issues of student diversity. Your research needs to assist us on that.*

QAD2 proposed to:

> *Allow engineering students to go across 2 years introductory programme giving ability to cover up or build on the foundation. Provide facilities in the country and access to buy some equipment from other countries. We*

need to have a lot of exchange in terms of student diversity. Resuscitation of textile industries in Zimbabwe and regionally would assist in securing attachment places.

The quality assurance directors commented that the institutions should provide adequate resources, introductory programmes and support through introduction of policy to promote strategies for catering for the diverse TCD students. The faculty deans of studies also commented that the universities should adequately support the provision of the programmes to effectively cater for the students with diverse academic backgrounds.

FD1 proposed:

Refocusing of focal areas in terms of what our lecturers see as their areas of training. First channel resources where they are mostly used for training purposes. One of the things that we are trying to do is to encourage schools to do outreach to encourage high schools to have relevant "A" level subjects so that when these students come to university, they are not taking it from basics. Departments are being equipped to have resource mobilization projects which can also be used as teaching resource.

DC1 noted that:

I think we have to work vigorously to develop projects that generate funds to buy equipment and also come up with the state of art lab. Have enough projectors for the lecturers. Lecturers have been allowed to go on leave during vacations, the university assists in paying for PhD studies but also have no funds. The university should allow lecturers and staff to go for contact leave to get cross fertilization of ideas and help in collaborative research. There is need for continuity in skills development. For example, have Pattern Making 1 and Pattern Making 2.

DC2 said, in relation to the freezing of posts which impacted on the manpower needs:

Well, unfreeze is the only solution to engage manpower. So far we are working with part time lecturers but sometimes all the work is dumped on one person. Provide resources like tutors for tutorials and learning space. Since the institution is still growing, it can hire learning space from other institutions.

The TCD department chairpersons urged the universities to provide adequate resources as was indicated by the quality assurance directors and deans of studies, though they further suggested that the Textile, Clothing and Design departments should develop projects that generate money to purchase equipment. The lecturers also gave their views on possible ways of solving the problems they faced in teaching TCD classes with diverse students.

TCDL1 said:

I propose that the department have more LCDs. and seminars on research skills such as APA system, Harvard and so forth. There is need for moderation of the marks by peer lecturers or even by internal examiners.

I think we have to give the students extra learning materials and devices, like laptops, and constant supervision in their work especially in practical.

TCDL2 proposed that:

The lecturers should mix the differences and segment the students in a class according to their abilities, especially when introducing a topic. When you work with smaller groups, it is easy to identify weaknesses and to deal with the weaknesses. The other solution is embedded in time tabling in which the class should be broken into smaller units for tutorials in order to attend to students' problems. Universities need to have enough structures, adequate staff and support staff like teaching assistants and technicians and buy enough equipment for the number of students they train.

TCDL3 confirmed the need for adequate resources to enable lecturers to cater for the diverse needs of the TCD students. He noted that:

It would be nice if these students were in groups or maybe split so that I will be teaching a small or manageable number. We need to buy more machinery, expand our training centre, so that maybe it's not only one room, but several rooms serving the same purpose so that we accommodate more students at the same time, and purchases be done during the second week so that students can make progress.

TCDL4 also shared the same sentiments on resource provisions with the above respondents as she revealed that:

Through enrolling students with a particular background like if you are to enroll only students who have undergone "A" level for a particular program, and have another program for those who have done Diplomas, like an upgrading program for such types of students. I am suggesting that we have our own computer lab, with computers that have the required software for Textiles and Clothing so that students can research widely. I am also suggesting if the department could boost the number of sewing machines and digital Televisions to match the number of students.

TCDL5 said that the institutions must provide adequate resources to enable them to cater for the needs of the students as has been alluded to above.

In response to how the challenges experienced in catering for TCD students can be solved, TCDL6 stated that:

Before we receive the students' assignments, we should discuss the marking guide with them so that when they work on the assignments, they follow the marking guide.

The lecturers proposed that the TCD departments should provide more consumables and training resources such as LCDs, digital Television sets, sewing machines, Pattern Making software; improve infrastructural facilities like workshops, studio rooms; and extend training centers into several classrooms/ seminar rooms to cater for students with diverse academic backgrounds.

The TCD students highlighted possible ways of solving the challenges they were facing in the learning process. In agreement with the quality assurance directors, faculty deans of studies, chairpersons and lecturers, the students suggested the provision of enough resources to meet the needs of the diverse students as the main solution to most of the challenges they were encountering.

SFG1 proposed that:

The school/ faculty should cater for those students with diverse background. If they can provide us with more practice like practicals and field trips. The department should provide us with more resources such as materials, equipment. And learning space is too small, the production unit is taking our space in the workshop for no reason. Time needs to be increased for practicals. Lecturers should always accommodate students to cater for limited time.

SFG2 commented on the manpower resource:

Just find someone who is very good at pattern making whom we can consult and the course should be offered in many semesters from 1:1. The lecturer for Pattern Making should always be in the production room to assist the students because we are in trouble. Probably create programmes that infuse working together. It will be better for the lecturers to have the students at heart, because that is the main issue. If the lecturers have students at heart, they will handle students in relationship with their academic backgrounds. Lecturers should have know-how of the technology such as software for designing and making patterns. There is need for upgrading of technological equipment.

SFG3 said that:

The university should acquire basic resources for the courses to be done before enrolling students; such as enough facilities so that the subjects are done practically not theoretically. The university can liaise with other related programmes so that the facilities like laboratories and equipment can be shared. Designing aspect is supposed to be done in a studio since it is difficult to visualize something that should be done practically.

They should employ full time lecturers. They should supervise their lecturers. The lecturers also need continuous staff development. There should be a clear channel of communication for us to the administration to air our views.

The interviewed respondents confirmed the questionnaire respondents' views that the university institutions that offer TCD programmes needed to support the adaptation of the TCD curriculum implementation strategies to suit the needs of the students with diverse academic backgrounds. The level of support required to cater for the students, as stated by the respondents, included resource provision and responsive staff development focused on dealing with student diversities at university level. The interviewed respondents elaborated that the lecturers needed adequate lecture rooms, laboratories, workshops, support staff, such as teaching assistants and technicians, equipment like sewing machines, and ICT based teaching and learning resources that would enable them to cater for the needs of the students. Staff development in line with catering for student diversities was highly advocated as the lecturers felt they would be kept up to date with developments in curriculum implementation issues in the higher education.

The other form of support considered relevant in catering for the diverse needs of students was provision of foundation courses to address the content and skills gaps among the students who joined the university education with diverse academic backgrounds. The process of going through foundation courses was ideal because the students would be exposed to basic TCD subjects'/ courses' content and skills so that they become adequately prepared for the advanced programmes' content designed for university education level.

The respondents' suggested solutions for the challenges experienced in catering for students with diverse academic backgrounds show that the focal institutional staff in the TCD provision was very positive about assisting all the students to effectively achieve programmes' learning outcomes. The respondents revealed possible solutions to the problems encountered in catering for the students that included corrective measures to promote implementation of diversified teaching and learning environments in TCD provision at university level. The respondents further called for

thorough monitoring of implementation techniques and students' performance to ensure all the students are assisted through the programmes' demands.

5.8 Summary

The chapter has presented, analyzed and interpreted data obtained through questionnaires, interviews and documents. The data answered the main research question which sought to investigate strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes in universities of technology in Zimbabwe. The qualifications and working experience for the lecturers in the TCD departments in the two universities were presented. It was revealed that most of the lecturers had the minimum professional qualification required for lecturing at university which was a Master's degree. Most of the lecturers had specialized in Clothing and Textile Technology. Two lecturers had the highest qualification among them, PhD qualification. One lecturer had specialized in Food Science and the other one in Educational Management, programmes not related to TCD programmes. Another lecturer had Bachelor of education degree, a qualification that was below the minimum qualification for lecturing at university.

It emerged from the lecturers that they encountered challenges of lack of knowledge in designing and implementing diversified teaching and learning methodologies to classes comprising students with diverse academic backgrounds. There were also inadequate resources and high student to lecturer ratio, which led lecturers to work overtime. There was high disturbance in lesson pacing and lack of adequate support from the university management. It was also established that most lecturers used student centered teaching methods that included group discussion, problem solving, research project, and also worked overtime in an effort to cater for the student with diverse academic backgrounds. This showed that the lecturers were highly committed to achieving optimum teaching and learning among the students. The respondents, including the students, advocated regular staff development focusing on dealing with students with diverse academic backgrounds and on issues pertaining to innovative artistic design content. Manpower development in such areas would enhance lecturers' pedagogic content knowledge as well as subject content

knowledge to enable them to respond to the continuously changing diverse needs of students entering higher education institutions. The further training of the lecturers would also make them able to match developments in technology in the industry sector.

Inspite of the challenges encountered by lecturers in implementing diversified teaching and learning strategies to students with diverse academic backgrounds, there were pockets of good practice found in TCD curriculum implementation among the lecturers at the two sampled universities of technology. The good practices include curriculum content adaptation to accommodate all students, and offer tutorial lessons. The use of different student centered teaching methodologies that enhanced students' interaction in the classes as well as accommodative assessment procedures such as continuous and formative assessment process reflects the lecturers' commitment to catering for the needs of the students although they lacked relevant content and skills in dealing with student diversity. There was also improvisation of resources to make up for inadequacy of material resources. The findings also revealed that there were functional monitoring structures outside and within the universities through ZIMCHE and quality assurance directorate, faculty deans of studies and department chairpersons although the structures did not adequately cater for students with diverse academic backgrounds mostly common among TCD students. The next chapter focuses on the discussion of the study findings.

CHAPTER SIX

DISCUSSION OF FINDINGS

6.1 Introduction

After having presented and analyzed the findings of this study in chapter five, this chapter provides a discussion of the findings. The discussion is based on those broad themes namely; TCD lecturer capacity, content and assessment adaptation procedures to meet the needs of students, and university support in catering for students with diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe. The three broad themes answer the study's main research question that sought to identify strategies used to cater for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at the universities of technology in Zimbabwe.

6.2 Lecturer capacity

The major determinant of quality education is the teacher. Studies reveal that lecturers who are highly knowledgeable in a subject area enjoy their work, can deliver subject content with ease and are capable of selecting effective teaching strategies that make students understand the content (Wenglinsky, 2002; Nguku, 2012). It is critical to pay attention to lecturers' professional training, level of lecturers' knowledge of subject content, and their teaching experience as these are prerequisite to implementation of strategies that cater for students with diverse academic backgrounds. Kurasha and Chabaya (2013) assert that a lecturer's years of experience in the lecturing job affects how they implement learning programmes. The current study's findings revealed that most of the lecturers in the TCD field of study did not have educational qualifications.However, UNESCO – UNEVOC (2013) study findings emphasize that lecturers' pedagogic knowledge is a prerequisite for curriculum implementation as it enhances their skills to handle a class and to select appropriate teaching

methodologies in order to meet the needs of students. Ethel (2007) advises that teacher education institutions should aim at producing quality teachers who are well equipped with varied and effective ways of content delivery in order to meet the needs of diverse students, as well as the complex industrial demands. The teacher preparation programmes must provide teachers with an appreciation of students' diversity (Mbele, 2005).The training curriculum should address issues of student diversity, accommodation, instructional activities, evaluation procedures, modification of materials, and identification, development and utilization of resources. The teachers' background training in teaching affects their ability to effectively deliver instruction in their classes. Tomlinson's differentiated instruction theory advises that instructional approaches used by teachers be varied and adapted to meet the needs of diverse students in the classroom (Hall, Strangman & Meyer, 2003).

6.2.1 Lecturer skills

Lecturers play a vital role in accomplishment of accommodative education practices (Coe, Aloisi, Higgins and Major, 2014; Alber, 2016). These researchers highlight that positive student outcomes are linked to highly effective classroom practice initiated by the instructor. The lecturers are capable of inspiring higher learning gains among the students through their creativity and classroom management skills. Providing students with best possible opportunities to learn requires education that is fully accessible to students with different backgrounds, abilities, and needs.

However, the study findings unveiled that most of these lecturers had specialized in the TCD related area of study, although their training lacked the artistic design aspects. It was noted from the study results that the teacher training programmes within some of the institutions of higher learning were not intended to foster creativity designing aspects that were highly required by the TCD university programmes. It also emerged from the study that two of the lecturers had specialized in Food Science and Educational Management, and these were not relevantly qualified to teach TCD programs. Hence, the students pointed out that some lecturers lacked practical skills in the areas they taught. The study findings were inline with UNESCO and ZIMDEF (2005) research results that portrayed that TCD provision in Zimbabwean universities was led by lecturers who were trained for the old model TVE provision, that

emphasized on skills to produce various products instead of innovative skills to create something. Furthermore, Coltart (2012) and ZIMDEF & UNESCO (2005) point out that most of the TVE trained teachers left the country for greener pastures elsewhere when the country had economic hardships.

Machteld and Naomi (2016) affirm that the implementation of flexible teaching and learning approaches in educational institutions is a result of a long term process in which the practices are continuously evaluated and adjusted to meet the needs of the diverse students. The study results revealed that the lecturers teaching TCD programmes at the sampled university institutions lacked continuous training on the job, which would have exposed them to strategies for catering for students with diverse backgrounds. Therefore, continuous training of lecturers would enable the lecturers to meet various needs of students. Veaux et al. (2016) posit that student diversity encompasses not only educational dimensions, but also students' roles, cultural identity, religious belief, gender, disability, socio-economic status and age. The researchers define institutional excellence as all the activities built into every facet and function of the university to achieve community engagement and student success, with these being facilitated by the lecturers through quality dissemination of their skills. Quality dissemination of subject knowledge and skills can only be enhanced through continuous staff development to respond to changes in student demographics and in technological advancement.According to Tomlinson's differentiated instruction model, the teacher is considered as the professional in the classroom who is suitably trained to mentor and lead the class using appropriate techniques to assist each student to reach his or her potential (Subban, 2006). Lea (2006) points that training of curriculum implementers is a critical issue that can only be resolved by the help of existing training and research centers. This therefore, emphasizes the importance of professional and continuous training of instructors to instill and update their subject and pedagogical content knowledge and skills.

6.2.2 Respondents' Age and working experience.

Older lecturers are mature and more experienced in challenges regarding curriculum implementation. Most university lecturers in Zimbabwean universities have either worked in industries or have been high school teachers and college lecturers who have

upgraded themselves to meet university lecturing requirements (MOHTE, 2010). Although the study findings in Table 5.5 confirm the above statements as it reveals that most of the lecturers at the two universities of technology were aged between 30 and 49 years. The lecturers were young and most likely capable of adjusting to demands of catering for students with different academic backgrounds in the TCD university classes.The TCD management staff, comprising quality assurance directors, faculty deans of studies and chairpersons was aged 40 years and above, reflecting the same view as presented above and these were more experienced in the field than the lecturers. Therefore, the TCD programmes at the two universities of technology in Zimbabwe were managed by mature personnel. Mature management personnel are usually more committed to their job as they have experienced various classroom environments and delivery challenges. Therefore, such management staff was relevant for managing the delivery of TCD programmes to classes that comprised students with diverse academic backgrounds. Moreover, supervising mature and experienced lecturers would make the supervisory process easier as mature personnel are easier to convince and direct as compared to young energetic manpower that are prone to experimentation (Wambui, Ngara & Waititu, 2016). Besides the age of lecturers, professional qualifications also play a pivotal role in enhancing lecturers' capabilities in handling classes comprising students with diverse academic backgrounds.

A study by Wambui et al. (2016) on how teaching experience of part time lecturers affects the quality of university education in public universities of Kenya, confirms that the experience gained by the curriculum instructors over a period of time enhances their knowledge, skills and productivity. Zaki and Rashidi (2013) extend that through their study findings that reveal that what and how instructors teach highly depends on the acquired knowledge, skills, support and commitment to the teaching profession, which is reflected by their years of teaching experience. Therefore, one's age, which is an indicator of one's working experience, is a determining factor for one's job performance as one learns on the job through experimentation and self evaluation. Thus, the TCD lecturers required close monitoring and guidance in handling the TCD classes as their working experience was on minimal levels of one to five years.

Various global studies by many researchers also confirm that teachers who recently joined the teaching profession are less effective than those who have some experience in the teaching field (Ladd, Clotfelter & Vigdor, 2007; Ladd, 2008; Rice, 2010). A study by Rice (2010) further reveals that teachers with three or fewer years of teaching experience are less effective in their work as they lack maturity and relevant experience on the job. Lecturers' years of experience on the lecturing job affect delivery of a learning programme (Kurasha & Chabaya, 2013). Lecturers who have very few years of lecturing experience and those just entering the field may have problems in implementing programmes as they may lack confidence in the job.

This study's results show that most of the lecturers had worked for one to five years while very few had been lecturing for above sixteen years. These results confirm Majoni's (2014) findings from his study on the challenges faced by university education in Zimbabwe which revealed that most experienced professionals have migrated to outside countries such as Britain, Australia, New Zealand, Canada, South Africa and Botswana to look for better paying jobs. Mupinga (2005) also shares the same sentiments when he says that the TCD lecturers who have been trained in the new improved college curriculum that encompasses the new approach to TCD provision have also been part of the brain drain that hit the Zimbabwean institutions from 2001 to 2008.

However, it emerged that all the TCD department managers were better experienced than most of the lecturers as their working experience ranged from six years and above. Therefore, the quality assurance directorate posts, faculty dean posts and chairperson posts were held by mature experienced individuals who could direct the less experienced lecturers. Westbrook et al. (2013) asset that teachers who have worked in the profession for some time have already developed their practices and pedagogical content knowledge over a long time through development of community and group practices, collaborative networks and reflection. An argument may, however, be made that the lecturers who have just joined the university may be well motivated and energetic to perform their duties which may stimulate them to be resourceful and hard working to achieve the programmes' learning outcomes.

Several studies that have been carried out with the European and Asian countries on inclusive education with regard to experience of teachers produced conflicting results

(Buston, Lartec, DeGuzman, Casiano, Carpio & Tongyofen, 2012). Some studies suggest that teachers with more experience in teaching students from diverse backgrounds show less positive attitude towards catering for diverse students, while other studies reveal that teachers' increased experience in teaching students with diverse needs increased their confidence to meet the needs of the students. Buston et al. (2012) further note that studies of both pre-service and in-service teachers have revealed that teachers' attitude can be influenced by the type of preparation they received during their training. The nature of training one receives assists in molding and nurturing one's attitude and beliefs about the teaching profession, and how to view the students.

This study therefore, suggests that the lecturers' attitude, beliefs and values towards catering for students with diverse needs need to be continuously nurtured through professional development. Petrie and McGee (2012) observe that professional development does not end at one stage, but is an ongoing learning curve. The professional development process is important because it introduces lecturers to curriculum and pedagogical reforms. Literature acknowledges that lecturers who are well-equipped with current pedagogical knowledge and skills have better impact on the success of differentiated education initiatives (Thornton, Peltier and Medina, 2007; Operti & Belalcaza, 2008; Buzda & Ali, 2011; Margolin, 2011).

6.2.3 Lecturers' professional qualifications

The Zimbabwe Council for HigherEducation (ZIMCHE), a council that governs the provision of programmes in Zimbabwean universities, stipulates that university lecturers should be holders of qualifications that are pitched at a minimum of one level above the exit level of programmes they are teaching (Garwe & Tirivanhu, 2015). Thus, undergraduate programmes should be taught by instructors who have master's degree while master's programmes must be taught or supervised by lecturers with doctorate qualifications.

Various researchers note that the qualifications and experience of lecturers have become a major concern among university lecturers and policy makers (Majoni, 2014; Vickers, McCarthy & Zamit, 2017). Lecturers' qualifications affect the success of

curriculum implementation and the success of the students which, in turn, impacts on the quality of teaching and learning in university education (Coe, Aloisi, Higgins & Major, 2014). The university academic staff members form its intellectual resource pool and constitute a key resource for an institution's success. (Arubayi, 2009; Bayisa & Zewdie, 2010; Tella & Daniel, 2013). A survey carried out by the Ministry of Higher and Tertiary Education in 2010 revealed that most senior academic staff had migrated from the country to neighboring countries as a result of the economic hardships faced by the country from the year 2000 to 2009. Therefore, the country (Zimbabwe) has to train more academic staff at Doctorate level to replenish those lost through brain drain in order to improve the quality of teaching, learning, and research (Garwe &Tirivanhu, 2015).

It emerged from this study that most of the TCD faculty managers comprising quality assurance directors, deans of studies and chairpersons had pedagogical qualifications. Only one manager had a PhD qualification which is in agreement with MoHTE (2010) and Garwe &Tirivanhu's (2015) observation that the most highly qualified staff had left the country for greener pastures. One quality assurance director did not even have any education-related qualification as indicated by the interview transcripts "*Although I am not a trained teacher…*"It also emerged that most of the TCD lecturers, twenty out of thirty-six, did not have education qualifications when several researchers stress that education qualifications are key to the teaching profession (De-Veaux, Flores-Marcial, Garcia, Henige, Jan, Jia, Ruvalcaba, Young, Ricks &Parsa, 2016; Vickers et al. 2017; Coe, Alois, Higgins & Major, 2014).

Teacher education equips the teacher with varied and effective content delivery approaches in and outside the classroom (Ethel, 2007; Ono & Ferreira, 2010; Saskatchewan Education, 1991). The study advocates for professional development of the lecturers so that they gain varied teaching methodologies relevant for various classroom situations that cater for diverse academic backgrounds of the TCD students. Staff development of the lecturers would improve lecturers' effectiveness in their teaching profession. Chireshe (2011) qualifies effective lecturing/teaching as that which creates an environment in which deep learning outcomes for students' academic attainment and course satisfaction are assured. Devin (2003) in Chireshe (2011) adds that effective lecturing should be well organized and presented clearly

and enthusiastically with variation and high student involvement. However, effective lecturing is affected by factors such as the lecturer background qualifications, student and environmental factors. It is therefore, presumed that the lecturer, as the organizer of the learning environment, should manipulate the student and the environment to make the teaching and learning process more effective (Tomlinson, 2005).

Chireshe's (2011) study with university students on qualities of an effective university lecturer which reviews professional qualifications of lecturers revealed that effective lecturers should possess a high level of rapport, fairness, delivery and knowledge and creativity attributes. High levels of rapport manifest in beingfriendly, helpful, patient, tolerant, approachable and readily available. Fairness is a lecturer trait that does not show favoritism by marking content not marking students by names, handwriting or students' past record. Marking is impartial, unbiased, constructive, and considers creativity. Delivery attributes include those that encourage group work, lead group discussions, allow students to participate and involve students in class presentations. Lecturers' high knowledge and creativity attributes include high degree of competence, knowledge, expertise, mastery of subject content, analytic mind, resourcefulness, creativity and innovativeness. However, most of the attributes are achieved through teacher education.

A study carried out by UNESCO-UNEVOC (2013) points to the fact that learning materials do not work in isolation to enhance learning outcomes for students, but student learning highly depends on lecturer's pedagogic knowledge, professional values and language proficiencies in handling a class and in selecting appropriate methodologies to meet students' needs. A study by the Ministry of Education in Canada (2013) established that TVE teachers must look at educational developments, incorporate them into teaching practice in order to be innovative, and be current. The current study's findings emphasized the use of inquiry based problem solving approaches to facilitate high levels of teaching and learning. The study's findings also suggest continuous teacher professional development that may be achieved through staff development programmes and seminars so that lecturers are exposed to curriculum implementation strategies relevant for catering for students with diverse academic backgrounds. Ethel's (2007) study suggests that the country's education system should set standards to ensure that teachers/lecturers know the subject

content, how to deliver the content to the students and how best the students can learn. It also emerged from the study by Ethel (2007) in Nigeria that the set teaching standards must lead to development of challenging examinations to capture and recognize accomplished teaching among the students. Measuring accomplished teaching among the students would help to identify lecturers' delivery weaknesses and stimulate the institutions to design relevant and focused staff development initiatives. The experience of lecturers also aid in sharpening the lecturers' attributes stated above. Therefore, the TCD curriculum delivery strategies with regard to teaching students with different academic backgrounds require implementation of competence based teaching and assessment procedures to measure attainment of learning outcomes by the students after completing programmes' content or at intervals. Assessment of competencies at intervals provides room for corrective measures to be effected to assist lecturers and students on the way before final assessment. However, such curriculum implementation reform requires formulation of policy to maintain order and consistency in curriculum delivery.

6.2.4 Lecturer specialization

Students with diverse academic backgrounds need instructors that can respond to their diverse needs in terms of subject content and skills gaps to achieve optimum levels of learning. Chireshe's (2011) study with university students on the effectiveness and ineffectiveness of lecturers revealed that effective lecturing is that which creates an environment that permits deep learning for students. Deep learning among students can only be achieved if the teacher has deep knowledge and skills of the subject they teach. Teachers acquire subject content knowledge and skills through specialization in specific disciplines and subjects at university, college and school level. Pedagogical content knowledge is strongly backed up by subject content knowledge that is acquired by teachers during training in a specific of area study. When the instructors' subject content knowledge falls below a certain level, it is a significant impediment to effective teaching and learning (Coe, Alois, Higgins & Major, 2014; Ono & Ferreira, 2010). It emerged from the findings of this study that three of the faculty managers had specialized in areas (performing arts, education administration and education management) that are divorced from Textiles, Clothing and Design programmes. The other three managers had specialized in areas that are

related to TCD programmes, implying that they had thorough subject content knowledge. Therefore, it was assumed that these were capable of effectively managing and supervising the TCD provision at the two universities. Among the lecturers, only two had specialized in areas (Food Science and Management) that are not related to TCD. Most lecturers were relevantly relevant specializations to teach the TCD programmes offered by the two universities of technology in Zimbabwe, though some of them were said to be lacking in-depth subject content knowledge, design innovative content as well as pedagogical content.

Results from studies carried out in some European countries acknowledge that the subject content knowledge is a relevant pre-requisite to effective teaching although being an expert in a discipline is not adequate (Rose & Ziemke, 2016). Fana, Schleppegrell & Lutkin (2008) argue that instructors must additionally have skills to make the subject content knowledge comprehensible by the students.

This study also established that some of the lecturers lacked in depth content in the subjects they specialized in. The faculty deans pointed out that the lecturers lacked knowledge and skills in artistic design aspects; a relevant aspect in TCD provision. It also emerged from student focus group interviews that, although the lecturers were qualified to teach the TCD programmes, they needed more practical hands on skills and in-depth knowledge in some courses such as Textile Science and Photography. Overall, the study findings established a training gap among the TCD lecturers. These findings were in line with Mupinga et al.'s (2005) study carried out with Zimbabwe high schools which revealed that the institutions that offered TCD programs were dominated by professionalswho were trained for the labour-specific and craft-based programmes. However, the current study findings focused on universities of technology rather than secondary schools. There is need for further research in order to formulate policy on how the existing lecturers can be staff developed to meet the level of TCD content and skills requirement in order to effectively deliver in classes that comprise diverse students.

Studies by Nguku (2012) and (2013) on analysis of textiles and clothing training institutionsin the Southern Eastern Africa established that most university institutions lacked adequately trained lecturing staff to operate and train students on specialized equipment and techniques that were beingused in industries. It was noted that

university lecturers lacked content knowledge in essential textile aspects such as technological knowledge of textiles, their applications in consumer textilesand knowledge in fundamental textile computation processes. In view of the lack of specialized skilled staff to handle the course context, Nguku (2012) recommends that the TCD university institutions improve their linkages with industry so that the lecturers can go to industry for internship to update their skills and close their content gaps. However, this research proposes that the university institutions that offer TCD programmes should map routine staff development plans and equip their laboratories with current equipment in order to effectively train students so that they fit well in the industry. The research also suggests that universities of technology be centers for industry research activities where innovative products are developed and tested before being produced in industry. Instead of having lecturers going to learn in industries, the industry personnel should come to the universities for staff development or the lecturing staff should go to the industries to carry out workshops to staff develop the industry personnel.

Nguku (2013) also established that the TCD lecturers at most of the southern eastern universities lacked specialized delivery methodologies such as skills to operate specialized machines such as Gerber Computer Aided Design. This manifests the content and skills gap that exists between the international universities TCD staff and the regional universities' staff.In line with the manifest skills gap, this research established that the lecturers lacked innovative design skills and in depth knowledge in some TCD subjects such as Textile Science and Photography as well as content delivery skills to cater for the diverse students who have different qualification levels. It is ideal that the curriculum delivery modes be benchmarked with the international institutions as some international universities have excellent Textile, Clothing and Design programme facilities and have worldwide reputation for high quality TCD teaching and research (Nguku, 2012). Besides, the TCD faculty deans of studies noted that the TCD Universities programmes at the major Zimbabwean universities were not adequately training the lecturers for the programmes offered by universities of technology. Therefore, the lack of expertise by lecturers was a result of the nature of their training which lacked the element of designing. Thus, it is of paramount importance for the nation to upgrade teacher training programmes to meet the needs of the TCD university curriculum and also close the TCD lecturers' content knowledge

and skills gap that exists between regional universities' lecturers and the global universities' lecturing staff.

Although the TCD university lecturers lacked some content and skills in the Textile, Clothing and Design component, and also in differentiated pedagogical aspects, they adapted the content by simplifying it to the levels of students and by using various methodologies to accommodate all the students in their classes. They used their little knowledge in delivering some courses such as Photography and Textile Science, although the students emphasized that they should invite specialists from industry to assist in such courses. It also emerged from the students that some lecturers were knowledgeable in some courses such as Grooming and Modeling. The students commented that the teaching of such courses was very effective as the lecturers were able to tackle both theoretical and practical components.

6.2.5 Academic backgrounds of students in TCD classes

The International Human Rights agreement, declaration and convection demands that institutions accommodate all children by implementing inclusive education policy for all human beings regardless of their physical, academic abilities, sex, race, ethnicity or other conditions (Peter, 2007 in Smith-Jackson, Johnson, McLaughlin & Rovira 2016). This right to education convention is similarly exercised in most countries whereby every individual is allowed to upgrade his/her education credentials regardless of age and background. In Zimbabwe, tertiary education comprises a multiplicity of programmes offered in different fields of studies and at different institutions (UNESCO & UNICEF, 2005). Textile, Clothing and Design programmes are offered by various private and government owned institutions through the TVET (Technical-Vocational Education and Training) initiative. Graduates from the private and government schools are enrolled into the university institutions to acquire higher levels of qualifications through the open access to education for all, an agenda adopted by the country soon after independence.

When the students from the various vocational institutions join the academic institutions (universities) they are disadvantaged because there is no national policy that guides such transitions (UNESCO & ZIMDEF, 2005). It is up to the individual

departments within the universities to place the student transfers at any level they deem appropriate (UNESCO & ZIMDEF).

The TCD programmes at the two universities of technology in Zimbabwe accepted students with background qualifications ranging from at least 2 years industry working experience, Ordinary level, Advanced level, National Certificate, Diploma in Clothing, Diploma in Education, Higher National Diploma, City and Guilds Diploma and Certificate qualifications. The students with this range of background qualifications were enrolled under the normal entry, mature entry and special entry provisions as was indicated by the enrolment policy documents from the universities. The enrolment of students with such a diverse academic background threatened the curriculum implementation process by the lecturers as all the diverse students needed to benefit from the programmes. There was no curriculum implementation policy in place to guide the lecturers in their teaching with regard to catering for such diverse students (UNESCO & ZIMDEF, 2005). Therefore, some students got disadvantaged while others benefited. The TCD departments at the two universities of technology witnessed student dropouts, failure rates, and attitude problems among the diverse students, especially in their first semester of university education. This led to the performance of students being rated as just good; reflecting an average performance as most respondents argued that most students' level of performance did not meet higher levels of lecturers' expectations. Since the good performance was attributed to students' effort in helping one another, the performance would improve if the lecturers supported all the diverse students in the teaching and learning processes. Literature also reveals that the industry complained that the TCD degree graduates' performance did not meet the industry's expectations as they lacked the required skills (Coltart, 2012; Coetzee, Bailey & Wickham, 2008; UNESCO, 2012).

The study also revealed that the lecturers were facing challenges of teaching students who had various levels of knowledge and skills and even those who had no TCD background knowledge and skills. It was observed that some students took longer periods than expected to complete the program repeating failed courses along the study period (The Financial Gazette, 2003; The Sunday Mail, 2013; Coltart, 2012).

Most regional universities, such as those in South Africa and Botswana, have set enrolment policies that stipulate clear educational levels of students in which

background knowledge in the programmes is regarded as pre-requisite for enrolment of students into a specific programme. The South African Universities have rating scales of Secondary School subject passes that are acceptable at universities such as the Admission Point Score (APS), based on the achievement rating of the subjects required for the programmes of interest. Above the achievement of the minimum required score, the candidates are further exposed to specific selection criteria that are applied by specific programme departments, such as interviews and entrance tests.

The interviews may be oral or written and these are geared to ascertain levels of background knowledge and skills possessed by the students for enrolment into a specific area of study or programme. Similarly, the international universities such as universities in Australia, Canada, China and England have set minimum entry requirements for all their undergraduate programmes (British Council Education, 2016. These have laid down eligibility university entry requirements that spell out specified educational certificates of equivalent qualification from any internal and external institutions. They also have set required grades in each of the pre-requisite subjects for specific programmes of study. However, before admission is granted, the candidate is required to write an admission test to find out if the candidates' previous educational background is at an adequate level for one to successfully participate in the chosen programme.

However, the engagement of a wide range of students with varied educational levels and characteristics reflected by the current study results shows that the enrolment procedure for TCD programmes required scrutiny or institutional support for those students who joined the programmes with minimal or no TCD exposure. The check-in level of background knowledge possessed by candidates is relevant as it determines the level of preparedness of candidates to pursue studies in areas of their choice. Students' background knowledge also guides instructors in lesson planning and choice of delivery strategies to suit the nature of students. Tightening enrolment criteria by tertiary institutions within a country assists to maintain global relevance in the provision of university programmes (Beall, 2012). The enrolment procedures adopted by institutions impact on modes of teaching and research, which is critical for tertiary institutions to increasingly remain competitive.

6.2.6 Teaching strategies used by the TCD lecturers

Catering for diverse students entails accommodation of all students in the teaching and learning practices. It involves changes and modification of curriculum content, instructional approaches, and structures with a view to achieving education for all students regardless of their background (Sullivan, 2002; Tomlinson, 2001). Various studies have revealed that the impact of the teaching that goes on in the classroom is crucial for enhancing teaching and learning among the students (Thornton Pettier & Medind, 2007; Opertti & Belalcaza, 2008; Buzda & Ali, 2011; Margolin, 2011).

The study findings revealed that most TCD lecturers were teaching design oriented subjects, reflecting that the TCD programmes comprised mostly design based subjects, though there were also theoretical courses and practical courses within the programmes. The design based subjects are core subjects for the Textile, Clothing and Design programmes as the programmes are aimed at exposing students to knowledge and skills that enhance their creative innovative skills in the textiles and clothing field (UNESCO & ZIMDEF, 2005; Catts, Falk & Wallace, 2011).

It emerged from the study that most lecturers were teaching design oriented subjects although they reportedly lacked artistic innovative design skills as presented by the deans of studies and student respondents. The studies carried out in most universities in Africa also reveal that there is a skills and knowledge deficiency among the TCD teaching and lecturing staff at secondary schools and at institutions of higher learning; (Arubayi & Obunadike, 20111, Kaindi, Mburugu, Nguku & Obere, 2016). The studies conducted internationally also established lack of design skills among the lecturers (Elmer, 2010). Such knowledge and skills deficiency among the lecturers impact on curriculum delivery modes used especially in classes that comprise students from diverse backgrounds. However, curriculum implementation trends in TCD provision worldwide, demands that there be better solutions for such concerns raised above as it is critical to produce environmental sustainability in textile & clothing products (Faerm, 2012). For instance, some university students in some American institutions have come up with textile clothing designs that solve problems in hospitals and have developed projects that interface with social and civic organizations (Dennis, 2011; Wolff & Rhee, 2011; Wax, 2010). The study by Faerm (2012) recommends that educators increasingly focus on developing students' conceptual skills and design

processes within the curriculum as that would provide greater interdisciplinary opportunities. This study emphasizes, not only the curriculum content, but also that educators should be staff developed in curriculum implementation strategies in order to achieve high quality TCD education among students regardless of their diverse academic backgrounds.

Teaching methodologies employed by lecturers differ from subject to subject and are according to available teaching and learning resources. However, it is important that the instructors have pedagogical content knowledge and skills in order to effectively deliver TCD programme content to students with diverse academic backgrounds. The study results reflect that most lecturers were using lecture methods to teach the TCD classes. Quite a number of lecturers indicated that they used group discussion. It also emerged that the lecturers' choice of teaching methodology depended on whether the subject was a practical one or theoretical one. However, this contradicted the lecturer responses, despite most of the TCD subjects being design oriented reflecting their practical nature; the lecturers mostly used lecture method, mostly suitable for theoretical subjects. Lecture method utilizes direct instruction teaching technique aimed at providing information and works well when introducing other teaching methods. The lecture method is explicit teaching, practice, drill and demonstration, and limits the development of students' abilities, processes and attitudes relevant for critical thinking and interpersonal and group teaching and learning (Na Li, 2012; Martel, 2009). Thus the lecture method may not fit well in teaching most of the TCD programme subjects/courses. The lecture method also do not suit curriculum delivery in classes that have diverse students, unless the methodology is augmented by other accommodative teaching strategies which cater for diverse students

A study carried out by Chireshe (2011) with university students on effectiveness of lecturers in lecturing reveals that effective lecturing is that which creates a classroom environment that permits deep learning for students and where high quality student learning is promoted. That study also established that an effective lecturer should possess good content delivery skills. The good content delivery skills entail encouraging group discussions, allowing students to participate, and involving them in class presentations. The current study's revealed that fewer lecturers were applying teaching methodologies such as group discussion, problem solving, research project

and field trips; that mostly involved students' active participation and critical thinking. Therefore, teaching methodologies employed by the TCD lecturers limited student active participation which impacted negatively on students' acquisition of knowledge and skills, considering the TCD students' diverse educational qualifications. Results from various studies carried out regionally reveal that students are expected to master curriculum content and skills at various levels of schooling regardless of their abilities (Arubayi and Obunadike, 2011; Kandi, Mburugu, Nguku & Obere, 2016; Mutepfa et al., 2007, MoHTE, 2010). Student centered teaching methodologies are encouraged as they enable students to construct knowledge through gathering and synthesizing information and integrating it through inquiry, communication, critical thinking and problem solving. International studies carried out by various researchers note that, since the contemporary university student population is characterized by great diversity, students must be exposed to good opportunities and conducive learning environments that are fully accessible to students (Machteld & Naomi, 2016; Webster, Cummin & Rowland, 2016; Coe et al., 2014; ATF, ILO & UNESCO, 2012; Awang & Ismail, 2010). Therefore, to effectively implement the TCD programmes, lecturers need to be well versed in a wide range of teaching methodologies and use those that permit effective teaching and learning of students from diverse academic backgrounds. Students with diverse academic backgrounds differ from students with different abilities as students with diverse academic backgrounds have acquired programmes' background knowledge up to different levels with some having just general knowledge in the field of study. The TCD programme provision calls for highly innovative instructors who can manage diverse classes through careful selection of instructional approaches that cater for such diverse students. The lecturers should utilize the students' cultural capital and various levels of TCD background knowledge possessed by the students, to design different teaching methodologies that effectively accommodate all the students (Tomlinson, 2003; Sullivan, 2001; Seo, 2004). This can be done by grouping students with different levels of knowledge in an area together in group activities and assignments in which peer teaching is highly encouraged. The lecturer can also design teaching and learning environments that permit peer teaching such as tutorials led by student peers.

It also emerged from the study that the lecturers were mostly employing instructional approaches that were related to the mostly used teaching methodology; lecture

method which is not student centered. The instructional approaches mostly used by lecturers were explicit systematic instruction followed by provision of feedback and correction. One reason for the lecturers' use of such instructional approaches was the time factor as, according to the lecturers, the approaches required minimum time to complete planned work. The study findings show that the lecturers' choice of teaching methodologies to use in class was highly dependent on time factor and the other strategies mostly used were providing feedback and correction, which also would not require much time since the lecturer just focuses on the assignment tasks and demands rather than presenting topic content. Hattie (2009) argues that explicit instruction requires that the lecturer researches thoroughly andbe very clear when he/she presents the unit of study to students by clarifying the purpose of the content topic, criteria on how they can be successful and models and examples of end products of the unit of study. Coe et al. (2014) and Saskatchewan (1991) observe that use explicit instruction deprives students of understanding affective and higher level cognitive objectives required for development of innovative artistic design knowledge and skills among the TCD students.

The study established that there were pockets of good practice in selection of teaching strategies as some lecturers indicated that they were using student centered instructional approaches such as modeling, problem solving, and demonstrating skills.The teaching strategies promote generalization and alternative representation of teaching and learning which is relevant for catering for students with diverse backgrounds. Such methodologies were said to be effective for equipping students with basic skills only that lacked the aspect of design innovative skills, the core skills for TCD programmes provision at university level. From the various studies carried out in curriculum implementation, (Coe et al., 2014; Hattie, 2009; Machteld & Naomi, 2016) various teaching methodologies can be used to deliver any type of content depending on the implementer's pedagogical content knowledge. This requires the teacher's degree of creativity in designing and selecting relevant teaching strategies for delivering various subjects' content knowledge in various fields of study such as practical, theoretical, and design oriented subjects. Since the TCD programme instructors were using the mentioned student centered instructional approaches, they lacked relevant subjects' content knowledge (artistic design innovative knowledge and skills) and pedagogical content knowledge for catering for students with diverse

academic backgrounds. Lecturers and the TCD chairpersons highlighted that they mostly used direct instruction methodology (Lecture method) because it was less time consuming and was suitable for teaching large classes, it meant that the size of class determines the choice of teaching methodology by the instructors, and also impacts on the required time for the lecturers to employ student centered teaching methodologies.

6.3 Content adaptation methods to meet the needs of students with diverse academic backgrounds

Valuing students' differences enables them to pursue their interests and develop their potential (Anerson & Boyle, 2015; Bhebhe, Dziva & Maphosa, 2014). Therefore, it is important to consider the lecturer's commitment to developing talents of individual students. There are different ways in which the lecturer can make a difference in each student's learning; such as provision of challenging learning opportunities, programmes adaptation and high quality instruction that caters for students' diversity (UNESCO- UNEVOC, 2010). In an institution that enrolls diverse students, curriculum adaption is carried out to meet the needs of any student for which the standard curriculum is inappropriate (Rosell & Ondrik, 2013; Wright, 2005). It involves arranging curriculum content for students to pursue different objectives within the same programme or lesson. When a lecturer adapts the programme, it is critical that he/she maintains the same learning outcomes although goals, expectations, presentation, materials, assistance and environments may vary (Block, 2011; Rosell & Ondrik, 2013). The findings of the study regarding content adaptation techniques and methods to cater for the needs of students with diverse academic backgrounds in the provision of TCD programmes at universities of technology are discussed in the following sections.

6.3.1 Factors considered when designing TCD content at university level

The findings of this study indicated that most respondents considered the demands of industry when designing the content for the TCD programmes at university level. Quite a number of the respondents mentioned that they considered prior learning

experiences of the students, contemporary trends in TCD provision, as well as the available resources. The level and title of programme, as well as delivery methods were considered to ensure that the designed programmes were in line with the TCD body of knowledge. The process of designing programmes at university level goes through a rigid structure prescribed by the university management. The respondents noted that programmes were first developed at individual level by lecturers, assessed at department level, at school level and then sent for stakeholder consultations to industry personnel and academics from other university institutions that offered the same programmes. After implementing the contributions of the stakeholders in the field of study, the programme was taken to the university committee and then to senate. Above the university senate board, the programmes were checked by ZIMCHE board that approves all Zimbabwean university programmes.

The study results concur with Nguku's (2012) findings that the curriculum development and review of programmes at universities that offer TCD programmes in the Eastern and Southern African countries (ESA) were done in collaboration with industry and other partners such as staff from other universities. The curriculum components highlighted by Nguku (2012) also match those of the programmes offered by the two universities of technology in Zimbabwe as reflected by the curricular documents. The components include designing, developing and implementing, monitoring, evaluating, and reviewing of the programmes. However, the idea of benchmarking the programmes with those of the highly performing institutions globally is not taken care of by the Zimbabwean institutions. The programme components and considerations in designing the curriculum content do not reflect the considerations for catering for diverse students from diverse academic backgrounds. The Pakistan Higher Education Commission emphasizes the need for the TCD curricula designers to consider current knowledge, techniques and methodologies evolving globally which demonstrate the need for professionals to keep updated (Ali, 2011; Machteld & Naomi, 2016; Webster et al., 2016; Howard &Terry, 2011). Howard & Terry (2011) proposed a culturally responsive pedagogy in dealing with culturally diverse students in American universities. This was a framework that recognizes the rich and varied cultural wealth, knowledge and skills that are brought by diverse students. The framework demands that lecturers develop teaching practices, multicultural content, multiple means of assessment and a philosophical view of teaching and learning that is focused and

dedicated to nurture students' academic, social, emotional, cultural, psychological, and physiological wellbeing.

6.3.2 Adapting TCD content to meet the needs of students with diverse academic backgrounds

Adaptation of curriculum content by curriculum implementers enables them to reach the capability of every student in classes comprising diverse students, for effective teaching and learning. The study findings indicated that there was a contradiction between the faculty management team (quality assurance directors, faculty deans and chairpersons) and the curriculum implementers (lecturers). The management team revealed that the curriculum content was not adapted to meet the needs of students with diverse backgrounds, but rather to ensure that the content of programmes reflected a gradual development from lower level to higher level, within the set content for the degree qualification. The management team pointed out that the implementers adapted teaching methodologies instead of content and that there were tutorial provisions in general to large classes. However, the curriculum implementers highlighted that they adjusted the programmes content to cater for the students by emphasizing specific aspects from the content and adapting skill levels, problem types and rules on how students approached the curriculum content. The lecturers concurred with the managers as they pointed out that they also adapted the delivery methodologies to meet the needs of the students. This may show that the management staff was not thoroughly monitoring the implementation of the designed programmes since the way lecturers adapted content by just selecting specific content aspects from programmes' content was not guided as it was not given in the curriculum documents. It was up to individual lecturers to decide what skills and aspects to teach and what to leave. It also emerged that there were some introductory and core courses designed for first year students to gain basic concepts within the TCD field such as acquainting them with basic methodologies and exposing them to equipment used. Although the institutions were making an effort to cater for the diverse students by having the core and introductory courses, the courses benefited the students to levels not adequate for all the programmes' courses.

The TCD managers were of the opinion that the programmes content should not be adjusted but only teaching methodologies should be adapted to meet the needs of students with diverse academic backgrounds. This is in agreement with Rosell & Ondrik (2013) who say that when lecturers make adaptations, the programme should maintain the same learning outcomes although the learning goals, expectations, presentations, materials, assistance and environment may vary.The various globalstudies by many researchers also note that lecturers' instruction and content adaptation techniques that attend to students' learning styles and needs remove barriers to learning and support students to be more successful academically (Shay, 2013; Rosell & Wickham, 2008). The researchers highlight that most global universities offer a wide range of lecturer coordinated programmes aimed at catering for students with diverse academic backgrounds. Such programmes include student pre-assessment, academic development units, foundation and extended learning programmes, targeted support programmes, peer mentoring and tutorial support, and in-service training and employment service (Mather & Muchatuta, 2011; Vickers et al., 2017). The current study findings show that only one support programme (offering tutorials) was implemented by the two universities of technology in order to cater for students with diverse academic backgrounds. However, the respondents commented that the tutorials were not very effective as they were carried out with large classes in which most students' needs were hardly met. Researchers have also suggested that assessments be administered to the students to ascertain whether the support mechanisms were successful in enabling improvement in the performance of students or not (Stephenson & Rajendram, 2017; Williams & Johnson, 2011; Mather & Muchatuta, 2011). This practice is a good as it infuses a quality assurance mechanism in programmes provision.

Besides designing coordinated support programmes, researchers also cite adapted implementation techniques designed to meet the needs of students with diverse academic backgrounds. Such techniques offered by global universities include adaptation of quantity of content and time per lesson, of difficulty, of output, and of alternate goals (Wright, 2005; Rosell & Ondrik, 2013). Adaptation of time and content per periodof instruction makes diverse students master expected content before assessment. This aspect differs from this study's content adjustment technique as some critical content areas are likely left out, affecting capabilities and competencies

of the programme graduates. Nguku (2012) posits that TCD graduates' performance is not meeting the expectations of industry.

The results from the various studies carried out in most African countries are in agreement with those of the current study as the studies point to lack of adequate subject content knowledge by the university lecturers because those with the rightful qualifications leave the countries in search of greener pastures outside Africa. The current study findings extend beyond lack of general subject content to lack of a specific component, artistic innovative design skills among the lecturers.Therefore, the adjustment of content by selecting specific content and skills could be due to lack of knowledge of some components of the TCD programmes by the lecturers, which may have a negative impact on TCD graduates as the students may end up lacking relevant knowledge and skills required in the textile and clothing industry.An analysis of TCD degree programmes offered by universities of technology in South Africa at Cape Peninsula University reveals that there is a mismatch between graduates' theoretical content and practical skills acquired by students from universities of technology and those acquired by students from academic universities (traditional Universities) (Winberg, Engel-Hills and Rip, 2013). Students from universities of technology were strong in practical skills and weak in theoretical subject content knowledge and vice versa for the students from academic universities. This may be due to the fact that lecturers are failing to adapt TCD content in a way that enables students to be exposed to a balanced practical and theoretical time sessions in order to allow students enough exposure to both practical and theoretical components of the programmes.

An analysis of the TCD courses offered by Southern Eastern African universities noted that the institutions are not providing training on the use of specific textile machines resulting in students' limited knowledge of modern equipment, tools, and modern production methods (Woyo, 2013; Nguku, 2012; Afeti 2014). This may be caused by lack of adequate subject content knowledge and skills by the curriculum implementers. This can also be attributed to lecturers' lack of adequate knowledge in current technological equipment used in the designing and processing of textile and clothing products. Mawoyo (2013) points out that after Zimbabwe attained independence in 1980, the tertiary education system focused on increasing access to education neglecting issues of quality.The same issue of quality translates to this study's results

that point to lecturer's failure to effectively adapt the TCD curriculum and implementation techniques in order to cater for students with diverse academic backgrounds in their classes. Saraceno, Alberto & HLEG (2014) point out that students' capital (various academic backgrounds) may be utilized by the universities by enabling them to resource the departments with relevant current technological equipment and manpower that may assist them to design and adapt TCD subjects' content to enhance teaching and learning of diverse students.

6.3.3 Assessment techniques used to assess students with diverse academic backgrounds

Besides adapting curriculum content to meet the needs of students with diverse academic backgrounds, mode of assessment assists lecturers to evaluate effectiveness of teaching and learning approaches, and effectiveness of methods of curriculum adaptation with regard to students with diverse academic backgrounds. The study established that most lecturers were using formative assessment, continuous assessment, and summative assessment techniques; while very few respondents said they were using summative assessment technique only to assess the students. The formative and continuous assessment techniques were used mostly because the respondents said the approaches enabled them to check on progress of learning achievement of planned work and to assess if there were some changes required in the curriculum implementation processes adopted. The two assessment techniques were mostly used because they assisted in fostering student participation, research skills and creativity, and they also enabled lecturers to ensure that all students' work was covered for by coming up with students' coursework marks. The techniques also ensured that appropriate feedback and support was provided to students after every learning stage. The study finding is in line with Tomlinson (2005) and Hall et al.'s (2003) who reveal that incorporation of pre-assessment and ongoing assessments by curriculum implementers is important as it leads to functional and successful differentiation of students by providing various implementation approaches. Although the lecturers were engaged in pre-assessment, the two assessment techniques were quite relevant for the TCD programmes as most of the program courses were design oriented and called for individual participation, research, and creativity that were tested by formative and continuous assessments. Although the

lecturers reasoned that the two assessment techniques enabled them to provide feedback to the students, some of the students complained that they were not provided with feedback and that some assessment items/ questions lacked clarity. The complaint from students reflects that some of the lecturers were not conforming to the mode of assessment techniques as the assessment techniques give room for constant feedback on students' performance. Despite the lecturers' effort in addressing the students' needs through the various assessment techniques mentioned above, some of the students complained that the assessment items provided in their final year were too many. Some of the students showed that they were not confident with their lecturers' competencies as they wanted other peoples' views in assessment of their final year's work.They indicated that they needed practicing designers from industry to assist the lecturers in assessment of their work. Having a second person's opinion in assessment of one's work caters for benefits of moderation which is relevant in marking of students' work as issues of individual judgment and favoritism are addressed through that exercise (Limbrick & Knight, 2005). The involvement of industry personnel in academic work creates a link between industry operations and academic work which is important for training graduates who meet industrial demands (Nguku, 2012; Muzenda & Duku, 2014).

A study by Mupinga et al. (2005) on examination of the purpose of technical vocational education and training in Zimbabwean high schools, found out that the Technical-Vocational Education and Training programmes that include TCD programmes lacked clarity of purpose since there were differences between the purposes of programs as viewed by curriculum implementers and those in official documents. There was a confusion as to whether the high school programme was prevocational or intensive skills training and this confusion led to variance in levels of subject content and skills delivery techniques impacting heavily on university curricula structure, implementation strategies as well as mode of assessment used. This study's findings confirm Mupinga et al.'s (2005) research findings that the assessment items presented by the lecturers were not clear. Thus, the high school teachers promoted to teach at universities carry on with their misconception of the focus of the TVE programmes, impacting on how they set assessment items for the students. It is also clear that university students have realized their lecturers' weaknesses since the current study findings point to

students' preference to be assessed by practicing industry personnel such as seasoned fashion designers and other TCD industry specialists. The other reason for the proposal could be because the lecturers were not effectively catering for students' diverse academic backgrounds in the way they assessed them.

Jumo, Chiweshe, Edziwa and Museva (2013) reveal the incompetence of industry mentors for students doing on the job training who could not effectively implement the assessment instrument provided by the universities. They were coming up with different interpretations of the assessment instruments resulting in some students benefiting while others suffered disadvantage considering their diverse academic backgrounds. The researchers advocated for regular workshops to staff develop assessors from industry as well as those within the university institutions.

Most studies carried out in African universities found that the curriculum implementers were not competent enough to come up with adequate programmes, topics and tests (Arubai and Obunadike, 2011; Afeti, 2014). Therefore, the teaching and assessment procedures were not thoroughly planned. This study's findings are in agreement with studies such as the one by Arubai and Obunadike (2011) as they reveal that the TCD curriculum implementers lacked some skills that are prerequisite to industry operations. It extends to reveal that the lecturers' lack appropriate assessment skills for practical programmes' courses as well as knowledge on the methods of catering for diverse students.

Various studies also reveal that use of a wide range of assessment methods enables the instructors to assess a range of acquired knowledge and skills by students and get more reliable and balanced results on students' performance (O'Farrell, 2015, OECD, 2008, Tremblay, Lalancette & Roseveare, 2012). Use of a wide range of assessment methods provides many chances for diverse students to review their performance and work harder to improve as feedback is provided after each assessment. Tomlinson (2005) and Hall et al. (2003) also share the same sentiments by saying that use of pre-assessment and various ongoing assessments on students provide for a variety of assessment approaches, choices and scaffolds for the varying needs, interests and abilities of diverse students. Global institutions' instructors were aware that use of various assessment methods enables them to cater for diverse students. O'Farrell (2015) emphasizes that it is critical for lectures to provide good quality, comprehensive

and timeous feedback because the feedback drives student learning, makes them realize where they have performed well, indicates areas that need improvement, builds confidence in the students and affords them time to manage and correct errors. However, the current study results reveal that some assessment items given to students were poorly constructed and were too many. It was also found that some instructors were not providing feedback and when feedback was provided, the students got it very late when they were about to write final examinations towards the end of semester. Thus, the students were not afforded enough time to correct errors made on formative and continuous assessment before summative assessment was provided. This could be one of the reasons for high failure rate of students as stated by the student focus group discussion results.

Besides the efforts being applied by the lecturers in adapting programs content to meet the needs of the diverse students, the students themselves should take responsibility for their learning by seeking independence and self-sufficiency as they strive for greater awareness of their skills, abilities and ideas (Tomlinson, 2005). The students may use continuous and formative assessment results to evaluate their capabilities and achievements for them to plan contingency measures foreffective performance improvement strategies. O'Farrell (2015) points out that if students use assessment to define and prioritize what is important to learn, and spend most of their time learning it, the lecturers have to respond accordingly. The lecturers may respond by taking cognisance of the messages portrayed by students and prioritize the most important content areas they want the students to learn from, create clear and upfront learning outcomes and assess them accordingly so that they can produce students who have acquired both deep and surface subject content and skills. To assess the level of content acquisition by students, there should be set learning outcomes assessed at various levels of study within specific fields of study such as in TCD programmes degree levels (Bachelors, Masters, Doctor of Philosophy degree and the like). The Organization of Economic Cooperation and Development (OECD) launched an Assessment of Higher Education Learning Outcomes (AHELO) feasibility study, an initiative with the objective of assessing whether it is possible to come up with international measures of learning outcomes for higher education (Tremblay, Lalancette & Roseveare, 2012). The study results reveal that the provision of TCD programmes needs to be benchmarked by setting learning competencies to be

achieved by students at each academic level across all the institutions that offer such programmes. The respondents further proposed that the learning competencies per academic level needed to be assessed on the students to ensure compliance with set levels of competencies that were suggested to be designed through associations geared towards quality education.

Learning outcomes in higher education are critical for meaningful education, and focusing on learning outcomes assessment is essential to improve teaching and learning processes in classrooms (OECD, 2008). Current global higher education trends, challenges, and paradigms have influenced the development of comparative measures of learning outcomes through measured performance and employability of graduates. Thus, AHELO aims to complement institutional based assessments by providing a direct evaluation of student learning outcomes at global level to make institutions benchmark the performance of their students against peers. This assists in designing improvement mechanisms among students (Tremblay et al., 2012). For instance, the emergence of common examinations, shared item libraries, graduate tests, and professional licensing examinations such as Graduate Medical School Admissions Test (GAMSAT, 2012),Ideal Consortium, 2012, Medical Schools Council Assessment (MSC-AA,2012) and United States Medical Licensing Examination (USMLE,2012) has in a way assisted most institutions to offer programs'content that meet the assessment requirements. It is essential that the AHELO assessment measures of learning outcomes are valid across student diversities such as the students' diverse cultures, languages, types of higher educational institutions, academic ability, preparedness and career expectations. The current study's findings do not reveal any form of universal assessments discussed above besides the institution-based assessments, although the universal assessments of outcomes would make students from different institutions compare their performances and thrive to meet the expectations. Besides, set programmes' outcome assessments would stimulate instructors to work hard for their students to meet set learning outcomes and expectations of the student performance, thereby enabling them to design effective teaching and learning strategies that would effectively cater for diverse students. Thus, it is ideal to consider benefits of international AHELO concept as they reflect the most advanced manifestation of a common examination that can be used to provide insights

into students' acquired content knowledge, capacity and ability to apply the acquired knowledge, and skills to solve real global issues within the area of study.

6.3.4 Performance of students with diverse academic backgrounds

The performance of students may be affected by various factors that include students' readiness levels, interests, and learning profiles (Felder, 2005, Thakur, 2014). It emerged from the study findings that the academic backgrounds of TCD students highly affected the performance of students. However, the general performance of the students was said to be good as some students were participating in national events, such as fashion shows while some failed and needed more time to complete the programmes, and others dropped out of the programmes.The research findings revealed that the students' performance during the first year, first semester was bad because most students needed to adjust to the university environment and at the same time adjusting to a completely new area of study, especially for those who did not have background knowledge in the study area (TCD). This finding concurs with Hausen & Mastekaasa's (2006) observation that most of the lower class (first year students) students who do not possess cultural capital generally fail to succeed in their education carriers. Thus, it emerged that some students dropped out of the programme, while others were not attending lessons and not doing assignments or working with their peers.

Apart from the failure rate, the study results highlighted that some students performed poorly due to negative attitude towards the programme although it was not clear whether the attitude issue developed after they had joined the programme or before. It may be assumed that students developed negative attitude after facing challenges of getting acquainted with programmes' demands and university environmental demands at the same time. Bourdieu's theory stresses that students who do not possess the cultural capital traits experience the educational institution as a hostile environment because they lack relevant skills, habits and styles that are rewarded at the higher educational level (Graaf et al., 2000). The findings from the study revealed that students from polytechnics and Secondary teacher training colleges performed better than students from primary teacher training colleges and those with 'A' Level qualifications. This could be attributed to the students' period of exposure to tertiary

level education, work, the field and their maturity as these were mostly practicing teachers in the field of TCD education. Mature individuals have concrete ambitions and aspirations that drive them to work harder.

The study results agree with Barrow, Reilly & Woodfield's (2009) idea that one's age is associated with better degree of performance as mature students achieve better degree outcomes. The research findings portray that the bad performance of students was attributed to inadequate time allocated for programmes' courses as students without or with little TCD backgrounds knowledge and skills needed more time to get acquainted with basic subject concepts. The study also revealed that some students were academically gifted while others were not. This study finding concurs with Sullivan's (2002) idea which contests Bourdieu's cultural capital educational benefits as he/she argues that students' success and failure in education is due to individual's intellectual gifts and lack of the gifts. Therefore, both educational background knowledge and one's intellectual quality contribute to the level of performance of students although the background knowledge may play a greater role in exposing one to basic concepts relevant for the field of study such as Textile, Clothing and Design. Creative innovative design skills are nurtured by exposure to environments that help to arouse and impart such skills to students.

The current study results which reveal that the various academic backgrounds of the TCD students have a greater effect on the performance of students is in agreement with research findings by Nyikahadzoi, Matamande, Taderera & Mandimika (2013) who found out that enrolment status that constitute students' background qualifications have a significant effect on the performance of students. They researched determinants of students' academic performance in four selected accounting courses at University of Zimbabwe. Since the qualification levels of TCD students vary, the lecturers may benefit from students with higher qualifications as they can be used to teach others during group discussions as well as in group assignments.

The current research findings that revealed that students who lack background knowledge in TCD field mostly fail and repeat courses and some drop out of the program, are also confirmed by various global researchers such as Machteld & Naomi (2016), Tremblay et al. (2012) & O'Farrell (2015). University institutions are aware that the students they enroll without relevant background knowledge in the programmes of

their choice face challenges that make them drop out of the courses. However, Thakur (2014) argues that the performance of students may not be fully attributed to background knowledge of students but is also affected by available teaching and learning materials as well as instructional approaches used by the lecturers in teaching. Students with less or no background content knowledge may also perform well through their commitment or the instructors' creativity in coming up with teaching approaches that effectively caters for their diversities.

The issue of catering for students' diversity is critical as reflected by OECD (2008) research findings that higher education currently comprise various groups of non-traditional students and that there is a shift from elite to mass education in which higher education access and participation has rapidly grown as it comprise diverse students in socio-economic status, academic ability, levels of preparedness and career expectations.The discussion that follows is centered on whether university lecturers were able to meet the demands of such diverse students and the curriculum demands or not.

6.4 University Support in catering for students with diverse academic backgrounds in the provision of TCD programmes

It is the responsibility of the university institutions to align their enrolment policies with their capacity to accommodate certain student numbers considering provision of adequate human and material resources that can adequately serve the number and nature of students admitted (ATF, ILO & UNESCO, 2012; Gamble, 2013; Fry et al., 2009; Machteld et al., 2016). The study findings reveal that the university institutions that offer TCD programmes provided resources in the form of infrastructure, equipment, materials and manpower to facilitate training of students. The lecturing staff was offered in-house staff development seminars through the Academy of Teaching and Learning although the academy was not fully utilized as observed by some of the respondents. The respondents stated that if the Academy of Teaching and Learning was fully functional, it would be providing staff development workshops on how to cater for students with diverse academic backgrounds in delivering TCD programmes. Hennessy et al.'s (2010) research findings also reflect that the ICT

policies in most of the East African countries' higher education institutions take long periods of time and very complicated processes to be implemented. This may mean that the planning process of some beneficial programmes by most institutions and the formulation of policies which appear to be easy are a challenge in their implementation. For instance, the lack of a definite policy mechanism for policy implementation and the absence of regulatory authorities such as that evidenced in the 1990 TVE policy position and the Nziramasanga Commission Report 1999 recommendations (UNESCO & ZIMDEF, 2005), deprive effective implementation of some programmes that are of high benefits to the people. The 1990 TVET envisaged that schools, VTCs and youth centers would offer PVC and NFC qualifications while Technical colleges offered NC and ND qualifications with Polytechnics providing NC, ND and HND qualificationsup to degree level in TVET. However, the youth centers and VTCs are offering NDs and even HND qualifications although they do not have the capacity to do so. They lack adequately trained lecturers, infrastructure, as well as equipment for such qualifications. Findings of this study reflect that the universities enroll students who are not fully prepared for university work as well as high school leavers and trained teachers. There are no curriculum implementation policies with regard to catering for such students with diverse academic backgrounds at university level.

Besides the issue of implementation policies, it emerged from this study that although universities were making efforts to provide resources, the available resources were not adequate for effective teaching and learning processes especially for students with diverse academic backgrounds. The respondents stated that there were no adequate classrooms, laboratories, and material resources. The manpower/ lecturing staff was not adequately trained to teach since some of them did not have pedagogic qualifications and some lacked subject content knowledge since they specialized in areas such as educational management and Food and Nutrition. Furthermore, all the lecturers did not have any training qualification focused on handling classes comprising students from diverse backgrounds. Various studies carried out with the university institutions reveal that the institutions have inadequately trained manpower to deliver textile and clothing courses, reflecting a gap in their specialization areas as well as pedagogical knowledge (Muzenda & Duku, 2014; UNICEF & UNESCO, 2005; Woyo, 2013). The current study's findings confirm these results although the current

study further points to lack of pedagogical content knowledge in catering for students from diverse backgrounds by curriculum implementers and resources to cater for TCD students who join university education with diverse academic backgrounds.

The studies carried out in the African region also confirm that the universities were not adequately supporting the teaching and learning of TCD programmes because of inadequate infrastructure, equipment, trained manpower due to brain drain and inadequate finances to maintain existing infrastructure and pay competitive salaries to lecturers (SARUA, 2009; Afeti, 2014; Nguku, 2012; Arubayi, 2013; Obunadike, 2011). Afeti (2014) recommends that the Technical and Vocational Education and Training be adequately resourced to support industrialization. He adds that the skills training must be of high quality, be competence-based, incorporate modern technological information and communication, and be adaptable to the changes in the technological work environment. The study's findings confirm that some of the computers and equipment used in TCD departments were out-dated and there were not enough LCD projectors. It also emerged that the TCD departments did not have relevant software for lecturers to teach effectively using current technologies, indicating that the institutions were not adequately supporting the provision of TCD programmes.

Various authors suggest that university institutions, through their management teams should fund and actively support the training programmes by allocating funds for specialized training to meet trends in industry, and modern technology (Andrews, 2013; Osam, 2013; Lucas, Spencer & Claxton, 2013).The authors point out that resources enable university programmes to be formalized, coherent with trends in industry, and also provide students with an up to date knowledge base and skills to increase students' innovation capacities. Additionally, provision of adequate resources enables designing and implementation of diversified curriculum implementation strategies to meet the needs of diverse students. However, the global research results emphasize that support for disadvantaged students requires prioritization of programme resources right form student enrolment process, which is not considered by the two Zimbabwean university institutions. The support highlighted includes provision of relevant staff and appropriate media that can be used to effectively test students during admission, course selection, and during orientation where at risk students and those that require academic support and development and those who require preparation for the world of work can be identified. One research project

carried out with one of the universities globally reveals that lecturers require senior management through heads of departments to legitimize their teaching practices for effective teaching and learning of diverse students (Rodriquez-Falcon, Evans, Allarm, Barrett & Forrest, 2010).

The students that need academic support are channeled to support units which are also well resourced for entry into specific programmes of choice. Moore & Shulock (2009) found out that institutions of higher learning should be assisted by policy makers on how to resource institutions in order to effectively deal with traditional and non-traditional students so that they would succeed in completing university programmes. However, the current study does not indicate any policies pertaining to addressing issues of student diversity at university level. Therefore, that gap should be filled in so that students can benefit, especially those students who enter university education with diverse academic backgrounds. This study's findings also reveal that there was no selection procedure that sought to check on student's background content knowledge to assist those in need. The global institutions care about the students they enroll. Establishing a level of content knowledge among the students may also motivate students to work harder and fill in the knowledge gaps in order to pursue their areas of choice and would also enable the lecturers to establish a starting point in terms of curriculum adaptation and lesson planning. DeGraaf et al. (2000) points that students who hold desired background qualities such as dominant linguistic styles, aesthetic preferences and styles of interaction, and habitus, are appreciated by their teachers as these facets of family life facilitate compliance with higher education TCD demands. Lecturers utilize such study traits in curriculum designing and lesson planning. However, Mac Gregor (2007) emphasizes that the institutions that succeed in changing their curriculum implementation practices begin with the practices and then modify resources such as structures and manpower, to accommodate the set practices. The institutions may begin with designing and implementing differentiated curriculum implementation strategies which would influence management to source resources for them, using formative feedback from the practices. Although the two universities were not adequately supporting the provision of TCD programmes to cater for students with diverse academic backgrounds, the study findings indicate that lecturers were using available resources, providing individual attention to students in need, conducting attachment visits, doing tutorials, working overtime to assist

students, and also stretching those limited resources to meet the needs of the diverse students. The departments had also set up production unit projects to raise funds for equipping the programmes, though the students argued that they were not benefiting from the project. The students lamented that they were not getting enough time to work in the workshop since it was occupied by production unit people throughout the day, forcing them to work during the nights. There were some elements of good practice in setting up the production unit, but the students needed to be oriented on how they benefited from it so that they could be motivated to participate in the project. Furthermore, the student workshop needed to be separated from the project so that students would have adequate time to work in the workshop, especially those who lacked some background information in the TCD area. The level of support provided for teaching and learning of students contributes to the performance of the students. Support provided for the teaching and learning of the TCD students with diverse academic backgrounds is discussed in the next sections.

6.4.1 Support for training students.

Institutions of higher learning and policy makers must develop initiatives and policies targeted at assisting students who enter university education from diverse backgrounds, especially TCD students who have various academic background qualifications (More & Shulock, 2009; Chand, 2001; Alarm, 2009). If the diverse students are not catered for, many of them do not acquire the relevant knowledge and skills specified in the curriculum (Osam, 2013; Ansu, 2008). The study found out that the support provided for TCD provision was the ordinary provisions for curriculum implementation in students' learning, and there were no provisions for catering for the diverse students who possessed various levels of academic qualifications. Therefore, the support was rated as inadequate and there was need for improvement of infrastructure, lecturer-student ratio, staff development, and provision of teaching and learning resources, with a view to assisting diverse students.

Lack of adequate support for provision of the TCD programmes at the two sampled universities was attributed to dwindling government support for higher education institutions across the country. Various studies carried out in most Zimbabwean universities reveal that the government support for universities has drastically reduced

due to economic constraints faced by the country (UNESCO & UNICEF, 2005; UNESCO & ZIMDEF, 2005; Woyo, 2013; Coltart, 2012). The studies note that the government grants that were previously provided to institutions of higher learning were of high benefit to the institutions. The institutions used the government grand fund to acquire resources for effective teaching and learning of students. The issue of inadequate resources compromising effective teaching and learning of students across the universities that offer TCD programmes has led to unsatisfactory performance by some students, student drop out and students taking longer periods to graduate as they repeated some courses. Most studies carried out in Zimbabwean universities have not focused on support provided to students with diverse academic backgrounds at university level. The study's participants pointed out that the university curriculum implementers were aware that they should be guidedby policy to abide by stipulated principles on how to handle classes that have diverse students. The TCD students with diverse academic backgrounds require different levels of support from the university management and lecturers through practices guided by policy.

Various studies carried out in many African universities reveal that enrolment increment in university institutions has outpaced the acquisition of resources relevant for effective teaching and learning of students (Ansu, 2008; Kurasha & Chabaya, 2013; Lammy, 2009; Mamo, 2015; SARUA, 2009). The enrolment rate has led to various student diversities at institutions of higher learning such as diverse academic backgrounds that exist in TCD provision. This has impacted heavily on resource provision by universities, resulting in inadequacy of instructional materials and supplies, poorly stocked libraries, and double or triple shifts in the use of facilities. This is in agreement with the current study results where respondents highlighted the need for provision of adequate resources especially I.C.T. based resources that would assist all students to access information related to their knowledge gaps and acquire knowledge and skills that match industry practices for them to succeed in their careers. Ansu (2008) states that effective vocational training of students accompanies development of a modern industrial sector. The researcher noted that the modern industrial sector can only be achieved through flexible training programmes at tertiary institutions that focus on advancing technical and engineering training through maximum student support. Nguku (2012) adds that the university should offer multi-disciplinary programmes that help students to acquire relevant knowledge and skills

that meet industry demands. In this regard, the suggested flexible training programmes are those that may result in provision of multi-disciplinary curricular and implementation approaches. Such programmes may assist institutional departments in sourcing and allocating resources relevant for each discipline and may eventually meet students' diverse needs.

The global view in terms of level of support for students with diverse academic backgrounds indicate that most institutions are concerned with supporting disadvantaged students and they identify such students right from the enrolment procedure and offer them relevantly designed support mechanisms for them to succeed in their academic careers (Lederman, 2008; Jaschik, 2008; Moore & Shulock, 2009; Anderson & Boyle, 2015; McInnis 2003; Zepke, 2007). The support programmes include remediation, tutorials by professional tutors, foundation programmes, and provision of resources that match the student numbers and technologies in industry, especially in programmes like TVE that encompass TCD provision.

Remediation has been found to be very effective in improving the skills of under prepared students as various studies have reflected that the students who successfully undergo remediation and transition into university level courses have persistence and success rates that are similar to students who begin with university level programmes' subjects (Attewell, Lavin, Domina & Levey, 2006; Kolajo, 2004; OPPACIA, 2007; Waycaster, 2001). The level of support provided to students who lack relevant knowledge and skills in a field of study make students succeed in their studies as they approach new university content and skills at the same level with others.

The study results revealed that the students were exposed to remediation through tutorials although these were not properly planned. This was because the tutorials were done by the lecturers themselves during and after lessons, with the whole class instead of dealing with those that had specific knowledge gaps. Therefore, the lecturers were over-burdened. It emerged from this study's results that it was up to the lecturers to carry out remedial lessons or not. Since there were no trained tutors for the programmes, the remediation was done through tutorials in very large groups leading to ineffectiveness of the process. Moore and Shulock (2009) & Bailey (2009) suggest that universities should incorporate more relevant support services such as provision of resources and remediation strategies that suit the academic levels of

students and that minimize the time for students to enroll into university level programmes.

6.4.2 University support for students on attachment

The study found out that the support for students on attachment was limited to attachment visits and provision of workshops for students before they went for attachment. However, the students who were attached to companies outside the country were not supported through attachment visits. Students paid lecturers' transport, food and accommodation costs during attachmentvisits which were exorbitant for students attached outside the country. Therefore, those students sacrificed to raise funds to meet the costs because they indicated that attachment done with companies outside the country was more beneficial than that which was carried out within the country as most TCD organizations were not operating on full capacity due to economic constraints. Student attachment, also referred to as experiential learning or internship, is a critical component of higher education as it places focus on students' learning which enables the students to link theory with practice (Kathuli-Ogola, VanLeeuwen, Kaboria-Muriithi & Weeks, 2015; Jumo, Chiweshe, Edziwa & Museva, 2013). The level of support for this component of student learning outside the institution is crucial because if students are not adequately supported, the intended learning objectives may not be achieved (Renganathan, Karim, & Li Su, 2012). This study reveals that the support provided was not adequate as most students indicated that they had challenges of finances for upkeep, accommodation, and paying lecturers' expenses when attached outside Zimbabwe. A study by Jumo et al. (2013) confirms that the support provided to students when they are on attachment is not adequate. The researchers pointed out that the instrument used for assessment was not well interpreted by the industry supervisors, thereby misleading the mentors on the major thrust of the attachment aspect. Therefore, the support provided by mentors was different from one industry provided as the mentors interpreted the log book (assessment instrument) differently. The studies by Jumo et al. (2013) and by Mkono (2010) suggest that institutions should hold seminars with industry mentors to highlight the support, focus and objectives for successful student mentorship. This proposal is in agreement with this study's findings which further

pointed out that it is the responsibility of the university to fund attachment visits for students within and outside the country and also provide student allowances for accommodation, transport and food costs since they pay full amounts of fees.

Most regional researchers emphasize that student attachment is a relevant component of student learning and they argue that, unless university students are provided with opportunities to test out acquired content knowledge and skills in industry settings, it is unlikely that they will be confident enough to integrate the learned components into practice after graduation (Kathuli et al., 2015; Adeogun, Oyebade & Osifila, 2009). The studies also concur that the student attachment component needed to be fully supported by the university institutions and the study by Kathuli et al. (2015) further notes that the industry supervisors should plan and allocate resources for the students they engage for attachment, so that they have the opportunity to test out the content they learned before attachment. Application of theory into practice enhances students' understanding of concepts and stimulates them to experiment new ideas and skills.

It also emerged that although the industry supervisors are essential for students' learning experience in industries, lecturers are not aware of their level of knowledge of the expectations of student attachment. Thus, it is not certain that these supervisors have the expected knowledge on how to orient students academically for the attachment process, how to prepare for students' practice, how to solve problems they face in supervising these students, as well as how to draft academic an programme that guides students attached to them (Tse, 2010; Matamande, Nyikahadzoi, & Taderera, 2013). These aspects of supervisors' traits are quite relevant as they can be used as a guide to assess the level of knowledge acquired by a student attached to a specific organization. It is ideal for university attachment bodies to ascertain the level of supervisors'knowledge of attachment requirements in order to provide enhanced support for these field supervisors.

Many global studies also emphasize that attachment of students should be well supported as the level of support affects learning progress of students (Peters, Scatter & Kelland, 2014; Knolb & Knolb, 2005). Furguson & Smith (2011) and Knolb & Knolb (2005) recommend that institutions should develop community partnership with industry student supervisors to allow sharing of ideas, which is relevant for creation of mutual relationship between industry and academic staff. Mutual relationship between

the two parties helps to expose industry mentors to academic demands in relation to the support required by students with diverse academic backgrounds. This proposal is similar to the study findings where participants suggested that the institutions should assist students to secure workplace learning places that suit students' backgrounds as well as institute support measures such as allowances for upkeep. It has also noted that industry supervisors suggested that the university institutions' attachment coordinators should communicate attachment objectives directly to the industry mentors prior to commencement of attachment so that the host organizations can plan and organize resources for effective student learning experience (Kathuli–Ogola et al., 2015). Dorasamy & Pillay (2010) and Naidoo & Devharain (2009) add that there is need for formulation and formalization of existing policies and institutional arrangements geared to facilitate meaningful community partnerships. In this regard, relevant partnerships should be geared towards the support of students' attachment component to facilitate development of holistic programmes that benefit the students as well as institutions and industries concerned.

Although the research findingsin this study reveals that the support provided to students on industrial attachment was inadequate, the students acknowledged that they got support from the lecturers in the form of attachment visits, moral support and some workshops before leaving the institutions to commence attachment. Karunaratne & Pereira's (2015) observation concurs that the students have realized some benefits in their internship programme such as provision of job experience, transport, and meal and food allowances.The nature and source of support provided to these students differ from those in the current study. The variance in support mechanisms reflect a gap in the support provided to students on attachment by the sampled universities of technology in Zimbabwe. Thus, these universities need to design adequate modes of support that would enhance diverse students' learning when attached to various industries.

In line with the requirements mentioned above, the students at the two universities of technology indicated that they needed regular attachment visits by the lecturers so that they get motivated to work. They also highlighted that they needed adequate resources for them to experiment and test the learned concepts within the industry, thereby achieving the main objectives of the student attachment component. A study by Karunaratne & Perera (2015) suggests that there should be closer dialogue

between the university institutions and the attachment host companies. The views suggest close linkages between the industries and the institutions so that the challenges met by students can be resolved, thereby creating a conducive learning attachment environment for students from diverse academic diverse backgrounds. Jones et al. (2008) and Renganathan et al. (2012) also agree that in-service training is most successful if the programme is well structured in the institutions concerned and when there is mutual understanding among the institutions, the organization hosting the students and the students concerned.

6.4.3 Support for lecturers

Administration support is an important factor in determining lecturer attitudes towards catering for students with diverse academic backgrounds. The lecturers get motivated if the university administration fosters a positive learning environment for both students and lecturers. Such support is significant for lecturers to implement appropriate practices in the teaching and learning of students with diverse academic backgrounds.

The level of lecturer support that is provided by institutions in form of human, infrastructure and material resources facilitate implementation of appropriate strategies to the teaching and learning environments (ATF, ILO & UNESCO, 2012, Coltart, 2012; Moore & Shulock, 2009). The nature and level of resources provide for a formalized, coherent, and well sustained education that fosters innovation capacities among the lecturers and enables them to meet the needs of diverse students (Lucas et al., 2013).

The study findings indicate that the TCD lecturers needed adequate resources in order to cater for the needs of students with various academic backgrounds. They indicated that they required practical skills and current knowledge in technologies such as e-learning facilities, tutors and teaching assistants, regular staff development workshops and demonstrations. It also emerged that the lecturers needed to be supported to initiate exchange programmes with other institutions that offer similar TCD programmes. Exchange programmes would enable them to find out how other institutions structure and implement their programmes to achieve quality education among diverse students. Most of the studies carried out with Zimbabwean tertiary

institutions did not address issues of catering for students with diverse academic backgrounds in curriculum implementation.

These study results are in line with most studies carriedout with Zimbabwean universities which note that the university institutions are under resourced (Garwe & Tirivanhu, 2015, Chireshe, 2011, UNESCO-UNEVOC, 2013; Masuku & Muchemwa, 2015). However, this study points to inadequate resources to implement strategies to cater for diverse students in the university TCD classes. Masuku & Muchemwa (2015) found out that most lecturers are stressed by increased workloads, the need to meet deadlines and long working hours emanating from lack of resources in the universities. The stress impact worsens for those lecturers who have high expectations as they want to achieve their goals that are compromised by shortage of resources. The lecturers' stress was further worsened by work overload emanating from highly packed timetables, large classes, tutoring, remediation, and attending to students who needed assistance, and from extended work related duties such as dealing with student disputes. The study's respondents indicated that they were overloaded as they were teaching very large classes and also performing the tutoring duty themselves because the universities were not engaging tutors. The lecturers also indicated that they stretched the available resources to meet the needs of the diverse students in their TCD classes.

The studies carried out in most regional countries reveal that the university institutions do not adequately support teaching and learning of students (Mitiku, Alemu & Mengsitu, 2014; SARUA, 2009; Arubayi & Obunadike, 2011; Kaindi, Mburugu, Nguku & Obere, 2016; Nguku, 2012, 2013; Gamble, UNESCO-UNEVOC, 2013, Henessy et al., 2010). The current study points to inadequate support to cater for diverse students during teaching and learning. This issue of inadequate lecturer support leads to job dissatisfaction by lecturers as they face lots of challenges to accomplish teaching and learning goals among students, especially those from diverse backgrounds. However, Masuku & Muchemwa (2015) argues that challenges are good as they help one to prove oneself through accomplishment of tasks. Mitiku et al. (2014) posit that the issue of creating responsive teaching and learning environments becomes cumbersome in poorly resourced environments.

The aspect of creating a responsive environment is also supported by Tomlinson's (2005) differentiated instruction theory that stipulates that implementation of curricular to diverse classes should recognize that all students have different individual needs. Thus, the teacher who is trained to facilitate teaching and learning should strive to meet the students' needs. This study views creation of responsive teaching and learning environment as the teachers' effort while institutional support is needed in provision of an environment suitable for the teacher to facilitate strategies to cater for diverse students. The physical environment relates to the layout of the classrooms, appearance of walls, furniture, and equipment arrangement which contribute to promoting active teaching methodologies. Dilnesaw (2009) and Mitiku et al. (2014) state that the physical environment in a classroom challenges active participation of students. The environment also limits the lecturers' choice of instructional approaches to use in lesson delivery.

The study finding that points to the need of updating lecturers' practical skills and knowledge in current technologies is in line with Mitiku et al. (2014) and Nguku's (2012) finding that the lecturers lagged behind in production competencies and knowledge required by industry. However, the current study extends the requirement to the aspect of relevant skills and technological knowledge for designing delivery approaches to enhance teaching and learning among students with diverse academic backgrounds. Mitiku et al. (2014) further propose that the institutions need to provide regular assessment of the strategies in use because the needs of students change regularly. The same authors and the study respondents share the same sentiments that there is need for provision of support for initiating exchange programmes with other universities that offer the same programmes. The study respondents also highlighted the relevance of collaboration with students' parents, industry, students themselves, and education authorities to help remove barriers to student learning. Collaboration with stakeholders in the field of study is important as the process opens doors for sharing ideas, cooperation and creating avenues for linkages. Establishment of linkages is important as they enable institutions to share their financial burdens with their stakeholders like the textile and clothing industry in order acquire up to date equipment and other relevant resources for effective teaching and learning of the students (Mamo, 2015; World Bank, 2010).

Contrary to the ZIMCHE programme provision guidelines used by the Zimbabwean institutions that do not specify curriculum implementation mode, the global universities are governed by a Charter for inclusive Teaching and Learning in Higher education (Rose & Ziemke 2016). The Charter facilitates and regulates modalities used by higher education institutions in accommodating diverse students to enhance effective teaching and learning. A study by Ross & Ziemke (2016) concurs with the current study's views that there is need for provision of adequate resources and enhancing of lecturers' skills and knowledge to meet the diverse needs of students.The researchers acknowledge the major shifts in higher education that open access to students from diverse backgrounds including non-traditional students. This shows that the university institutions should respond to the changes in programme provision in higher education institutions to meet the different needs of the students and to improve on curriculum implementation strategies. The researchers note that the major shifts in higher education have transformed the ways in which lecturers teach and the ways in which students learn. This means that knowledge of one teaching approach that dictates a particular set of teaching strategies is not enough for 21st century student learning. Thus, lecturers should be supported in professional development so that they broaden their pedagogical content knowledge and skills to cater for the diverse students in their classes. In addition to the aspect of being knowledgeable in a variety of teaching and learning approaches, the instructors need to be supported through staff development so that they become aware of the approaches' strengths, limitations and complementarities to enable them to use suitable synergy of approaches. Such approaches encompass linguistic, socio-cultural, critical and cognitive aspects meant to improve development of disciplinary linguistic capacities among the diverse students. Research has revealed that most global university lecturers are better supported compared to lecturers in most developing countries' universities. Universities like those in Australia, England and China are better resourced with current technological teaching and learning equipment and materials (Moore & Shulock, 2009; Bozalek et al., 2013; McInnis, 2003). The studies reveal that through the utilization of up-to-date teaching and learning materials, the lecturers are able to design various teaching approaches to match the capabilities of diverse students.

Furthermore, Olasumbo & Toyin (2009), who researched on determinants of university lecturers' job satisfaction, add that the institution's environment, its culture and

payment of staff salaries also influence lecturers' job satisfaction although different individuals have varying factors that influence their job satisfaction. Job satisfaction is highly linked to one's commitment, turnover, job performance, productivity and job turnout; which are the most desired lecturer qualities which influence lecturers' ability to implement relevant curriculum approaches to diverse students. Lack of job satisfaction has contributed to brain drain which is a major challenge faced by most African tertiary institutions. The low level of support for lecturers is a worrisome issue as it determines how the lecturers perform their core duties within the institutions. Even the student teacher mentors at the universities and colleges also need support in the form of supervisory knowledge and skills that promote reflection in the student teachers, as they should lead by example. A study by Maphosa & Ndamba (2012), on supervision and assessment of student teachers, recommends that the mentors be supported through provision of workshops so that they can effectively assist student teachers through their professional development. In this study, the TCD lecturers needed to be exposed to professional development workshops to upgrade their knowledge and skills in order to match developments in industry and be able to handle the classes with diverse classes.

Most international studies on the issues related to lecturer support provisions reveal that most global universities face brain drain as the lecturers leave for greener pastures elsewhere (Wahab, 2014; World Bank, 2011) and most lecturers migrate from developing countries to developed countries in Europe (Baruch et al., 2007). A study by Wahab (2014) that analyzed the brain drain in Malaysia, points out that most overseas countries make efforts to fight brain drain, and have been successful, by improving their countries' economic position through improved standards of living, offering economic opportunities and pull factors like reducing strictness in granting visas and work permits to students. This shows that even the university institutions in developing countries can work towards reversing lecturer migration to other countries by effectively supporting them, especially by offering support that is geared to improving their standards of living. This idea of offering economic opportunities may work well in supporting the lecturers.The university management involved in the study (the faculty deans and quality assurance directors) commented that the financial challenges being faced by most university institutions in Zimbabwe had hindered most

of the support programmes for lecturers such as staff development and supply of technological equipment to match industry practices.

Furthermore, the study findings portrayed that the universities supported the provision of TCD programmes through monitoring structures that comprised the quality assurance directorate, the faculty dean of studies and the chairpersons for each department. The monitoring process is discussed in the next section.

6.5 University monitoring process

The study found out that the two universities employed the ordinary monitoring mechanisms to monitor provision of TCD programmes to students with diverse academic backgrounds. The ordinary monitoring procedures comprise the dean of studies', department chairperson's, lecturers' and students' evaluations. The quality assurance directorate department checks the overall curriculum implementation and assessment throughout the university. The universities also send examination items to external assessors who verify issues of validity and reliability of the items. The external assessors are also invited after marking end of semester examinations to moderate the whole assessment exercise carried out in the departments. That includes marking of examination scripts and compilation of marks. However, the study results reveal that there were no monitoring procedures aimed at checking programs' assessment procedures with regard to catering for students with diverse academic backgrounds. The study results confirm Gamble's (2013) recommendation that institutions workers' unions and industry should work more closely to monitor the conduct of industrial attachment by defining the lecturers' roles and the industry supervisors' roles. This aspect focuses on industrial attachment while the monitoring gap mentioned above focuses on monitoring strategies used for students with diverse academic backgrounds. Information and Communication Technology (ICT) policy (2014) for Zimbabwe states that institutions must integrate ICT in programmes provision to effectively prepare graduates for industry operations and to cater for student diversity. The aspect of catering for students with diverse academic backgrounds needs to be addressed even during attachment period. Gamble (2013)

and the Zimbabwe National ICT policy document for 2014 advocate utilization of cutting edge technology both in industry and in universities.

Contrary to the current study findings that the monitoring procedure used by the TCD universities did not cater for student diversities, the universities in developed countries have laid down follow-up procedures used by the TCD universities to cater for student diversities.The universities in developed countries have clear laid down follow-up procedures that assess attainment of content knowledge by students after completing the foundation programmes up to the point of graduation (Moore & Shullock, 2009; McInnis, 2003). Farrel (2005) and Akamobi (2005) argue that although there are various ways of coming up with meaningful assessment techniques, many higher education institutions select assessment methods from a fairly narrow range. This therefore, leads to limitations in catering for students' diversities. Brown (2001) asserts that most instructors base their assessment procedures on the nature of the programme offered neglecting other aspects such as diverse backgrounds of students. This shows that there is need for monitoring, guiding and support structures that focus on catering for student diversities by educational institutions. The current monitoring structures, as revealed by study findings, emphasize lecturer attendance to lessons, adhering to deadlines in handling examinations, marks, course outlines, and marking of attendance registers for students, which is limited to general programmes provisions with little focus on quality of teaching and learning. Peer and student lesson evaluations are not done often and when they are implemented, management tends to be fault finding instead of encouraging constructive peer and student evaluations.

Ireland University has a Recognition of Prior Learning Policy (RPL) that regulates the teaching and learning experiences of students with diverse academic backgrounds (Scattergood, 2011). The author argues that recognition of prior learning may be a disadvantage to traditional students combined with more mature students whereby the non-traditional students tend to dominate the instructional process overriding the traditional students. In most South African universities, the enrolment of students is governed by policies that require institutions to test the student's level of content knowledge in the chosen area (Jones et al., 2008). Testing level of subject content knowledge among students is ideal for considering content gaps among students so that appropriate support can be rendered to the concerned students. Mather &

Muchatuta (2011) consider monitoring procedures geared towards identification of student diversity as a resource that enriches universities core activities in teaching and learning, research, leadership and administration, and community engagement. This shows that monitoring of curriculum implementation is relevant for provision of high quality education across universities.

6.6 Challenges encountered in catering for students with diverse academic backgrounds

Universities that offer TCD programmes should provide Textile, Clothing and Design programmes that enhance exploration, articulation and mobility of students and lecturers from one institution to the other (ATF, ILO & UNESCO, 2012; Manitoba Education, 2013). The provision of a flexible TCD curriculum implementation model enhances the opportunities for more students to broaden their knowledge and skills and to explore and access more diverse career opportunities.

Study findings on challenges faced in implementing strategies to cater for students with diverse academic backgrounds indicate that lecturers lacked adequate resources. Inadequate resources made lesson preparation and delivery very difficult for lecturers because one had to split oneself and the available resources into a diverse range of skills to meet the needs of each student in the classes that comprised students with diverse backgrounds. The study finding is in line with Musuku & Muchemwa's (2015) observation that universities in Zimbabwe were poorly resourced in teaching and learning resources such as infrastructure, materials and human resources. The findings of the studies in other African countries also point to the same issue of inadequacy of resources across most university institutions (Nguku, 2012, 2013; Olasumbo & Toyin, 2009). Fry et al. (2009) argue that the student increase in numbers, internationalization of tertiary education and a wide increase in students' backgrounds and educational experiences have placed pressure on institutional resources. Some global institutions also experience inadequate resources to cater for student diversity. This study suggests that the higher education institutions should design income generation projects, offer improved flexible modes of programmes' study, offer e-learning platforms, and continuous evaluation of practices to guarantee and maintain

high quality standards in the teaching and learning of students. This means that responsive institutional support is critical for effective programmes provision.

The study respondents also revealed that they were facing challenges of meeting due dates for submission of marks and completing course outlines. It emerged that the lecturers had problems of lesson pacing as they tried to cover basic concepts in the area to cater for students without the background knowledge and skills in the TCD field. It was very difficult for the lecturers to plan lesson activities that would accommodate various levels of students' academic backgrounds, as some students' backgrounds lacked basic concepts and skills in the subject area which Bourdieur (2003) refers to as lack of cultural capital. The cultural capital theory stipulates that teachers appreciate students' cultural capital by designing instructional approaches that are derived from the level of subject content knowledge and skills possessed by the students. Hattie (2009) and Schrader & Helmke (2015) emphasize that teaching begins from the known to the unknown and teachers should base their teaching and learning approaches on the background knowledge possessed by the students. It was a challenge for TCD lecturers to design teaching and learning approaches that would suit the background knowledge and skills of many students who had various levels of TCD background knowledge and skills. Ross & Ziemke (2016) assert that educators need to be highly knowledgeable of various teaching approaches, their strengths and weaknesses as well as their complementarities in order to make right choices of relevant approaches appropriate for students from diverse backgrounds. Ehren, Lenz & Deshler (2014) in Ross & Ziemke (2016) notes that lecturers should value the importance of clearing the technical terms barrier that exists among students who lack background content knowledge and skills in the area and focus on closing that gap by focusing on language embedded in the discipline. Tomlinson's differentiated instruction model urge teachers to design combinations of instructional methodologies that promote learning among all students in classes that comprise students from diverse backgrounds.

Smith-Jackson, Johnson, McLaughlin & Rovira (2016) say lecturers should be exposed to professional development programmes in order to be able to design teaching and learning strategies that enhance achievement of programmes' learning outcomes. The same authors further state that professional development does not end

at one stage but is an ongoing learning curve. Besides that, UNESCO-UNEVOC (2013), Masuku & Muchemwa (2015) and Olasumbo & Toyin (2009) observe that the lecturers level of commitment to the teaching profession contribute more in achieving total teaching and learning among students from diverse backgrounds as well as in achieving total job satisfaction. The current study results also confirm the requirement of high commitment among lecturers as they were working extra time to assist students and complete course outlines. However, the current study's respondents indicated that they were overwhelmed since the support provided did not take cognisance of the extra work in catering for the diverse students' needs. Lecturers who were not committed to assist students during their extra time or those who had other things to attend to were unable to assist the students who had problems in tackling their work. Such students were disadvantaged since the study findings revealed that there were no tutors and that the available teaching assistants and technicians were not enough to meet the needs of the diverse students in the TCD classes.

The study findings also revealed the challenge of failure to address in depth subjects' content by the lecturers as most of the time allowed for lessons was spent in addressing students' content and skills gaps that were supposed to be covered before students joined university education. Besides, some lecturers lacked in-depth subject content knowledge and artistic design knowledge which deprived students from accessing in-depth subject content knowledge. Although most of the respondents attributed their failure to teach in-depth subject content to inadequate time to attend to the diverse students, some of the respondents comprising deans of studies and student focus groups, indicated that some lecturers were not adequately addressing set curricular content due to lack of subject content knowledge and skills. As was indicated earlier on, some lecturers who were teaching the TCD programmes did not specialize in the teaching of the programmes which implies that they lacked TCD subject content knowledge and could be the ones who were addressing general surface content, when teaching students, instead of teaching in-depth subject content knowledge and skills. Various researchers acknowledge that the level of lecturers' subject content knowledge and skills and pedagogical content knowledge affects the way they delivered in the classroom. In this context, the lecturers needed to be acquainted with knowledge and skills on curriculum implementation approaches to

address the various needs of TCD students who entered university education with diverse academic backgrounds.

The study findings also revealed that the lecturers had challenges of determining adequate time for completion of assignments and projects as the students' progress in executing various tasks because of their different academic backgrounds. Management of class activities in order for students to complete learning activities to fulfill learning outcomes was a problem with the lecturers as time allocated for lessons especially, for practicals was inadequate. The students were also affected by the issue of inadequate time allocated for the lessons especially practicals as most of them failed to get optimum achievement of their aspirations especially in design oriented subjects/courses. This was so because those who lacked basic knowledge and skills in the area needed to clear up gaps before attending to the demands of the university level content. The issue of inadequate time for completing tasks and lecturers' failure to address in-depth curricular content was reported as highly challenging the TCD curriculum implementers and the students. Semesterization system adopted by the university, where one subject is done once in one semester for the whole programme, was also said to be another cause for limited time to address in-depth subject content knowledge by the lecturers. This means that the students have only one chance to learn one course's content and skills leading to very limited time for them to master subject' content and skills.

From the above challenge of inadequate time to address in-depth subject content in subject areas, the respondents showed that they were concerned about student's achievement of set learning outcomes by introducing follow-up courses that required application and extension of learned concepts in other courses so that students would develop in-depth content in the TCD subject areas. The respondents also addressed the issue of limited time for covering in-depth content by giving students tasks such as project assignments that called for in-depth responses and critical thinking. Tomlinson's differentiated instructional approach calls for the teachers' creativity and innovativeness in designing teaching and learning approaches that cater for all the students in the class and address planned learning outcomes (Tomlinson, 2005). Sacco (2011) also views the individuals' culture and cultural capital as societal asserts that contribute to economic development, in which the cultural capital refers to the

institution's resources such as library, e-learning resources and laboratories where students can work individually to cover up for content gaps. Such resources are university property (societal property) viewed as part of its wealth and a resource for the development of individual cultural capital (Bygren et al., 2009; Van de Werf host, 2010).

The study respondents acknowledged the presence of such university resources that can be effectively used by the students and proposed that the lecturers use technological teaching and learning packages to cater for varying students' capabilities. The respondents highlighted that self-assessment items can be posted to students and some processes can be virtualized so that individual students can visit the laboratories during their study times to access the information. Hennesy et al. (2010) assert that if ICT is carefully integrated in education, it has the potential to facilitate acquisition of knowledge and skills and has the capacity to solve educational challenges through enhancement of life skills like research concepts. The respondents stated that universities had inadequate resources like laboratories where students would experiment, practice, and test out the learned concepts.

The other challenge faced in implementing strategies for catering for students' diversities was lack of enough manpower to handle the programme courses and to assist students. The study respondents highlighted that they hired part-time lecturers who could not afford enough time with the students as they were working somewhere. Wambui, Ngari & Waititu (2016) study findings reveal that part-time lecturers have less teaching time and experience as they have less teaching hours per week, have less interaction time with students, and have less time to prepare for lessons as they work somewhere. It also emerged that the TCD departments did not have tutors at all for assisting students to close their knowledge and skills gaps.

The lecturers also highlighted that they had challenges adapting the curriculum content to suit the academic backgrounds of students. This indicated a professional development gap among lecturers and they revealed that they needed professional development for dealing with students' diversity so that they could confidently assist students to achieve learning outcomes. Hence Coe, Aloisi, Higgins & Major's (2014) study findings on what is great teaching, emphasize that effective teaching is that which leads to improved achievement among students. Smith-Jackson et al. (2016)

also reiterate that professional development is an ongoing learning process which does not end at one stage. This shows that the curriculum implementers needed continuous staff development in the form of workshops, seminars, demonstrations, and attachments to industries in order for the instructors to update their knowledge and skills in their fields of specialization. Such staff development exposure would also assist in equipping the instructors with knowledge and skills to effectively implement appropriate teaching strategies to the TCD classes comprised of diverse students.

The students revealed that they were not getting up to date knowledge and skills in some programme course as the lecturers were not effectively catering for their academic backgrounds. The students highlighted that the lecturers assumed that all the students knew basic concepts in the area yet not all of them were knowledgeable. The students also stated that some of the lecturers lacked up-to-date knowledge and skills in the courses they taught. This shows a content knowledge gap among the lecturers in terms of curriculum requirements and in addressing the needs of diverse students in the TCD classes. This challenge can only be solved through regular staff development and provision of relevant support services by the institutions. This can be in form of availing technicians, tutors, and teaching assistants as has been suggested by most of the study respondents.

 The study found out that there were various challenges in implementing teaching and learning approaches to cater for diverse students in the Textile, Clothing and Design programmes. Some of the challenges include lack of adequate professional development of lecturers, inadequate university support, high lecturer-student ratio, inadequate teaching and learning materials, shortage of manpower, and inadequate time to attend to students' diversities in order to achieve programmes' learning outcomes. However, it emerged that there were pockets of good practice as some lecturers were committed to working overtime and applied various teaching and learning methodologies and instructional approaches to cater for the students who enter university education in TCD field with diverse academic backgrounds.

6.7 Summary

The major findings of this chapter reflected that the two universities of technology that offered TCD programmes lacked the capacity to support effective teaching and learning of the students who enrolled into universities with diverse academic backgrounds. The implementation of strategies to cater for TCD students with diverse academic backgrounds at the sampled universities of technology in Zimbabwe is burdened with a variety of challenges that include inadequate resources in the form of human, material, and infrastructure resources, high student-lecturer ratio, and lack of knowledge among lecturers and industry mentors on how to deal with student diversities as there is no policy with regard to catering for students with diverse academic backgrounds at university level. However, the TCD curriculum implementers are using their teaching experience in adapting programmes content, improvising resources, using teaching and learning approaches that enhanced active student participation and applying continuous and formative assessment to cater for students with diverse academic backgrounds in their TCD classes. Such initiatives by the lecturers have been realized as pockets of good practice for achievement of programmes learning outcomes.

The study findings revealed that there is a national university board (ZIMCHE), institutional quality assurance department, faculty manager, and department chairperson support structures that guide and control the provision of programmes across and within the universities. However, it has been pointed out that such support structures focus on general programme provisions without considering the aspect of catering for students' diverse academic backgrounds although the universities' administrators were aware that their enrolment procedures accommodated students with diverse academic backgrounds. Monitoring and quality assurance strategies in place were there to encourage lectures to work harder to meet scheduled due dates, in submission of course outlines, coursework marks, end of semester examinations, and marks. Such schedules pushed the lectures to work overtime to complete course content before end of semester examinations as a measure of achieving learning outcomes among the students. Such study findings reflect valuable practices among the TCD curriculum implementers in a bid to cater for all the diverse students in their teaching.

The chapter that follows provides a summary of the study, conclusions drawn from the study, and recommendations. The chapter also suggests some curriculum implementation models that focus on catering for students with diverse academic backgrounds in the Textile, Clothing and Design programmes at the two Universities of Technology in Zimbabwe.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The chapter summarizes the study and provides a conclusion based on study findings. It presents some recommendations, and a proposed framework for a model of curriculum implementation is considered to maximize the teaching and learning of TCD students with diverse academic backgrounds.

7.2 Summary of key ideas

Globally, universities admit students from diverse backgrounds that include different financial backgrounds, traditional settings, various disabilities, private and public schools and those with different academic backgrounds (UNESCO-UNEVOC, 2013). The universities have an obligation to accommodate all the students in various educational programmes and ensure that they acquire relevant skills and knowledge (ATF, ILO & UNESCO, 2012).

The realization of the diversity characterizing university students prompted the researcher to conduct this study, whose purpose was to examine the strategies used to cater for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at the universities of technology in Zimbabwe. The study sought to examine the capacity of university lecturers to deliver TCD programmes at university level, how lecturers adapted the TCD curriculum content, including assessment, to ensure that students with diverse academic backgrounds are catered for, how universities supported the provision of TCD programmes to ensure that all students are catered for and to come up with a curriculum implementation

framework that can be put in place to cater for students with diverse academic backgrounds.

The study was guided by two theoretical models; differentiated instruction model by Tomlinson (2005) and cultural capital theory by Bourdieu (1986). Tomlinson (2005) posits that students learn best when their teachers accommodate the differences in their readiness levels, interests, and academic profiles in curriculum implementation, with the main objective of taking full advantage of every student's ability to learn. Bourdieu's theory of cultural capital bases educational attainment on class inequalities and class reproduction in advanced capitalist societies. Class inequalities relate to the various levels of academic profiles possessed by the TCD students entering university education and cultural reproduction relates to the link between original class membership (students' background knowledge) and the ultimate class membership (TCD university content), and how the link is mediated by the education system (Sullivan, 2002).

The research paradigm adopted for this study was post-positivism, as it sought to examine factors that influenced study outcomes (Mackenzie & Knipe, 2006). The paradigm was relevant for the study as the study sought to examine strategies used to cater for students with diverse academic backgrounds in TCD provision at universities of technology in Zimbabwe. Factors that influenced adoption of implementation strategies were analyzed. The data that developed through this paradigm was based on careful observation and measurement of the objective reality that exists in various individual group settings (O'Leary, 2004). It enabled the researcher to come up with numeric measures of observations and study the behavior of individuals in order to predict and control forces that surround people. Post positivists believe that the truth for one person or cultural group may not be the truth for another (Onwuegbuzie & Combs, 2011). Therefore, the researcher gathered and analyzed data from different groups of universities personnel involved in TCD curriculum implementation comprising quality assurance directors, TCD faculty deans of studies, department chairpersons and lecturers for triangulation purposes and to get a deeper understanding of the strategies used to cater for students from diverse backgrounds. Document analysis was done on programme documents that included programme regulations and course outlines.

7.3 Summary of research findings

The concept of curriculum implementation differentiation recognizes that students have individual needs and that teachers who are trained to teach must respond to the diverse needs of the students by providing support services that help to ensure quality education for all through appropriate curricular adaptations, organizational arrangements, and teaching strategies (Tomlinson, 1996; Mitiku et al., 2014).

The summary of the study findings is organized under the research themes derived from the research questions as that reflects a connectedness of insights and inferences made throughout the research process. A summary of the study's contributions that adds to new knowledge is also presented.The main findings of the study are summarized under capacity of lecturers to deliver the TCD programmes, curriculum content adaptation including assessment to cater for students with diverse academic backgrounds, and university support for the provision of the programmes to cater for students with diverse academic backgrounds

7.3.1 Lecturer capacity (professional qualifications)

Lecturer expertise is a critical factor in the development of education and in catering for diverse students in educational institutions. Lecturers are the determinants of quality education. Quality education is crucial for the economic empowerment of a nation. An educated community contributes more to the development of the economy of a country. Therefore, it was important for the study to consider lecturers' professional training, level of knowledge in the subject area, and teaching experience as these are pre-requisite to curriculum implementation and the success of the teaching and learning process.

The findings of this study indicated that most of the TCD lecturers at the two universities of technology did not have educational (pedagogic) qualifications which are critical in the teaching profession. The pedagogical qualifications are teacher preparation programmes that contribute to the ability of a teacher to plan, deliver and evaluate the teaching and learning process. The ability of the teacher to implement a

range of teaching methodologies enhances the teaching and learning process, and creates a learning environment that suits students with diverse backgrounds.

Besides lack of pedagogical qualifications, the study revealed that the lecturers also lacked adequate training in designing and implementing curriculum implementation strategies to enhance teaching and learning of TCD students with diverse academic backgrounds. From the information gathered, the workshops that were provided to the lecturers were not focusing on differentiated curriculum implementation practices. Although the institutions had introduced a Post Graduate Diploma in Education programme for equipping the lecturers with educational knowledge and skills, the programme did not address any aspects with regard to dealing with student diversity at university level. The lecturers lacked pedagogical content knowledge and competencies for dealing with students from diverse backgrounds which in turn affected the implementation of TCD programmes to students with different academic backgrounds. The lecturers required training in the education field and continuous professional development in order to meet the dynamic needs of students that enter higher education institutions from diverse backgrounds.

Although most of the lecturers in the TCD field did not have educational qualifications, it was clear that they were committed to cater for students with diverse academic backgrounds, as the curriculum documents reflected various teaching methodologies used in the teaching and learning processes. That most faculty managers, except one, possessed educational qualifications provided some indication that the lecturers' commitment was backed up by professional leaders.

7.3.2 Lecturer professional skills

Positive student outcomes are highly linked to effective classroom practice that is initiated by the lecturer. The lecturers' creativity and classroom management skills inspire high learning gains among the students. Curriculum instructors must provide students with different backgrounds, the best possible opportunities to fully access education that suits their abilities and needs. The study findings revealed that most of the lecturers had specialized in the textile, clothing and design related areas of study although their training lacked in-depth subject content knowledge and artistic design

content component. The artistic design component is critical in the TCD field because it addresses issues of creativity and innovativeness, which are the core components of the study area.

The components equip the students with relevant skills that lead to solving of industrial production problems faced by the textile and clothing industry. It also emerged from the study findings that all the lecturers did not have any form of qualification or workexperience with regards to catering for students with diverse backgrounds in curriculum implementation. These findings showed a skills training gap among the lecturers that can be addressed by regular staff development through refresher courses, seminars, workshops, industrial attachment of lecturers and staff exchange programmes.

Although most of the lecturers lacked in-depth subject content knowledge and artistic design knowledge and skills due to their training deficiencies, they showed that they were working very hard and had commitment to attaining high levels of teaching and learning by adapting curriculum content, progressing from simple to complex, and by using instructional methodologies that inspired students to be creative in solving product design issues.

7.3.3 Lecturers working experience

Lecturers' years of experience in the lecturing job affects how they present a learning programme. Lecturing experience creates confidence in solving issues related to teaching and learning at university level. The university lecturers require lecturing experience because the job demands knowledge and skills of a variety of instructional approaches for diverse students.The lecturers also require knowledge and skills on how to assess students' knowledge and to integrate multiple techniques of lesson planning, teaching methodologies, and classroom management. The findings of the study showed that most of the TCD lecturers had lecturing experience of up to five years reflecting minimal levels of university job experience. However, the TCD management posts were held by well experienced individuals who had lecturing experience of more than six years which indicated that they were capable of guiding the curriculum implementers (lecturers). Although the TCD managers were quite

experienced, they could not effectively instill differentiated teaching skills among the lecturers as the curriculum recipients were complaining that the lecturers were not taking cognizance of the existence of students with diverse academic backgrounds in their classes. Their teaching and learning approaches were not effectively taking care of the various background qualification levels of the students which limited students' learning. The study results show that most of the lecturers teaching the TCD programmes' subjects were less experienced in university lecturing and needed thorough institutional support to achieve high levels of curriculum implementation approaches to cater for the students with diverse academic backgrounds.

7.3.4 Academic backgrounds of students

The study findings confirmed that the two universities of technology enrolled students with diverse academic backgrounds ranging from at least two years textile and clothing industry working experience and Ordinary level, Advanced level, National Certificate, Diploma in Clothing (HEXCO), Diploma in Education, Higher National Diploma, to City and Guilds Diploma and Certificate qualifications. The students were enrolled under normal entry, mature entry, and special entry provisions as indicated in the enrolment policy that guides universities on how to cater for such a wide range of diverse students. Most students ended up being disadvantaged as the support for the students was up to the individual lecturers. The study results showed that there is need for some kind of coordination in enrolment procedures and in curriculum provision to the students with diverse academic backgrounds so that they get the necessary support to suit their background qualifications.

7.3.5 Teaching strategies used by lecturers

The study findings revealed that the lecturers were using a wide range of teaching methods that included lecture, group discussion, problem solving, demonstrations, presentations, field trips and research projects that matched different TCD programs' courses. The programmes comprised theory, practical and design oriented courses. The teaching methodologies used were selected according to the requirements of the courses and to cater for students' abilities. For example, Design courses were taught through problem solving and research project methods. The study results reflect

pockets of good practice employed by the TCD lecturers that included use of some student centered teaching approaches that catered for students with different abilities, despite the lecturers complaining about lack of resources and relevant expertise in teaching students from diverse backgrounds. Lack of resources prevented the lecturers from entirely utilizing various teaching strategies and assisting individual students during lessons. The lecturers experienced shortage of equipment, time, materials and lack of training in design artistic subjects' component. The study findings also indicated that the lecturers mostly used the lecture method, explicit instruction, and providing feedback to the students, teaching strategies to implement the TCD curriculum in classes that comprised students from diverse academic backgrounds. The reason for use of the lecture methodology, explicit instruction, and providing feedback was that the teaching strategies required less time to complete planned work for lessons.

7.4 Content adaptation methods used

Curriculum content adaptation is important in planning curriculum content and instruction because it enables the lecturers to cater for the diverse needs of students in classes comprising students with diverse academic backgrounds.

7.4.1 Factors considered when designing TCD content at university level

The study findings pointed out that the university lecturers considered the needs of the textile and clothing industry mostly when designing curriculum content for the TCD programmes since the industry gets its workers from the tertiary institutions. The respondents also added that they considered prior learning experiences of students, contemporary trends in TCD provision, and available resources in the institution. The factors considered were critical for programmes' components as the graduates should acquire relevant subject content knowledge and skills that are required by the industry and that reflect progression of content from students' background qualifications, and linked to trends in TCD provision globally. The approval of the designed programmes was quality checked by a rigid university approval structure from department level to

ZIMCHE, a National University body that approves all programmes provided by all universities in Zimbabwe.

7.4.2 Adapting content to meet the needs of students with diverse academic backgrounds

The study findings reflect that there was a contradiction between the views of the faculty management team and those of the lecturers as the faculty managers said content was not adapted while lecturers said they adapted the content to meet the needs of the students. The faculty managers indicated that the curriculum content should not be adapted to meet the needs of the diverse students but to ensure that programmes content reflected gradual development from lower level (simple) to higher level (complex) within the designed content for degree qualification. The managers indicated that the lecturers were required to adapt their teaching methodologies instead of the content. Despite adapting the teaching methodologies to cater for student diversity, the lecturers indicated that they further adjusted the programmes content aspects into simpler terms and by emphasizing specific content aspects from the content. This shows that it was up to individual lecturers to select specific components which meant that some content aspects were prone to be omitted though they would be relevant for set programmes competencies. The contradiction in adaptation methods used by curriculum implementers and those indicated by the faculty managers shows that the managers were not effectively monitoring the implementation of the TCD programmes with regard to student diversity.

The mixed views on the study findings pertaining to content adaptation methods among the respondents call for coordination and monitoring of the process in order to align the different views between the lecturers and the faculty management personnel. Coordination and thorough monitoring of the process may enable origination of universal content adaptation techniques that may benefit students with diverse academic backgrounds and enhance the quality of TCD programmes provision.

7.4.3 Assessment techniques used to assess students with diverse academic backgrounds

The study findings reveal that the assessment techniques used to assess students were mostly continuous assessment and formative assessment. Use of continuous and formative assessment techniques enabled the lecturers to check on the students' progress in order to achieve set objectives and to assess if there were some changes required to curriculum implementation methods in use. The lecturers also indicated that they used those assessment techniques because they assisted them in fostering student participation, research skills, creativity, and also ensured that all students' work was catered for when compiling coursework marks. The assessment techniques adopted were quite relevant for assessing students with diverse academic backgrounds because they ensured that appropriate feedback and support was provided to students after each teaching and learning stage. The assessment processes were quite relevant for the students although the students complained that some of the assessment items lacked clarity, which called for lecturers' efficiency in designing the assessment items to accommodate all the different backgrounds of the students.

7.4.4 Performance of students with diverse academic backgrounds

It emerged from the study findings that the academic backgrounds of TCD students highly affected the performance of the students. The research findings revealed that the students' performance during the first year, first semester was bad because most students needed to adjust to the university environment and at the same time adjust to a completely new area of study, especially for those who did not have background knowledge in the study area (TCD). Students with minimal basic content and skills in the area also needed to cover up the content gaps to reach the required level for university education.

However, the general performance of the students was said to be good as some students were participating in national events, such as fashion shows while some failed and needed more time to complete the programmes, and others dropped out of the programs after realizing that they could not cope up with the programmes' demands.The study findings show that there is need for curriculum adaptation

measures to control the failure rate of students, minimize student drop outs and enable students to complete the programmes on time.

7.5 University support in catering for students with diverse academic backgrounds in the provision of TCD programmes

The study findings revealed that the university institutions that offer TCD programmes provided resources in the form of infrastructure, equipment, materials and manpower to facilitate training of students. The lecturing staff was offered in-house staff development training through the Academy of Teaching and Learning although it was not fully utilized as commented by the respondents. The level of support mechanisms was said to be inadequate and the respondents pointed out that the universities were not providing any form of support geared towards catering for student diversities although management was quite aware that their enrolment criteria accommodated a wide range of student background qualifications. The respondents stated that if the Academy of Teaching and Learning was fully utilized, it would offer staff development refresher courses to address students' diversity at university level to improve effectiveness of teaching and learning of the students.

7.5.1 Support for training students with diverse academic backgrounds

The study found out that the support provided for TCD provision was the ordinary provision for curriculum implementation and there was no provision for catering for the diverse students who possessed various levels of academic qualifications. Therefore, the support was rated inadequate and there was need for improvement of infrastructure, lowering lecturer-student ratio, enhancing staff development criteria and providing teaching and learning resources with the focus on assisting diverse students.

7.5.2 University support for students on attachment

The study found that the support for students on attachment was limited to attachment visits and provision of workshops to students before they went for attachment. Students who were attached to companies outside the country were not fully

supported because the students were paying lecturers' transport, food and accommodation costs. The students sacrificed to raise funds to meet the costs because they indicated that attachment done with companies outside the country was more beneficial than that carried out within the country, as most TCD organizations were not operating on full capacity due to economic constraints.

7.5.3 Support for lecturers to cater for students with diverse academic backgrounds

The study findings indicated that the TCD lecturers needed adequate resources in order to cater for the needs of students with various academic backgrounds. They indicated that they required practical skills and current knowledge in technologies such as e-learning facilities, tutors and teaching assistants, and regular staff development focused on dealing with student diversities in curriculum implementation in higher education. It also emerged that the lecturers needed to be supported to initiate exchange programmes with other institutions that offered similar TCD programmes to find out how other institutions structured and implemented their programmes to achieve effective teaching and learning among the students from diverse backgrounds.

7.6 University monitoring process

The study found out that the two universities employed the ordinary monitoring mechanisms to monitor the provision of TCD programmes to students with diverse academic backgrounds. The ordinary monitoring procedure comprised, the faculty dean of studies', department chairpersons', and lecturers' and students' evaluations. The quality assurance directorate checks the overall curriculum implementation and assessment throughout the university. The universities also send examination items to external assessors who check the validity and reliability of the items. The study results revealed that there were no monitoring procedures aimed at checking programmes provision with regard to catering for students with diverse academic backgrounds, although the moderation exercise tended to check on fairness of assessment procedures exercised within the departments.

7.7 Challenges encountered in catering for students with diverse academic backgrounds.

The study found out that there were various challenges experienced in catering for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes. Some of the challenges included lack of knowledge to cater for student diversities and little subject content knowledge among lecturers, inadequate university support, high lecturer-student ratio, inadequate teaching and learning materials, shortage of manpower, and inadequate time to attend to student diversities in order to achieve learning outcomes. However, the study results revealed that there were some pockets of good practice as some lecturers were committing themselves to working overtime and also applied various teaching and learning methodologies and instructional approaches to cater for the students who entered university education in TCD field with diverse academic backgrounds.

The study results also revealed that the students were not getting up to date knowledge and skills in some programmes' courses as the lecturers were not effectively catering for their diverse academic backgrounds. The students highlighted that the lecturers assumed that all the students knew basic concepts in the area yet not all of them were knowledgeable. The students also stated that some of the lecturers lacked up-to-date knowledge and skills in the courses they taught. This showed a content knowledge gap among the lecturers in terms of curriculum and pedagogic requirements and inadequate resources to address the needs of students with diverse academic backgrounds in the TCD classes. The study findings reveal that the challenges may be solved through regular staff development and provision of relevant support services by the institutions.

7.8 Implications for theory

7.8.1 Bourdieu's Cultural Capital theory

The findings of the study support the theoretical frameworks that informed the study. The study used the Cultural Capital theory by Bourdieur (1986) which is based on the premise that educational attainment is determined by class inequalities and class

reproduction in advanced capitalist societies. Cultural reproduction relates to the link between original class membership and the eventual class membership and how the link is mediated by education (Sullivan, 2002). Bourdieu states that cultural capital consists of familiarity with the dominant culture in a society, especially the ability to understand and use educated language. The TCD students with different academic backgrounds have different levels of knowledge and skills in the Textile, Clothing and Design field, with some students' academic backgrounds lacking the background knowledge in the field. Bourdieu emphasizes that the possession of cultural capital varies with the social class, and the education system assumes one's possession of cultural capital (Sullivan, 2002; Lizardo, 2011; Lareau, 2003). The study results revealed that the lecturers assumed that the students had background knowledge and skills required for university education in the teaching practices. The various performance levels of students portrayed by the study results reflected the various levels of background knowledge among the students.

Also the level of subject content knowledge and pedagogic content knowledge among the lecturers affected the lecturers' delivery practices and the depth of subject content knowledge delivered to the students. The theory also recognizes that the institutional support affect the success of strategies used to cater for the students with diverse academic backgrounds at university level.

7.8.2 Tomlinson's Differentiated Instruction theory

The study was guided by differentiated instruction model by Tomlinson (2005), who says that students learn best when their teachers accommodate the differences in their readiness levels, interests, and academic profiles in curriculum implementation, with the objective of taking full advantage of every student's ability to learn. The study findings concur with the theory's principles as the lecturers made adaptations to the curriculum content and assessment techniques and varied their teaching methodologies and instructional approaches to cater for the students with diverse academic backgrounds in the TCD university classes. The differentiated instruction theory stresses that instructional approaches should vary and be adapted to cater for individual students in classes comprising students from diverse backgrounds (Hall, Strangman & Meyer, 2003; Tomlinson, 2001). The model requires teachers to be

flexible in their approach to teaching and adjust the curriculum and presentation of information to meet the needs of students rather than expecting students to modify themselves to suit the curriculum. In this regard, the implementation of differentiated curriculum approaches was affected by inadequate support from the institutions. Tomlinson's theory identifies three elements of the curriculum that can be differentiated namely; content, process and products. These relate to practices observed in the study that included curriculum content adaptation, teaching methodologies adaptation and adaptation of learning outcomes. The mixed views on aspects to adapt are supposed to be agreed upon among the faculty management team and the curriculum implementers.

The study found out that there was no curriculum implementation policy to guide lecturers in their teaching practice and that the lecturers did not have adequate pedagogic content knowledge and skills for addressing student diversities at university level. The lecturers also lacked subject content knowledge and design artistic knowledge to teach in-depth subject content and instill design innovative skills among students as required by the textile and clothing industry. The study also found out that the implementation of differentiated curriculum approaches to TCD programs was affected by inadequate resource provision by the institutions. However, the TCD departments made efforts to fund raise through production units, to improvise resources and to work extra time in order to provide support to enhance teaching and learning of the students.

The relevance of the theory also lies in its ability to show that it's not only the instructors who should be committed to improving performance among the students, but also the students themselves are encouraged to work hard to pass the assessments given to them. The students are also encouraged to identify areas in which they need assistance in order to achieve the programmes' learning outcomes. The institutional support and the lecturers' professional qualities are also highlighted as important aspects in the success of differentiated teaching and learning strategies adopted to cater for students with diverse academic backgrounds. The study confirms the theory's assertion that the teacher is considered as the professional in the classroom, who is appropriately trained to mentor and lead the class using suitable techniques to assist

each student to reach his or her potential (Subban, 2006). Most of the lecturers had specialized in the areas related to textile and clothing.

7.9 Justification of research methodology

The study used a pragmatic post-positivism mixed method methodology to examine the strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe. The mixed method approach assisted the researcher to solicit views from various data sources and insights from multiple stakeholders like universities' quality assurance directors, faculty deans of studies, department chairpersons, lecturers and students.

The mixed method approach was appropriate for this study because it permitted the use of both quantitative and qualitative data collection and analysis techniques to get a deeper understanding of strategies used to cater for students with diverse academic backgrounds in the implementation of TCD programmes at university level. By combining qualitative and quantitative methodologies, the researcher created a balance and avoided being subjective on issues such as examining lecturer capacity, methods of adapting curriculum content, and the level of support provided for implementation of curriculum approaches to cater for students with diverse academic backgrounds in TCD programmes provision. The post-positivist paradigm enabled the researcher to observe and analyze study findings in depth to get the curriculum implementation factors that influenced the outcomes.

The researcher managed to collect quantitative data from the university lecturers, qualitative data from the quality assurance directors, faculty deans of studies, department chairpersons and from student focus groups in order to get a deeper and broader understanding of strategies used to cater for students from the diverse backgrounds. Documentary data obtained from curriculum documents was also analysed to check on accuracy of respondents' views. The use of concurrent triangulation design in the collection and analysis of data enabled the researcher to get useful information simultaneously where qualitative data and quantitative data collected complemented each other.

7.10 Conclusions

The study sought to examine strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at universities of technology in Zimbabwe. The study findings revealed that all the lecturers lacked training on how to cater for students with diverse academic backgrounds at university level and that there was no special training for dealing with student diversity at higher education level. The study findings also revealed that although the TCD lecturers had specialized in areas related to textile and clothing field, most of the lecturers lacked training in pedagogic content knowledge, in artistic design and in in-depth and current knowledge and skills in some areas of the TCD programmes. The students cited lack of knowledge and ignorance about current technologies in the designing component, in Pattern Making and in Photography among the lecturers.

The findings of the study also revealed that the lecturers adapted the TCD curriculum content and teaching methodologies to cater for students with diverse academic backgrounds. The lecturers used various assessment techniques which included continuous, formative and summative assessment to accommodate the students. The use of diverse curriculum implementation and assessment approaches was due to the commitment of the lecturers as there was no policy to govern curriculum implementation strategies used for students with diverse academic backgrounds in the provision of TCD programmes at university level. The study established that the lecturers faced challenges in catering for students with diverse academic backgrounds. The challenges experienced were inadequate time to attend to individual students, difficulty in planning and managing lesson activities, inadequate teachingand learning equipment and materials, not enough infrastructure, high student-lecturer ratio and lack of lecturers and support staff like technicians, tutors and teaching assistants

The study also found that there was inadequate support and monitoring to enable lecturers, faculty managers, and support staff to implement strategies to cater for diverse students in the provision of TCD programmes to students with diverse academic backgrounds at university level.There were limited exchange programmes

with other institutions, limited support for staff development and for collaboration with industry personnel. However, there were pockets of good practice in the way lecturers delivered TCD programmes as noted in the two universities of technology despite all the challenges that were experienced in teaching and learning of the TCD students with diverse academic backgrounds. These included lecturers implementing diversified curriculum implementation practices without appropriate training that encompassed curriculum adaptation, differentiating of teaching and learning methodologies, working overtime, and setting fund raising projects to acquire teaching and learning materials.

The 1990 rationalization of Technical and Vocational Education policy in Zimbabwe structured the technical and vocational education into 5 levels, PVC, NFC, NC, ND and HND that enabled students to progress to degree level either at the polytechnics or at universities of technology. However, there is no policy that guides the movement of students with the qualifications above (UNESCO & ZIMDEF, 2005). The absence of policy with regard to progression of the students makes university departments place the students with the various qualifications at any level they deem necessary. Universities do not bother to come up with programmes' provision structures that can guide the provision of the programs to students with diverse academic backgrounds at university level. However, university lecturers used their discretion to design accommodative techniques to cater for the students. Accommodative techniques highlighted in universal inclusive education policy as given by UNESCO (2007) involves changing and modifying programmes' content, approaches, structures and strategies with a common vision that covers all children in terms of age and a conviction that it is the responsibility of a regular system to educate all children. Therefore, catering for students from diverse backgrounds without curriculum implementation policy at university level, especially in the TCD field, disadvantaged the curriculum implementers and the students from acquiring appropriate support from the university management and other TCD stakeholders. The existence of acurriculum implementation policy would guide university institutions in acquiring adequate teaching and learning materials, infrastructure, qualified lecturers and support staff.

The researcher concludes that despite the effort applied by the lecturers in critically modifying the TCD programmes by adapting the content and assessment procedures,

improvising inadequate resources, and varying teaching methodologies to cater for students with diverse academic backgrounds, it is critical for the universities to consider coming up with curriculum implementation policy for appropriate guidance in catering for students who join universities with diverse academic backgrounds.

7.11 Contribution to knowledge

This study examined the strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at two universities of technology in Zimbabwe. Possible measures that contribute to successful practices in catering for TCD students with diverse academic backgrounds at universities of technology were identified by the researcher. Although there was no guiding policy with regard to implementation of differentiated curriculum to cater for students with diverse academic backgrounds at university level and that there was a positive attitude among lecturers towards catering for the students in teaching and learning, there was slight improvement in the implementation of the diversified strategies to effectively cater for the needs of individual students to achieve programs' learning outcomes. The researcher proposes an alternative framework of curriculum implementation to cater for the students with diverse academic backgrounds in the provision of TCD programmes at universities of technology in Zimbabwe. The framework is founded on the reviewed literature and analysis of the study findings on strategies used to cater for students with diverse academic backgrounds at two universities of technology in Zimbabwe. Table 7.1 shows the new suggested framework.

Table7-1: Alternative framework of curriculum implementation to cater for students with diverse academic backgrounds

Strategies used to cater for diverse students(identified from literature)	Strategies used to cater for diverse students (used at two universities of technology in Zimbabwe)	Alternative framework of curriculum implementation approaches to cater for the diverse students (as good practices suggested by researcher)
Capacity of lecturers Many of the lecturers trained for the new TCD curriculum have left the country for greener pastures (Coltart, 2012; Mupinga et al., 2005)	Most lecturers lacked pedagogical and education training to cater for diverse students at higher education, but they identified students who needed assistance and offered remediation lessons.	Creativity and innovativeness of lecturers is essential when designing curriculum delivering strategies to cater for students with diverse academic backgrounds. Exposing lecturers to training in specialized ICT pedagogical content and skills knowledge and differentiated curriculum implementation approaches assist them to design effective delivering strategies to enhance teaching and learning among students from diverse academic backgrounds. Responsive staff development enhances

		the lecturers' skills in designing effective curriculum implementation techniques to cater for the dynamic needs of students who enter universities from diverse backgrounds. Such staff development initiatives enhance lecturers' creative skills to manipulate available resources to create diversified teaching and learning environments when operating in environments that have limited resources such as the two sampled universities in Zimbabwe
Strategies to enhance catering for diverse students		
Curriculum adaptation Has revealed various ways of adapting content to cater for diverse students such as adapting content quantity, time, difficulty,	The lecturers were able to differentiate their teaching methodologies and instructional approaches to ensure that students with diverse academic backgrounds were catered	Open discussion and cooperation among TCD lecturers, students and management regarding curriculum content adaptation to come up with procedures that

goals and substituting curriculum (Rosell & Ondrik, 2013; Wright 2005).	for. However the lecturers were selecting specific content aspects to teach. Some curriculum content aspects were likely omitted since content adaptation process was not coordinated. Therefore, there were mixed views on curriculum content adaptation to cater for the students.	enable lecturers to achieve programmes' learning outcomes among all students without disadvantaging others.

Adapting of curriculum by differentiating teaching approaches, dedicating time, giving individual work, group work, extra work and projects, and coming down to students' level to cater for students with different levels of background knowledge in the TCD programmes, especially in universities' environments that have limited resources.

Motivating students' right from first year may further enhance students' interest in the TCD area.

Breaking students into tutorial groups according to the academic backgrounds and offering remediation may enable students to fill knowledge gaps effectively. |

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Assessment Reveals that lecturers use different assessment techniques that include continuous assessment, formative assessment, and summative assessment in order to assess a range of skills acquired by the students (O'Farell, 2015)	Lecturers were differentiating assessment by using formal assessment that included presentations, written assignments, tests, projects, portfolio, group work, field work and end of semester examinations (continuous, formative and summative assessments)	Assessment could be modified by using combinations of various assessment techniques such as formal and informal assessments such as portfolio, oral interviews, spoken and tests, design projects that lead to production of usable products and production processes. Assessment items may also be differentiated to meet the diverse needs of the students and assess attainment of programmes' learning outcomes effectively among all the students. Use of continuous assessment during teaching and learning process to ensure active participation of the students with diverse academic backgrounds

		especially in institutions with limited resources. Use of self-assessing activity based items for students may enable students to evaluate their learning progress.
Material resources Reveals that most Zimbabwean university institutions are faced with challenges of inadequate material resources for curriculum implementation (Nguku, 2013; Afeti, 2014).	Lecturers adapted material resources to teach in TCD classes that comprised diverse students by improvising and simplifying materials to reach academic levels of students as there were no special material resources to cater for the students' diverse academic backgrounds.	Adaptation of material resources by coming up with materials that are easy to understand to cater for students with diverse academic backgrounds considering the limited resources available in the universities.
Support for provision of the programmes		
Staff development workshops Institutions in Zimbabwe have limited capacity to fund staff development of all lecturers due to	Limited staff development workshops were organized for lecturers by the Academy of Teaching and Learning but were not addressing issues of student diversity with	Lecturers could be professionally developed on strategies to deal with student diversity, especially those with diverse academic backgrounds through

economic instability in the country and also since the universities no longer get grants from the government (ZIMDEF & UNICEF, 2005; UNESCO, 2013)	regard to curriculum implementation to students with diverse academic backgrounds. However, the lecturers were utilizing their general expertise and knowledge gained through lecturing experience in designing curriculum implementation strategies to cater for students with diverse academic backgrounds.	workshops, seminars and demonstrations organized by the Academy of Teaching and Learning.
Assistance provided by institutions to support catering for students with diverse academic backgrounds. Other universities have academic development units to assist students who enter university institutions from diverse backgrounds (Mather & Muchatuta, 2011).	Institutions provided libraries, e-resources facility, and computer laboratories for students to source information for assignments and research, although the libraries lacked current books and laboratories were not adequate for the students. Institutions also funded attachment assessment visits for students on attachment by providing transport, accommodation and food allowances for	Updating and purchasing of more library books would expose students to wide ranges of reading materials in subject area. Provision of well equipped laboratories that match large student numbers and that opened for 24 hours would help students with diverse academic backgrounds to cover up content gaps individually. The 24-hour open laboratory facility would allow more time for

	lecturers. However, students attached outside the country individually funded the lecturers for attachment visits. Lecturers organized workshops for students before they went for attachment and provided moral support when they carried out attachment visits. However, the lecturers were not adequately supporting the industry supervisors on how to handle industrial attachment process.	students to experiment their design ideas. More attachment visits by lecturers would afford more time for students to share their attachment challenges with the lecturers and get more moral support from them. More attachment visits would help to cement closer relationships between lecturers and industry supervisors and open dialogue between the two parties that would enable sharing of information. Organization of workshops and seminars with attachment supervisors and provision of learning outcomes for attachment would assist supervisors to handle student attachment component and enable supervisors to share challenges they face in dealing with students on attachment.

		Institutions can set up departments that deal with students' diversities so that students may be assisted by professionals and time for remediation may be availed.
Other forms of support All universities are linked to the industry through industrial attachment (Jumo et al., 2013; Kathuli-Ogola et al., 2015).	TCD departments worked with the industry through industrial attachment of students. Students were funded to participate in national events such as Zimbabwe Fashion Week and Clothing Indaba. The TCD departments' relationship with other institutions was very limited as they were related to a few institutions locally and abroad through review of programmes, staff development and research. The universities are closely linked to ZIMCHE which approves all programmes offered by universities in Zimbabwe	Closer relationship with industry people through social and national events gatherings, seminars and demonstrations is important as it helps the two parties to be closely linked. The business community would have a forum for sharing its training demands while the academic community would have a chance to share their research developments pertaining to production processes and design innovations that are relevant for boosting the country's economy. These parties would also share specialization areas that

		diverse students can take up to match industry settings.
		Extension of TCD departments' relationship to many institutions within the country and outside the country enables the lecturers to get current trends on diversified curriculum implementation strategies employed by other institutions, and paves way for staff exchange that leads to widening of staff development avenues.
		Closer linkages with colleges and high schools make universities govern the provision of preparatory TCD programs content for university education which may reduce knowledge gaps among students entering universities.

Monitoring strategies to cater for the students		
Some institutions have put in place tracking procedures to ensure success of support procedures such as remediation for achievement of set learning outcomes by the students (Moore & Shulock, 2009).	Monitoring of catering for the students followed a structure from quality assurance directors, faculty deans and chairpersons who checked the writing of examinations, examination items, coursework marks and moderation of marks. There were also peer and students lesson evaluations that were used to appraise the lecturers on effectiveness of their teaching practices with regard to achievement of students' learning outcomes.	There could be monitoring of curriculum implementation to ensure that all students with diverse academic backgrounds are catered for. Lesson evaluations could be used to provide feedback on the effectiveness of lecturers' teaching approaches in relationship to catering for students with diverse academic backgrounds. Coordination of curriculum implementation practices through involvement of all TCD stakeholders is relevant for coming up with universally designed curriculum implementation practice.
Frameworks of curriculum implementation		

approaches to cater for the students		
Models of inclusion policy Trainer-training programmes' framework which emphasizes organization of learning environments for students with special needs to learn on their own through specified competence based learning. Universal design approach model considers flexibility of learning materials in curriculum designing to provide individual accommodations for the students from diverse backgrounds (Barabasch & Petrick, 2012; Hockings, 2009).	There was no curriculum implementation policy regarding catering for students with diverse academic backgrounds in TCD provision at the two sampled universities in Zimbabwe.	Participatory involvement of all TCD stakeholders in coming up with university programmes' implementation policy is important as the policy would guide implementation of strategies to cater for diverse students to ensure achievement of programmes' learning outcomes, and effectiveness in catering for students with diverse academic backgrounds at university level Training of lecturers should be focused on catering for students from diverse backgrounds in university programmes provision and should address in depth knowledge in TCD programmes.

7.12 Recommendations

Based on the presented research findings, the study suggests the following recommendations:

- Universities in Zimbabwe, in collaboration with higher education policy makers, should come up with programmes provision policies that guide the higher education institutions in catering for students who enter universities with diverse academic backgrounds. The policy will enable the institutions to provide appropriate support and will also guide lecturers to come up with relevant curriculum implementation strategies that fully address the needs of the students who enter university education from diverse backgrounds. The policy will also direct students on the roles they should play to achieve set programmes' learning outcomes at university level.

- University institutions should support and organize staff development programmes focusing on updating lecturers' subject content knowledge and skills and those that address approaches to cater for diverse students in curriculum implementation at university level. This enables the lecturers to upgrade their knowledge to meet current trends and industry developments. The Post Graduate Diploma in Education programme offered by the universities should include issues of student diversity in higher education to prepare lecturers for the demands of students who enter universities with diverse academic backgrounds.

- The TCD department should initiate collaborative activities with industry, curriculum development boards and other institutions that offer similar programmes and those that prepare students for university education. This enables the development of programmes that link each other in content progression and programmes that thoroughly prepare students for progressive levels like university education. Collaborative programmes such as staff and students exchange allow lecturers and students to create relationships that enable them to share ideas on catering for student diversities; programmes provision and carry out productive research projects.

- There should be interactive participation of all members of each department, students and university management team to design effective programmes

provision strategies to cater for students who enter university education from diverse backgrounds. This enables institutions to come up with a universal programmes provision that directs curriculum implementers to effectively deliver and reduce student drop out and failure in programme areas such as TCD programmes.

- Universities should enroll students that match resources available in the institutions to achieve equity and fairness in allocation of material and infrastructure and human resources among lecturers and students.

7.13 Areas for future research

From the findings of this study, some areas of potential further research related to strategies used to cater for students with diverse academic backgrounds at universities of technology are hereby proposed.

- There is need for a study on strategies used to cater for students with diverse academic backgrounds in other university programmes that enrol TVE students from the various backgrounds because the current study focused on TCD programmes only and the results are generalizable to university TCD programmes only. Such a study would provide a more holistic picture of good practice of catering for diverse students at university level, and possibly stimulate development of curriculum implementation policies that can be adopted at university level.

- There should be a study carried out on the investigation into staff development in place to address catering for students with diverse academic backgrounds in universities. The study will reveal how staff development is carried out and what it entails.

- There should be another study carried out on assessing university degree TCD graduates' capacity. The study will reveal the skill level of degree graduates with regard to industry requirement and the degree programmes' outcomes and stimulate effective quality control on TCD and other university programmes' implementation across universities in Zimbabwe.

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APPENDICES

Appendix A: Ethical clearance Certificate

University of Fort Hare
Together in Excellence

ETHICAL CLEARANCE CERTIFICATE
REC-270710-028-RA Level 01

Certificate Reference Number: REM201SCHI01

Project title: Strategies used for students with diverse academic backgrounds in the provision of textile, clothing and design programmes at two universities of technology in Zimbabwe: Towards an inclusive curriculum implementation approach.

Nature of Project: PhD

Principal Researcher: Felisia Chimbindi
Sub-Investigator:

Supervisor: Prof S Rembe
Co-supervisor:

On behalf of the University of Fort Hare's Research Ethics Committee (UREC) I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the UREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the document

The Principal Researcher must report to the UREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The UREC retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
  - Any unethical principal or practices are revealed or suspected
  - Relevant information has been withheld or misrepresented
  - Regulatory changes of whatsoever nature so require
  - The conditions contained in the Certificate have not been adhered to

- Request access to any information or data at any time during the course or after completion of the project.

- In addition to the need to comply with the highest level of ethical conduct principle investigators must report back annually as an evaluation and monitoring mechanism on the progress being made by the research. Such a report must be sent to the Dean of Research's office

The Ethics Committee wished you well in your research.

Yours sincerely

Professor Gideon de Wet
Dean of Research

07 March 2016

Appendix B: Permission letter to the university

Faculty of Education
School of Further and Continuing
Education
Stewart Hall, Alice

Phone: Alice: 040602412
| Email: nmuyiya@ufh.ac.za|

University of Fort Hare
Together in Excellence

27 November 2015

The Registrar
Chinhoyi University of Technology
Zimbabwe

Dear Sir/Madam,

Re: Permission to Collect Data: Mrs Felisia Chimhindi (Student Number 201415370)

This is to confirm that Mrs Chimhindi is pursuing PhD degree at the University of Fort Hare. Her research title is **"Strategies used for students with diverse academic backgrounds in the provision of textile, clothing and design programmes at two Universities of Technology in Zimbabwe".** She is supposed to collect data from your institution. Kindly grant her permission. I would also be grateful if you could kindly provide her with documents that may assist with information regarding the area of her study.

I would like to assure you that any information that will be collected will remain confidential and no name of a person will be disclosed. The student will ensure that she does not disrupt ongoing activities during the period she will be collecting data.

Sincerely,

Prof. S. Rembe
Coordinator of MEd and PhD Programmes,
Faculty of Education, Alice Campus
University of Fort Hare

UNIVERSITY OF FORT HARE
Faculty of Education

2 6 NOV 2015

Signature

Appendix C: Permission for data collection

CHINHOYI UNIVERSITY OF TECHNOLOGY

P. Bag 7724, Chinhoyi ☎: 263-67-22203-5 ☎: 263-67- 27214 E-mail : vicechancellor@cut.ac.zw

Vice-Chancellor's Office: Prof. D. J. Simbi – PhD, BSc, MIM, CEng, FZ'welE, FiCorr, FZAS, Hons FZ'w

HUMAN RESOURCES DEPARTMENT

8 December 2015

Mrs Felisia Chimbindi
Chinhoyi University of Technology
P Bag 7724
CHINHOYI

Dear Mrs Chimbindi

RE: REQUEST TO CARRY OUT A RESEARCH PROJECT AT CHINHOYI UNIVERSITY
        OF TECHNOLOGY

We acknowledge receipt of your application letter dated 4 December 2015 seeking permission to undertake a research study under a title that reads Strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and Design Programmes towards an inclusive curriculum implementation approach: *a case of Chinhoyi University of Technology.*

You are kindly advised that permission to undertake your study is hereby granted. However, you are reminded to observe the University Official Secrecy Oath.

The University would also expect results of your research upon completion.

Thank you.

T.A. Kaseke (Mr)
DEPUTY REGISTRAR, HUMAN RESOURCES

Appendix D: Permission for data collection

National University of Science and Technology

P. O. Box AC 939, Bulawayo, Zimbabwe
Cnr. Gwanda Road/Cecil Avenue

Telephone 263-9-282942/282413/3658
Fax: 263-9-289057

From Registrar F. Mhlanga Dip Edu, BEd, MSc(UZ); MBA (NUST)

FM/sb

24 February 2016

Mrs Felisia Chimbindi
University of Fort Hare
Faculty of Education
School of Further and Continuing Education
Stewart Hall, Alice
East London
SOUTH AFRICA

Dear Mrs Chimbindi

PERMISSION TO CONDUCT RESEARCH

Reference is made to your letter dated 27 December, 2015 on the above request.

We would like to inform you that we have granted you permission to do your research study entitled **"Strategies used for students with diverse academic backgrounds in the provision of textile, clothing and design programmes at two Universities of Technology in Zimbabwe".**

We note that you will be collecting data and would like to emphasize that all the information gathered should be for research purposes only and that confidentiality has to be exercised.

The University wishes you the best in your studies.

Yours sincerely

F Mhlanga
Registrar

cc   Professor S Rembe, Coordinator of MEd and PhD Programmes
      Faculty of Industrial Technology
      Chairperson, Department of Textile Technology

Appendix E: Informed consent agreement form

Ethics Research Confidentiality and Informed Consent Form

Please note:

This form is to be completed by the researcher(s) as well as by the interviewee before the commencement of the research. Copies of the signed form must be filed and kept on record

(To be adapted for individual circumstances/needs)

I Felisia Chimbindi is asking people from your University to answer some questions, which she hopes will benefit your community and possibly other communities in the future.

I Felisia Chimbindi am conducting research regarding 'Strategies used for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes at Universities of Technology in Zimbabwe: Towards an inclusive curriculum implementation .approach.' I am interested in finding out more about how lecturers adapt programmes content and assessment , capacity of lecturers, how universities support the provision of textile, clothing and design programmes and curriculum implementation frameworks that may be adopted to ensure that the students with diverse academic backgrounds are catered for at universities of technology in Zimbabwe. I am carrying out this research to help improve the quality of textile, clothing and design programmes provision at university level.

Please understand that you are not being forced to take part in this study and the choice whether to participate or notis yours alone. However, we would really appreciate it if you do share your thoughts with us. If you choose not take part in answering these questions, you will not be affected in any way.

If you agree to participate, you may stop me at any time and tell me that you don't want to go on with the interview. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way. Confidentiality will be observed professionally.

I will not be recording your name anywhere on the questionnaire and no one will be able to link you to the answers you give. Only the researchers will have access to the unlinked information. The information will remain confidential and there willbe no "come-backs" from the answers you give.

The interview will last around 30-45 minutes *(this is to be tested through a pilot).* I will be asking you a questions and ask that you are as open and honest as possible in answering these questions. Some questions may be of a personal and/or sensitive nature. I will be asking some questions that you may not have thought about before, and which also involve thinking about the past or the future. We know that you cannot be absolutely certain about the answers to these questions but we ask that you try to think about these questions. When it comes to answering questions there are no right and wrong answers. When we ask questions about the futurewe are not interested in what you think the best thing would be to do, but what you think would actually happen. (*Adapt for individual circumstances*)

If possible, our organization would like to come back to this area once we have completed our study to inform you and your communityof what the results are and discuss our findings and proposals around the research and what this means for people in this area.

INFORMED CONSENT

I hereby agree to participate in research regarding 'Strategies used for students with diverse academic backgrounds in the provision of textile, Clothing and Design programmes at Universities of Technology in Zimbabwe: Towards an inclusive curriculum implementation approach'. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop this interview at any point should I not want to continueand that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally.

I have received the telephone number of a person to contact should I need to speak about any issues which may arise in this interview.

I understand that this consent form will not be linked to the questionnaire, and that my answers will remain confidential.

I understand that if at all possible, feedback will be given to my community on the results of the completed research.

……………………………..

Signature of participant   **Date**:…………………..

I hereby agree to the tape recording of my participation in the study

……………………………..

Signature of participant   **Date**:…………………..

Appendix F: Letter confirming editing

SOL PLAATJE UNIVERSITY

Dr. J. Sibanda (Senior Lecturer: English) School of Education Private Bag X 5008, Kimberley, 8300 North Campus, Chapel Street, Kimberley E-mail: Jabulani.Sibanda@spu .ac. za   Website: www .spu.ac.za   Tel: 27534910142 Cell: 0845282087   06 June 2017

TO WHOM IT MAY CONCERN

I hereby confirm that I have proof read and edited the following PhD Thesis using Windows 'Tracking' System to reflect my comments and suggested corrections for the student to action:

Strategies used to cater for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes.A case study of two universities of technology in Zimbabwe.

By

FELISIA CHIMBINDI

A THESIS SUBMITTED IN FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN EDUCATION.

Although the greatest care was taken in the editing of this document, the final responsibility for the product rests with the author.

Sincerely

 06. 06. 2017

Appendix G: Questionnaire for TCD Lecturers

Questionnaire for lecturers on Strategies used to cater for students with diverse academic backgrounds in the provision of Textile, Clothing and Design programmes. A case study of two Universities of Technology in Zimbabwe. Please respond as honestly as possible by filling in the spaces provided by ticking and writing your views on issues raised. Do not write your name.

Section A: General background information.

1. What is your gender? Male [   ]   Female   [   ]

2. What is the diversity nature of your students?

'O' Level [ ]

'A' Level [ ]

National Certificate in Clothing [ ]

Diploma in Clothing [ ]

Diploma in Education [ ]

Two years and above industry working experience [ ]

Higher National Diploma [ ]

Any other, specify...

Section B: Lecturer capacity.

3. What is your age?   20- 29 years [   ]

30- 39 years [   ]
40- 49 years [   ]
50- 59 years [   ]
60- 69 years [   ]
70 and above [   ]

4. For how long have you been lecturing?

Less than one year [   ]
1- 5 years   [   ]

6- 10 years   [   ]

11- 15 years   [   ]

20 years and above [   ]

5. What is your highest professional educational qualification?

Higher National Diploma   [   ]

Bachelor of education degree [   ]

Honor's degree   [   ]

Masters in education   [   ]

Masters in engineering   [   ]

Masters in heritage studies   [   ]

Masters in industrial textile technology [   ]

PhD   [   ]

Any other specify...

6. What is your area of specialization?

Clothing and Textile Technology [ ]

Clothing Technology [ ]

Textile Technology [ ]

Fashion Design   [   ]

Fashion Design and Illustration [   ]

Food Science [   ]

Textile Decoration [   ]

Art and Design   [   ]

Management   [   ]

Textile Engineering [   ]

Any other specify...

7. Which courses are you teaching? ....

Section C. Content adaptation

8. What factors do you consider when designing TCD programs' content at university level?

        Prio learning experiences of students [   ]

        Academic qualifications for students [   ]

        Industry demands [   ]

        Contemporary trends in TCD provision [   ]

        Available human and material resources [   ]

9. How do you adapt TCD programmes' content to meet the students with diverse academic backgrounds of students?

a. Adjustment by qualification equivalent content [ ]

 b. Drawing content from program and emphasize specific aspects [ ]

c. adjust quantity of content aspects [ ]

d. adapt time allocation per task [ ]

e. adjust level of individual assistance [ ]

f. adapt the ways instruction is delivered to students [ ]

g. adapt skill level, problem type and rules on how learners approach content [ ]

h. adjust learner output – how students respond to instructions [ ]

i. adjust learner participation [ ]

j. alternate outcome expectations (goals) [ ]

k. substitute curriculum [ ]

l. Give more time to teach fundamentals and preliminary knowledge (teach content from known to unknown, teach basic content and skills)

m. Teach students with common challenges separately in groups (tutorials).

 Any other, please explain...

10. Which instructional approaches do you use to cater for students with diverse academic backgrounds in your classes?

a. Provision of alternative representation of teaching and learning materials. For example use of multimedia, illustrated texts, simplified texts or captioned video. [ ]

b. Motivating learners through engagement with personal interests. [ ]

c. Modeling and demonstrating skills, knowledge and cognitive strategies. [ ]

d. Explicit and systematic instruction [ ]

e. Levels of promoting learning concepts. [ ]

f. Modeling problem solving [ ]

g. Providing opportunities for the student to think aloud. (Verbalization). [ ]

h. Scaffolding student learning through guided practice and support. [ ]

i. Providing feedback and correction. [ ]

J.Identifying key vocabulary for explicit instruction [ ]

K.Organizing and connecting knowledge, skills and values to promote generalization. [ ]

l.Using cross-curricular and naturally occurring learning opportunities to enhance individual learning goals. [ ]

m. Providing alternative opportunities for students to represent their learning for example use of technology and augmentative and alternative communication systems. [ ]

n. Frequent cumulative review. [ ]

o. Providing opportunities for generalization and maintenance. [ ]

p. Encouraging inter student demonstrations [ ]

Othersplease specify..

11. State teaching methodologies that you use most often.

Group discussion [   ]
Lecture   [   ]
Problem solving   [   ]
Guest lectures   [   ]

<div align="center">Field trips   [   ]

Research project   [   ]

Any other specify...</div>

12. Comment on the effectiveness of the teaching strategies adopted..

………………………………………………………………………………………..

12. of the strategies mentioned above, which ones do you use most often?................

a. Please give reasons for using those instructional approaches.................................

13. What assessment techniques do you use to assess students with diverse academic backgrounds?

a. continuous assessment [   ]

b. formative assessment [   ]

c. summative assessment [   ]

Any other, please explain……………………………………………………………

14. Justify the use of assessment techniques selected above.

a. Summative assessment..…......

b. Formative assessment...…......

c. Continuous assessment……………………………………………...........................

15. Do students' academic qualifications affect their performance at degree level? Yes [   ]   No [   ]

a. If yes. How does it affect the performance of students?

a. not at all   [   ]   b. to a lesser extent [   ]   c. to a greater extent   [   ].

16. How do the students from diverse backgrounds perform?

Excellent [ ]   Good [ ]   Bad [ ]

a. If excellent, explain the contributing factors to their performance...........................

b. If Bad, explain the reasons for the performance...

c. If bad, how can the performance be improved?..

Section D. University support

17. How does the university support training of students in the TCD programmes?

a. materials for teaching and learning [ ]

b. Infrastructure [ ]

c. laboratories [ ]

d. educational trips [ ]

a. Any other, please specify..

18. What mode of support does the university offer to students on attachment?

a. Attachment visits by lecturers [ ]

b. students transport allowances [ ]

c. Accommodation [ ]

d. students workshops [ ]

a. Any other, please specify..

19. Is the support adequate? Yes [ ]   No [ ]

20. Comment on how the support should be adequate………………………………

21. What kind of support do you require to effect instructional approaches that cater for students with diverse academic backgrounds? ....

22. How does the university monitor the provision of TCD programmes to students with diverse academic backgrounds?

External examination [   ]

Peer and student evaluation [   ]

Moderation of examination [   ]

Quality assurance department [   ]

23. What challenges are encountered in catering for students with diverse academic backgrounds?...

24. Suggest solutions for the problems cited above…………………………………..

Appendix H: Interview schedule for TCD lecturers

Interview schedule for lecturers on strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes. A case study of two universities of technology in Zimbabwe.

Section A: Preliminary information of respondents

1.Sex..

2. What are the students' academic diversities in your TCD classes?........

Section B: Lecturer capacity.

3. How old are you?

4. For how long have you been lecturing?..

5. What is your highest professional educational qualification?................................

6. What is your area of specialization?..

7. Which courses are you teaching?..

Section C: Content adaptation.

8.Explain factors that you consider when designing TCD programmes content at university level. ....

9. How do you adapt TCD programmes content to cater for students with diverse academic backgrounds?...

10. What instructional approaches do you use to cater for students with diverse academic backgrounds during lesson delivery?..

11. State teaching methodologies that you use during lessons………………………..

12. Comment on the effectiveness of the teaching strategies used..........................

13. Which assessment techniques do you use to assess TCD students with diverse academic backgrounds?...

14. Justify the use of such assessment techniques...

15. Comment on the academic performance of the students with reference to their academic qualification...

Section D: University support

16. How does the university support the teaching and learning of TCD students with diverse academic backgrounds?...

17. What kind of support is provided to students when they are on attachment?.....

18. What kind of support do you need to effect instructional approaches that cater for students with diverse academic backgrounds?..

19. How do your university monitor the provision of TCD programmes to ensure that students with diverse academic backgrounds are catered for?....................................

20. What challenges do you encounter in catering for students with diverse academic backgrounds in the provision of TCD programmes?..

25. Suggest possible solutions to the challenges cited above....................................

Appendix I: Interview schedule for TCD Chairpersons, Deans of studies and quality assurance directors

Interview schedule for Quality Assurance Director, Dean and Chairperson Respondents on strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes. A case study of two universities of technology in Zimbabwe.

Section A: Preliminary information of respondents

1.Sex...

2.State the types of academic backgrounds of students in your TCD classes...

3.Post held...

Section B: Lecturer capacity.

4. How old are you?

5. For how long have you been in the post?...

6. What is your highest professional educational qualification?.................................

7. What is your area of specialization?..

8. Which courses are you teaching/ have you taught?..

Section C: Content adaptation.

9. Explain factors that lecturers consider when designing TCD programmes content at university level...

10. How do lecturers adapt TCD programmes' content to cater for students with diverse academic backgrounds? ....

11. State instructional approaches used by lecturers during lesson delivery to cater for the students……………………………………………………………………………….

12. What teaching methodologies do they use in teaching the students?....................

13. Comment on the effectiveness of the teaching strategies used by the lecturers to teach the TCD students with diverse academic backgrounds…………………………..

14. Which assessment techniques do lecturers use to assess TCD students with diverse academic backgrounds? ....

15. Justify the use of such assessment techniques..

16. Comment on the level of performance of students with diverse academic backgrounds..

Section D: University support

17. How does the university support the teaching and learning of the TCD students?.

18. What kind of support is provided to students when they are on attachment?......

19. What nature of support is required by the lecturers to cater for the students with diverse academic backgrounds in the provision of the TCD programmes?.................

20. How do your university monitor the provision of TCD programmes to ensure that students with diverse academic backgrounds are catered for?....................................

21. What challenges do TCD departments face in catering for students with diverse academic backgrounds in the provision of TCD programmes?.................................

22. Please suggest solutions to the challenges you have mentioned.......................

Appendix J: Interview schedule for student focus group discussion.

Focus group interview questions for students on strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes. A case study of two universities of technology in Zimbabwe.

Section A: Preliminary information of respondents

1. Sex...

Section B: Lecturer capacity.

2. How do you rate your lecturers in terms of their relevance for teaching the TCD programmes?...

Section C. Curriculum adaptation.

3. How do you view the university TCD curriculum content with reference to your background qualifications?..

4. What teaching and learning strategies do your lecturers use during lessons?..

5. How do you view the teaching and learning strategies used?..................................

6. What form of assessment are you exposed to?..

7. What are your views on the form of assessment provided?................................

Section D. University support

8. What support do you get from your university in terms of teaching and learning?...

9. Please explain how you find the support..

10. What kind of support do you get when you are on attachment?..........................

11. What kind of support do you prefer to get when you are on attachment?........

12. What challenges do you face in the learning process?.....................................…

13. Please suggest ways in which the challenges mentioned above can be solved.

Appendix K: Document analysis guide

DOCUMENT ANALYSIS GUIDE FOR TCD PROGRAMME DOCUMENTS

The strategies used to cater for students with diverse academic backgrounds in the provision of TCD programmes will be analyzed in the programme documents as follows:

-programme goals in relation to students' diverse academic needs and institutional mission and vision

-Model used to implement the programme and its rationale

-delivering strategies and their link to student engagement

-Professional competencies of those delivering the programmes

-Key knowledge, values and attitudes inculcated in the programmes

-Integration of the program with other support programmes

-Where the programme is conducted

-Suitability of facilities i.e. Infrastructure, laboratories

-Monitoring of the programmes

-Evaluation of the programmes

-Challenges met during implementing the programmes

-Gaps between theory and practice