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Entrepreneurial culture in a South African Higher Education institution

Compiled by

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DECLARATION

I, **Smangele Evidence Gumede** hereby declare that the dissertation I have compiled has never been submitted before in any other university and it is my own work. Where the work of others was used, it was dully acknowledged through referencing process.

This research work was carried out in one of the higher education institutions in Durban under the supervision of Doctor Muhammad Hoque, University of KwaZulu Natal Westville Campus, Graduate School of Business and Leadership.

This dissertation does not contain any other person's data, graphs, pictures and any other information unless specifically acknowledged as being sourced from other persons. Where other people exact words have been used, their writing is indicated through quotation marks.

Signature --------------------------------- Date------------------------

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ABSTRACT

Entrepreneurial culture in most of the countries plays vital role towards uplifting of country's economy. This is achieved through an integrated approach amongst tertiary institutions, business sector, and government. This study expanded the three-alliance integrated approach through integration of students' self-efficacy that should be driven with employment business plan competitions, technology competitions and experiential opportunities. The purpose of the study is to unleash within students, the potential of creating manpower through establishment of business from small to medium size and other job opportunities incorporated with risk management and uncertainty bearing information when managing their businesses. This study has been conducted using the mixed method approach. The data collection process employed is concurrent mixed method data collection strategy. The purpose for employing this strategy is to validate one form of data with the other data form. The researcher employed both closed questions and open-ended questions with the rationale of ensuring fair intuitiveness for participants. Two hundred and sixty-three students responded out of two hundred and seventy using Likert scale closed questions. Six total numbers of Heads of Departments, Management and Deans responded for open ended Questions. Study initially targeted 286 participants with 270 students who were expected to respond, and 16 totals Number of Heads of Departments, Management and Dean were expected to respond but only 6 of them in total responded which is 38% and only 263 students responded which is 97%. Sample procedure was stratified sampling procedure. Non-respondents came from Management and Head of departments. A total response rate was 94, 05% and non-response rate was 5, 95% for both students and staff. Findings revealed extensive importance of instilled entrepreneurial culture in a South African institution to contribute towards minimizing high level of unemployed graduate and to help reduce the only employability mind-set and promote entrepreneurial mind-set.

Keywords

Entrepreneurial culture, Entrepreneurial readiness, Opportunity identification, Motivation, Entrepreneurial ability, Entrepreneurship Education, Decision Making, innovation and knowledge economy

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BBBEE…………………………. Broad Based Black Economic Empowerment

CHE..Higher Education Quality Committee

CDD…………………………..…Curriculum Design and Delivery

DHET..Department of Higher Education and Training

DTI……………………………… Department of Trade and Industry

OECD……………………………Economic Co-operation and Development

EU………………………………. European Union

GEDI ………………………...…. Global Entrepreneur Development Index

GEDI……………………………. Global Entrepreneur Development Index

GEM……………………………. Global Entrepreneurship monitor

HEI..Higher Education Institution

HEQC..Higher Education Quality Committee

HERD ……………………………Higher Education Research and Development

HRD...Human Resources and Development

HOD………………………………Head of Department

IPAP………………………………Industrial Policy Action Plan

ITS………………………………. Integrated Tertiary Systems

KT……………………………….....Knowledge Transfer

KM..Knowledge Management

LLL………………………………. Life Long Learning

MENA……………………………Middle East and North Africa

MM……………………………..…Mixed Methods

MSF………………………………Management Sciences Faculty

NQF..National Qualifications Framework

NS……………………………………Natural Sciences Faculty

NSDS..National Skills Development Strategy

OECD……………………………Organization for Economic Co-operation and Development

PAP……………………………..…Performance acceleration Programme

PAR………………………………Pure Applied Research

PBR………………………………Pure Basic Research

QUAL……………………………Qualitative

QUANT…………………………. Quantitative

Rand D……………………….…Research and Development Projects

SAQA..South African Qualifications Authority

SDLA...Skills Development Levies Act

SMME……………………..……. Small Medium and Micro Enterprise

SOE……………………………. State Owned Enterprise

STP………………………………Science and Technology Parks

UKZN..University of KwaZulu Natal

U-I-G……………………………University, Industry Government

UIBR……………………………Use-Inspired Basic Research

VSE……………………………. Very Small Entities

WEG……………………………World Economic Growth

WIL……………………………. Work Integrated Learning

Glossary Items

(i) Collaboration

Collaboration means people working with other people towards a common outcome. Collaboration is a recursive process where two or more people or organizations work together in an intersection of common goals - for example, an intellectual endeavour that is creative in nature - by sharing knowledge, learning and building consensus.

(ii) Innovation

Innovation is a concept applied for making changes or introducing new methods or ideas. Innovation in the South African context is defined as the process of transforming an idea normally generated through research and development into a new or improved product, process or approach, which relates to the real needs of society and which involves scientific, technological, organizational or commercial activities.

(iii) Public Institution of Higher Education

Public institution of higher education is defined and limited to small, regional, public institution of higher education that provides degrees in various and is funded via public monies.

(iv) Knowledge Transfer (KT)

This concept is used to encompass a broad range of activities to support mutually beneficial collaborations between universities, businesses as well as public sector. It works better through contact support where participants or individuals will meet and exchange ideas and would sometimes spot new opportunities.

(v) Organisational Knowledge

Organizational knowledge is complex accumulated expertise that resides in individuals and it is partially or largely inexpressible. This is because organizations operate as distributed knowledge systems and contain within them various streams of knowledge.

(vi)Inter-organizational knowledge

Inter-organizational knowledge transfer is the process in the organization which one unit such as individual, group, and department affects division affected by the experience of another.

This affects the performance of the recipient units, knowledge repositories in general and the potential outcomes of knowledge transfer.

The management of knowledge therefore includes the process of capturing, analysing, sharing and distributing knowledge, while technical expertise in many organizations has become a scarce and costly commodity; “expert transfer has become a convenient, workable and important way to share expertise that may be located anywhere in the world.

(vii) Entrepreneurial activity

Entrepreneurial activity refers to the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new avenues in relation to products, processes or markets. Entrepreneurship is the phenomenon associated with entrepreneurial activity.

(viii) Entrepreneurial Culture

The term applies to individuals, teams, and entire organizational cultures. An entrepreneurial culture is what many companies hope for. Certainly, in the fast-moving and competitive technology industry, an entrepreneurial culture is what most organizations should strive for. Entrepreneurial culture relates to individuals who decide to suppress their individual interests for benefiting and attending the group needs with the belief that as they fulfil the group needs, their individual needs will be fulfilled in the process.

Thesis overview

Overview on chapter one

Chapter one was an introduction of Problem Overview. It postulated background to the problem that covered entrepreneurial gap with disappointing and low unemployment rate both in capability and opportunity relative to 2015. Established business rates decreased by 26% since 2015. Unemployment rate was rated at 27, 7% by the second quarter of 2017. Youth unemployment rate was rated 51, 3% in July 2014 and 55, 9% in July 2017. There is dire need of entrepreneurial culture visitation in South African education institutions. South African institutions are faced with a challenge of having to be able to breed students with mindset of self-employment as opposed to employability mind set. The challenge is with the education system and has nothing to do with undermining roles of executive management, council and line managers in their capacity of managing institutions. The chapter below introduces the literature review.

Overview on chapter two

Chapter two dwelt on literature review. The themes that were covered were multiphase measure of entrepreneurship through Global Economic Monitor (GEM). Those multi-phases incorporated potential, intentional, nascent, as well as new entrepreneur. The literature review further focused on entrepreneurship and world economic forum. It also covered aspects such as similarities and differences between entrepreneurship and Intrepreneurship as well as advantages and disadvantages for both phenomena. Entrepreneurship and Black industrialist became phenomenal part of this chapter. Research and Innovation in relation to entrepreneurship were also covered. The chapter further postulated the relevance value chain in relation to entrepreneurship. Entrepreneurship theories formed part of the literature review. Such theories incorporated evolution of entrepreneurship; Complexity theory and entrepreneurship; Religion and entrepreneurship, Islamic and entrepreneurship focus as well as Christianity and entrepreneurship. Chapter also focused on the need for tolerance of ambiguity, self-confidence, locus of control, risk taking and autonomy. The chapter also covered psychological theories, social and anthropological theories, knowledge flows, role of universities; entrepreneurial university as well as unemployed graduates.

Overview on Chapter three

Chapter three focused entrepreneurial culture and success factors. The introduction unpacked culture and climate as well as comparative description between culture and climate. It also touched on entrepreneurial culture and black tax as well as role of culture in entrepreneurial activity.

The crux of the chapter unpacked entrepreneurial success factors which are-: socio cultural factors, personal factors, opportunity factors with special reference to global competitive environment. This phenomenon postulated global mind-set, cultural agility, relationship management and adaptability. Some aspects that were unpacked were psychological factors, culture and corporate entrepreneurship. The chapter later touched on Durban University of Technology background and culture; Critical Durban University of Technology capabilities, DUT cultural web as well as application of the model. The information postulated in chapter three will assist in providing guidance towards the development data collection questionnaire instrument for this study. The next chapter four, details the research methodology to be undertaken in this study.

Overview on chapter four

Chapter four presented the research method and design. The researcher employed mixed method approach. The paradigm and the selected methodology are covered for the execution of the study. The chosen methodology was motivated in terms of its relevance to the research problem. An overview on how the exploratory sequential mixed method procedure was implemented for the gathering and analysis of the data was presented. The chapter also provided information on the population, sample selection, questionnaire both open and open-ended questionnaire instrument design, interview question design and how validity and reliability will be maintained. The elimination of bias was discussed and how it was managed throughout the study. It touched on the technical details of this study Technical details incorporated method, design, research setting, and research strategy and research paradigm. It also unpacked how data was collected; data collection tools the sample strategy and sample size. It further postulated the bias types that were considered for elimination such as design bias, procedural bias, measurement bias, reporting bias, reliability bias. The chapter unveiled the tests that were employed for results. Tests included Kruskal Wallis test, Mann Whitney Test, Spearman's correlation coefficient, Anova, Kolmogorov Sminorv, Cronbach's Alpha and Shapiro Wilk test.

Overview on chapter five

Chapter incorporated quantitative and qualitative results. The first section postulated quantitative results and second section postulated quantitative results. Another part covered reliability of scores and normality test, and frequency distribution mean ratings. The quantitative results scale was five point Likert scale and the qualitative results were presented based on the open ended questionnaire presented based on the objectives of the study. Inferential statistics was also postulated in this chapter. Thematic presentation for qualitative results was postulated in this chapter with subthemes unpacked. Part of qualitative subtheme postulated Entrepreneurship resource management model. Data and results were validated. Both models were merged and integrated and the triangulation process took place.

Overview on Chapter Six

This chapter covered discussion on both quantitative and qualitative discussion. The chapter was meant to justify findings that transpired from chapter five. It responded on why results came out the way they were covered reliability of tests, mean ratings. It also covered the role played by tertiary institutions in promoting entrepreneurial culture. It covered subjective norms and cultural aspects affecting and interfering with promotion of entrepreneurial culture. It covered support needed by tertiary institutions to promote entrepreneurial culture. The level of entrepreneurial intention and attitude perceived in becoming and entrepreneur as well as level of entitlement was covered. The new model that is termed Belligerent Entrepreneurial Education Model (BEEM) was introduced**.** Likert scale and open-ended findings and discussion were also covered.

Overview on chapter seven

This chapter covered conclusion and recommendations transpiring from findings and discussions. The eight recommendations were each given subheading. First recommendation was in relations to integration of National Strategic plan to entrepreneurial culture. The second recommendation was in relation to integration of human resource practitioners and performance management to entrepreneurial culture. The third recommendation was on entrepreneurial culture within higher education. The fourth recommendation was on integration of radical economic transformation to entrepreneurial culture. The fifth recommendation was on entrepreneurial culture in relation to entitlement versus narcissism. The sixth recommendation talked to importance of gatekeepers' cooperation towards success of entrepreneurial culture. The seventh recommendation talked about the importance of collaboration with local and global institutions for the success of entrepreneurial culture. The eighth recommendation covered the impact of environmental influences on entrepreneurial culture. The ideal model was recommended that incorporated self-efficacy, on-going coaching and mentoring together with on-going monitoring and evaluation of entrepreneurial culture progress and impact.

CHAPTER 1
PROBLEM REVIEW

1.1. Introduction

Entrepreneurial culture gap remains pandemic in the global economy. Attempts at cultivating an entrepreneurial culture have been facilitated through The Global Entrepreneurship Monitor (GEM) project. South Africa over the last year, and especially the last few months, has gone through a series of political and economic setbacks, all of which are likely to have a dramatic effect on the overall well-being of the citizens of the country. These setbacks include a politically-motivated reshuffle of the cabinet; rating agencies Standard and Poor and Fitch downgrading South Africa to junk status; and GDP growth in 2016 at a mere 0.3%. South Africa's main social problems remain its extremely high-income inequality and employment challenge. A weak job-creating capacity that has led to chronically high unemployment and even more significantly under employment has been a critical contributory factor in the country's persistent poverty and inequality. Unemployment is at its highest level ever (27.6%), with an expanded rate of over 40% and youth unemployment at over 65% (GEM, 2017).

It has never been more important or urgent for South Africa's policy makers to make a strong commitment to growing the economy. A key priority is to introduce reforms aimed at fostering a more enabling business environment, particularly for the small and medium-sized enterprises which contribute so much to employment. In many developing economies, small businesses have been shown to contribute substantially to job creation, economic growth and more equal income distribution. Experts World Economic Growth (WEG) forecast expect WEG to rise from 3, 1 % in 2016 and 3, 5 % in 2017 and 3, 6 % in 2018. Chapter 2 of the World economic forum document however still emphasizes the importance of emerging market and developing economies which now account for 75% of global growth in output and consumption. The experts moreover cite income gaps in economies in which South African economy is still noted as one country with income gaps as well as entrepreneurial culture gaps to be unpacked under background section below (WEG, 2016). This study will however be limited to investigating and instilling entrepreneurial culture gap within a South African Higher Education institution considering globally identified entrepreneurial culture gap globally. Entrepreneurial learning will form part of entrepreneurial culture (Pittawa, Gazzard, Shore and Williamson, 2015).

1.2 Background

Data from the 2016 Global Entrepreneurship Monitor (GEM) survey in which South Africa has participated, reveals and confirms South Africa's persistently low levels of entrepreneurial activity relative to other countries participating in GEM. South Africans continue to report strongly positive societal attitude towards entrepreneurship. South Africa is notable for its robust level of media attention, with almost three-quarters of respondents believing that there is substantial media visibility for successful entrepreneurs. A disappointing low rate both in capability and opportunity relative to 2015 continues to be cited. South Africa's established business rate is disturbingly low as it has declined by 26% since 2015 and is the lowest since 2011 (GEM Report, 2017).

Figure 1.1 South Africa unemployment rate: Source Statistics South Africa (2017)

South Africa's unemployment rate came in at 27.7 %in the second quarter of 2017, unchanged from the previous period's 13-year high. The number of unemployed fell by 37 thousand to 6.18 million while the number of employed declined by 113 thousand to 16.10 million. The number of unemployed persons decreased by 37 thousand to 6.18 million from 6.21 million in the first quarter. Employment dropped by 113 thousand to 16.10 million from 16.21 million in the previous period. Job losses occurred in the formal non-agricultural sector (-144 thousand), in agriculture (-40thousand), and in private households (-8 thousand) but gains were recorded in the informal sector (80 thousand). The labour force declined by 150 thousand to 22.28 million from 22.43 million in Quarter 1; and those detached from it rose by 306 thousand to

14.94 million from 14.63 million. The expanded definition of unemployment, which includes people who have stopped looking for work, rose slightly to 36.6 %in the second quarter, from 36.4 %in the previous period. A year earlier, the jobless rate was recorded at 26.6%. Although innovation levels have declined since 2015, South African early-stage entrepreneurs remain more innovative than their African counterparts. Over the past three years there has been a consistent increase in entrepreneurial participation among 45-54-year-old. In 2016, this age group is the most entrepreneurially active, accounting for more than a quarter (28%) of all early-stage entrepreneurial activity. The percentage of 18-24-year-old in South Africa involved in early-stage entrepreneurial activity is considerably lower than the average for Africa which is 2.4 times the South African figure for this age group as well as lowers than the average for efficiency-driven economies, which at 12% is almost double the South African figure. Given South Africa's high youth unemployment figures (in the region of 60%, using the expanded definition) this is cause for concern (Statistics South Africa, 2017)

Figure 1.2 Youth Unemployment rate: Source-Statistics South Africa (2017)

This graph illustrates the South Africa Youth Unemployment Rate- actual values, historical data, forecast, chart, statistics, economic calendar and news. South Africa Youth Unemployment Rate- actual data, historical chart and calendar of releases (Statistics South Africa 2017). One main global impediment is downward trend in labour income share which is traced from global integration (World economic forum, 2017). South Africa's established business rate is significantly lower than the average for efficiency-driven economies which at 8% is more than double South Africa's rate of 3.4%. Of concern is that South Africa has one of the lowest established business rates of all the economies that participated in GEM 2014 (ranked 53rd out of 60 economies). Around two-thirds of entrepreneurs in South Africa in 2015 were opportunity-driven, the lowest opportunity scores since 2011. Necessity-motivated entrepreneurship is up 18% compared to 2014 evidence that South Africa's poor economic growth and chronically high unemployment over the past few years is persistent. It is revealed that the percentage of early-stage entrepreneurs who expect to generate no jobs within the next five years, has increased considerably since 2013. The 2017 GEM report reveals that 42% of working-age adults see good opportunities for starting business in their area, with very little difference between the three economic development levels with regard to opportunity perception. In the factor and efficiency-driven economies a little more than half the adults believe that they have the required skills to start a business while a third indicate that fear of failure would inhibit them from pursuing entrepreneurial opportunities. It is also noted that regarding job creation projections, three phases of economic development are similar in terms of the proportion of entrepreneurs who do not anticipate creating any jobs in the next five years. The efficiency-driven economies have, on average, slightly more non employer entrepreneurs 46% while the factor and innovation-driven economies are on a par at 44% (GEM report, 2017).

In terms of medium to-high growth entrepreneurs related to those projecting to employ six or more people in the next five years, the differences are more distinct. A quarter of entrepreneurs in the innovation-driven economies exhibit these higher-growth aspirations, compared to a fifth in the factor- and efficiency-driven economies. Global Economic Monitor report (2017) further reveals that Africa has on average the smallest of the busy entrepreneurs with 35% who are non-employers. Two of the three economies with fewer than 15% of entrepreneurs expecting to generate no jobs in the next five years are in this region, namely Burkina Faso and South Africa the third is Colombia. The best-performing African countries, Botswana and Senegal, both exhibited an upward trend year-on-year in terms of the number of adults starting new business, 33% and 38.6% respectively. South Africa is investing substantially in entrepreneurship development; its success record is miserable. The three biggest areas for improvement are in start-up skills, human capital and risk capital. When they surveyed youth in Africa about the chances of them pursuing entrepreneurial opportunity in the next three years, South Africa accounted for a meagre 12% compared to an average of 53% in the rest of Africa (GEM, 2016). South Africa's current socioeconomic predicament is firmly rooted in its past and requires measures that will change the historic imposition of inequality and economic disenfranchisement by colonial and apartheid administrations. To this effect, the National Development Plan (NDP) acknowledges that transforming the economy also means changing the patterns of ownership and control. To date, efforts to transfer ownership of productive assets have not yielded the desired results, with employee share schemes playing a relatively minor role. A bolder approach and clearer targets are required (NDP, 2012). According to Department of trade and industry (2015) The Black Industrialists Policy is a key part of Government's broad industrialisation initiatives to expand the industrial base and inject new entrepreneurial dynamism into the economy. It calls for bolder policy interventions on the part of the state to expand the industrial base of the country and grow the economy through dedicated support to black industrialists, as highlighted in the latest iteration of the Industrial Policy Action Plan. This is consistent with Government's commitment to expand South Africa's economic capabilities to design, manufacture and service products of increasing value. The development of the manufacturing sector is core to the industrialisation process. Primary requirements to successful industrialisation are the availability of coherent support measures to potential or existing industrialists to develop new capabilities and grow South Africa's global competitiveness (the dti, 2015).

The following three constraints of South African entrepreneurship are depicted-: The national experts interviewed in 2015 identified many weaknesses in South Africa's entrepreneurship ecosystem. The weakest entrepreneurial conditions in South Africa cluster around the areas of government programmes and policies, school-level entrepreneurship education and training, research and development transfer, and cultural and social norms. The scores for government programmes, government policies which are taxes, bureaucracy, cultural and social norms are of concern. In these categories, the ratings were substantially below the averages for the Africa region, the efficiency-driven economies, and the GEM sample. Only two countries which are Hungary and Croatia had lower scores than South Africa for social and cultural norms. The experts gave a particularly low rating to the extent which our national culture 'encourages entrepreneurial risk-taking. This strongly negative assessment may explain South Africans' low levels of entrepreneurial intention despite positive opportunity perceptions. The experts were asked to identify and comment on the three most important factors constraining entrepreneurial activity. The three main areas cited as critical constraints by the experts were government policy (61%), access to finance (44%) and education and training (42%). The researcher highlights these areas as critical factors since South Africa first participated in GEM in 2001. It is disappointing that the fact government policies are rated as a critical constraint. It is particularly disappointing in light of the fact that the government has repeatedly identified the SMME sector as an important vehicle for addressing the challenges of job creation, economic growth and equity, and committed itself to helping to create an environment in which businesses can get on with their job. It is further argued that the quantity and quality of the opportunities that people perceive and their belief about their own capabilities may well be influenced by various factors in their environment, such as economic growth, culture and education. Another factor taken into account is the fear of failure. Fear of failure can be influenced by intrinsic personality traits, as well as by societal norms and regulations. In some countries, the legal and social ramifications of business failure may act as a strong deterrent, reducing the pool of potential entrepreneurs. Potential entrepreneurs see good opportunities for starting a business and believe that they have the necessary skills, knowledge and experience to start a business. However, perceiving a good opportunity and having the skills to pursue it will not necessarily lead to the intent to start a business. Individuals will assess the opportunity costs, and risks and rewards, of starting a business versus other employment preferences and options (De Palma and Dobes, 2010).

It is promising though, to see policy makers and academics agreeing that entrepreneurs, and the new businesses play a critical role in the development and well-being of their societies and acknowledge of the role played by new and small businesses in an economy. Although learning is receiving high attention in government, in the private sector, as well as in institutions of higher learning the economic activity shows minimal impact on entrepreneurial activity that needs to be witnessed through growing number of entrepreneurs as opposed to increasing number of employment where unemployed graduates also add to that pool. Many institutions here are working tirelessly towards an espoused purpose, namely the improvement of the skills of the country's workforce. In this regard, the South African government has established Sector Education Training Authorities (SETA) to enforce skills development in the country (Duma, 2013). New microeconomic research has increasingly suggested that the relative labour market benefits of Higher Education (HE) in South Africa may be on the decline. Significant rise in graduate unemployment rates between 1995 and 2005, as well as the extent of emerging skills-mismatches, according to which the skills that new graduate labour market entrants possess deviate from the skills that employers demand, are two areas that have received much attention, both in academic research and the media (Koen, 2006).

It is suggested that entrepreneurial education reduces entrepreneurial intention for certain groups, for example, male German students, female Finish Students Greek students with previous entrepreneurial exposure (Packham, Jones, Miller, Pickernell, and Thomas, 2010; Petridou and Sarri, 2011; Joensuu, Viljamaa, Varamaki and Tornikoski, 2013). The deterioration of graduate labour market outcomes in South Africa is attributed to a combination of the HE system's lacking responsiveness to structural changes in the economy changes in the underlying demographic composition of South Africa's pool of graduate labour force participants and the fields in which they chose to study. The critical noted pandemic is the mismatch of skills and post-secondary qualifications (Kraak, 2010; Nabi, Linan, Fayole, Krueger and Walmsley, 2017).

In a review of the South African literature on unemployment among individuals with post-secondary qualifications, Kraak (2010) further argued that this skills-mismatch has exacerbated South Africa's existing skills shortages and adversely affected the employability as well as labour market prospects faced by tertiary-educated individuals than for any other educational cohort. Despite frequent references in the media and political statements to worsening labour market outcomes for South African graduates, the shortcomings of existing research on the relationship between Higher Education and the labour market imply that there is confusion about the labour market prospects that graduates are likely to face. This confusion is witnessed by prominent reporting of graduate employment and unemployment figures that are out-dated and taken out of context. The study purports to assist the Higher education institution in with the model and tools for the institution to be able to produce improved number of self-employed and innovative graduates as opposed to only employable graduates, considering status of South African economy with high level of unemployment (Chatterji, Glaeser and Kerr, 2013).

1.3 Problem Statement

It is still not well-understood why there appears to be persistent differentials in the labour market outcomes for graduates from different race groups, or how the specific higher education institutions (HEIs) that graduates attend relate to their expected labour market outcomes. The finding that the employability of South Africa's HE-educated individuals, when measured in terms of the probability of being employed rather than unemployed, varies substantially by race has been emphasized. Kriewall and Mekemsom (2010) postulate invention of new products and emphasis on the importance of teaching students such as engineers to be entrepreneurially minded being influencers as opposed to have an employability mind-set. The criteria for such entrepreneurial mind-set are possession of societal values, technical fundamentals, customer awareness and Business acumen (Kriewall et al, 2010). The pressing aspect is the business discontinuation rate reported in the 2016/2017 report. GEM report that percentage of the adult population aged between 18 and 64 years who are either a nascent entrepreneur or an owner-manager of a new business and who have, in the past twelve months, discontinued a business, either by selling, shutting down, or otherwise discontinuing an owner/ management relationship with the business. The question is posed on how a South African tertiary institution can contribute towards closing the entrepreneurial gap and contribute towards sustainable entrepreneurial culture (Packham, Jones, Miller, Pickernell and Brychan, 2010; Wong, 2014). Below is the extrapolation of the motivation of the study that will unfold on what prompted the study. Employability is the dream of most of South African graduate. This in return pose a challenge on whether South African tertiary institutions are adequately cultivating and instilling entrepreneurial culture in students' minds considering high employment. The subheading below postulates the objective of the study.

1.4 Motivation of the Study

A Higher education institution is the main contributor to the body and pool of knowledge. The societal expectation is that an academia provides knowledge solutions that may address country's economic needs, political needs family need as well as academic need. Such expectation may incorporate unemployment pandemic. Despite tireless effort of a South African higher education institution, there is still an outcry for unemployed graduates in the country. South African country is in and out of Junk status downgrade, and economy is declining. This has prompted the need to investigate the entrepreneurial culture in a South African higher education institution. The rationale behind is that time for only employable graduates is up if a South African Higher Education institution is determined to make a meaningful difference, change and impact towards the economy of the South African country. This study will assist a South African higher education institution with the tools that will address, poverty, alleviate unemployment, and to have a self-sufficient generation. The next subheading unfolds the focus of the study.

1.5 Focus of the study

The focus of the study was directed towards visitation of entrepreneurial culture in a South African higher education institution. This was prompted by high level of unemployed graduates which results in high influx of the unemployment pool. The study incorporated the disjuncture between the academic skills supply versus the South African skills demand. The study is expected to contribute to the body of knowledge toward entrepreneurial culture in a South African Higher Education institution. It is aimed at revisiting education system with increased level of entrepreneurial activity, through integrated collaboration within the academic sector, private sector as well as government sector. In addition, the study is expected to contribute towards unleashing the potential of students whilst in the institution thereby contributing towards minimizing the number unemployed graduates who exit institution to join the pool of unemployed labor force and wait for government support. The next subheading unpacks the actual problem statement in a condensed manner as indicated below.

1.6 Research Objectives

-To develop a framework/model with the intention to meet test of theory which are-:*functional significance* which is usefulness in helping people to understand entrepreneurial culture; *Comprehensiven*ess that entails embracement of the range of diversity of phenomena; *Verifiability* that entails logicality of concepts; *Parsimony* that encompasses the economic aspects of explaining events; *Internal consistency* where model/theory must not contradict itself but should account for things internally in a consistent way within a given set of assumptions, *Heuristic Value* where theory model or theory should stimulate further research

-To contribute towards meaningful education that is meant to instil entrepreneurial culture with the purpose of driving self-reliance, self-dependence as well as profit driving mentality.

-To support students with teaching, learning and education tools and support that will help them for the establishment of businesses from small to medium size and

- To unleash within students, the potential of creating work force through establishment of business from small to medium size and other job opportunities incorporated with risk management and uncertainty bearing information when managing their businesses, where the above objectives are interlinked to the research questions below.

1.7 Research Questions

-What subjective norms and cultural aspects may affect or interfere with promotion of entrepreneurial culture and which model and framework can address that?
-How is the level of entrepreneurial intention, attitude perceived in becoming an entrepreneur, and how is the level of entitlement?
-What role should tertiary institutions play in promoting an entrepreneurial culture?
-What support do tertiary institutions need from to promote an entrepreneurial culture?

1.8 Significance of the Study

South Africa needs to create six million jobs presently. The study will contribute towards the knowledge of not only teaching Entrepreneurship but also producing students with a mind-set of self-employment. That will in turn reduce the pandemic phenomenon of unemployment.
This study will also improve technology transfer from academia world to industry: NB: Only 5% start up business from Harvard University are successful. Jost (2015) and Paulsen (2015) raise the conflict of interest around the issues of who should own intellectual property, this study incorporates integrated helixes and reporting that will suggest collaboration around policies of who will own Intellectual property. It will also contribute to 2015 state of entrepreneurship address nine-point action plan, specifically point number seven which *is Entrepreneurial Education integrated holistically into education* This point emphasizes that entrepreneurship should be taught as a cross cutting key. The study will be limited to South African Tertiary Institutions and selected Matriculating students. The economy will be stimulated through investment diversity in products and services; contribution to Gross national products; wider market through international trade; and generation of employment in the economy ((Paulson, 2015).

1.9. Delimitations of the of the Study

Delimitations refer to choices made by the researcher, which should be mentioned. They describe the boundaries that you have set for the study. It is the place to explain: the things that the researcher is not doing and why the researcher has chosen not to do them. It however does not attempt to undermine the roles of the Executive Management and Council as well as line Managers who have full capacity of Managing universities. Initially the study was going to involve interviewing of people from universities of other provinces and TVET colleges. After defending my proposal, it became clear that the researcher's study was too broad and was limited one of the higher education institution in Durban. The study will also not focus on challenges and factors affecting women entrepreneurship since that is not the main purpose of the study. The study population will be extracted from Durban University of Technology institution and its key findings and recommendation to come out. The subheading below provides the researcher's perspective of what prompted the topic whist she is objective in her study as indicated below.

1.10. Researchers Perspective

It is important to note that the researcher is acquainted with the challenges facing adult learning fraternity, institutions of higher learning. This is cited because the researcher's life experience incorporates over twenty years as an employee. The researcher has been exposed to both in one of the big four South African financial institutions as an agent of knowledge transfer to staff and as an agent of skills development to one of the South African higher learning institution. The researcher has also gone through the experience and taste of retrenchment and to be non-permanently employed for almost five years and attempted to be involved in business, which could not materialize as it, was triggered by desperation of unemployment. The researcher therefore goes for this dissertation with boldness that emanated after enormous reflexive thinking with also the perspective of assisting the generation to come through contributing to the body of knowledge. The researcher is however very cautious of mitigating the possible challenge of biasness emanating from her experience.

1.11. Conclusion

Figures enshrined above indicate that Entrepreneurial culture remains pandemic in South African tertiary institution. Such pandemic does not only affect a South African tertiary institution, but it also affects South African economy. This is evidenced by GEM report with high level of unemployment and high level of unemployed graduates. The chapter also introduced the main concept and constructs to be studied. It touched on the actual problem review that has given rise to the gaps in knowledge that necessitates and justifies undertaking this study, the research problem, research questions, objectives, the research methodology, significance of the study and the parameters within which the study will be researched going forward.

CHAPTER 2
LITERATURE REVIEW

2.1. Introduction

The purpose of the literature review section serves as an evaluative report of information that is related to the researcher's area of study which is entrepreneurial culture in a South African Higher education institution according to this dissertation. This section defines, describes, summarises, clarifies, evaluates and furnishes the reader with theoretical perspective to determine the nature of research. It unpacks the concepts that postulate the role of the different role-players in the entrepreneurial culture activity thus identifying their ideal position within the Triple Helix, and gaining knowledge regarding research on constraints experienced. To acquire information on the Triple Helix model and the challenges experienced within developed and developing countries, references will be cited regarding Triple Helix. Thereafter the literature review will focus on the South African perspective. The research programme will aim to understand the different challenges experienced when leading a Triple helix project. The literature review will synthesize what frameworks are available to streamline the process. This will form the basis and departure of the research and an essential part of the research methodology (Mounton, 2011). The research considers various publications during the completion of the study. Literature regarding constraints experienced in the Triple Helix includes books related to the Triple Helix concept as well as journals and websites amongst others those of the Department of Trade and Industry, National Research Foundation Department of Science and Technology, and Human Sciences Research Council (Leydesdorff, and Park, 2014).

2.2. Multiphase Measure of Entrepreneurship

It is important to understand how entrepreneurship is measured. GEM's multi-phase measures of entrepreneurship are given below-: GEM captures both informal and formal activity observing the following multiphase measures. (i)*Potential entrepreneurs*-refer those who see opportunities in their environments, who have the capabilities to start businesses and are undeterred by fear of failure-:*(ii)Intentional entrepreneurs*-those who intend to start a business in the future (in the next three years); (iii) *Nascent entrepreneurs*-those who have taken steps to start a new business, but have not yet paid salaries or wages for more than three months; (iv) Ne*w entrepreneurs*-those who are running new businesses that have been in operation for between three and 42 months; (v)*Established business owners*-those who are running a mature business in operation for more than 42 months; *(vi)Discontinued entrepreneurs*-those who, for whatever reason, have exited from running a business in the past year. Dissatisfaction and entrepreneurship aspect reveals various types of dissatisfaction are used in micro studies of entrepreneurship. Dissatisfaction with previous work experience has been proven to be closely related to the entrepreneurial decision. It is asserted that self-employed individuals tend to be relatively highly dissatisfied with the previous work itself, with supervision and with opportunities for promotion but more satisfied with actual pay. Research data show that individuals are much more likely to act upon negative information rather than positive, and the data on company formations support that conclusion. Dilemma normally faced by entrepreneurs is that they are too large to access microcredit financing mechanisms while being too small to have the necessary cash flow to attract longer-term growth financing from commercial banks. It is argued that in a well-functioning financial system, clean energy ventures and other forms of early-stage enterprises are more likely to have a range of financing options and support services as they grow (Romano and Platania, 2014).

This is regarded as a way of meeting finance and investment gap. Early-stage African business ventures as is the case in many other developing countries typically operate in a much less supportive funding and investment capital ecosystem. In their final model both pull, and push factors contribute to the start-up of a business, but negative displacements such as forced emigration, being fired and being bored or angered predominate. Several other studies indicate that people are more likely to start their own enterprises when they face a lack of opportunities for viable careers in existing organizations. This fits with what psychology postulates about motivation. Individuals with a high sense of self-efficacy are activated by self-dissatisfaction like when they do not attain their goals. This spurs efforts to align outcomes with their value standards. The increased effort is believed to lead to increased performance if the person has the right tool to get his accomplishment done if this can be related to entrepreneurship (Redmond, 2010; Baker, 2015).

The three measure components of motivation force which are expectancy, instrumentality and valence could be regarded as the useful tools to achieve entrepreneurial culture. The model reveals that job satisfaction should be related to the strength of the force on the person to remain in his job or in other words that job satisfaction and turnover are negatively related to one another consequently, it is no surprise that dissatisfaction is one of the most important predictors of job mobility. The level of the individual, various kinds of dissatisfaction are conducive to job mobility and the propensity to become self-employed (Thurik and Dejardin, 2012).

2.3. Entrepreneurship and World Economic Forum

Challenges depicted by World Economic Forum for South Africa include identification of deepening income inequality and persistent jobless growth as the two most important challenges that the world will need to address. Inequality is one of the key challenges of our time. Income inequality specifically is one of the most visible aspects of a broader and more complex issue, one that entails inequality of opportunity and extends to age, gender, ethnicity and disability, among others. A lack of inclusive growth, capable of providing decent jobs and livelihoods for all people within society, is the second most critical issue. A shortage of employment opportunities in their countries is a very big problem by more than two-thirds of the world's population (Asia 62%, North America 64%, Europe 71%, the Middle East and North Africa (MENA) countries 70%, Latin America 79% and sub-Saharan Africa 88%. South African per capita income has now had two years of growth that is below its annual population growth of around 1.6%, which means that the country is going rapidly backwards in terms of per capita incomes. South Africa goes into 2016 facing yet another year of weak economic growth. The World Bank, in its recent economic update report on South Africa, noted that the economy is flirting with stagnation, if not recession, warning that poverty in South Africa is likely to increase. The World Bank sees South Africa growing at a dismal 0.8% this year down from an earlier forecast of 1.4%, while the Reserve Bank lowered its growth outlook for the year to 0.9% from 1.5%. (GEM, 2017). The International Monetary Fund pegs South African Gross Domestic Product (GDP) at 0.7%. GDP declined 0.3% in the fourth quarter of 2016 and 0.7% in the first quarter of 2017 but the overview of historical South African GDP between 2006 and 2016 is illustrated below.

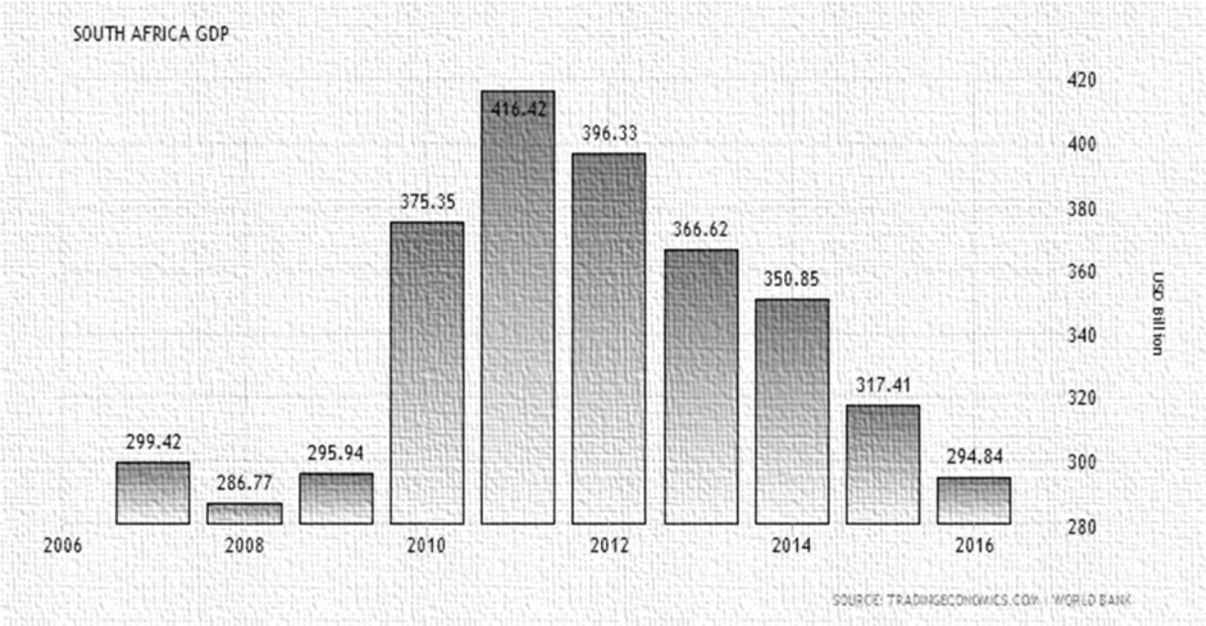


Figure 2.1 South Africa GDP- Source: Trading Economics-World Bank (2016)

According to trading economics website (2017), the GDP forecast projected until 2018 is illustrated as follows-:

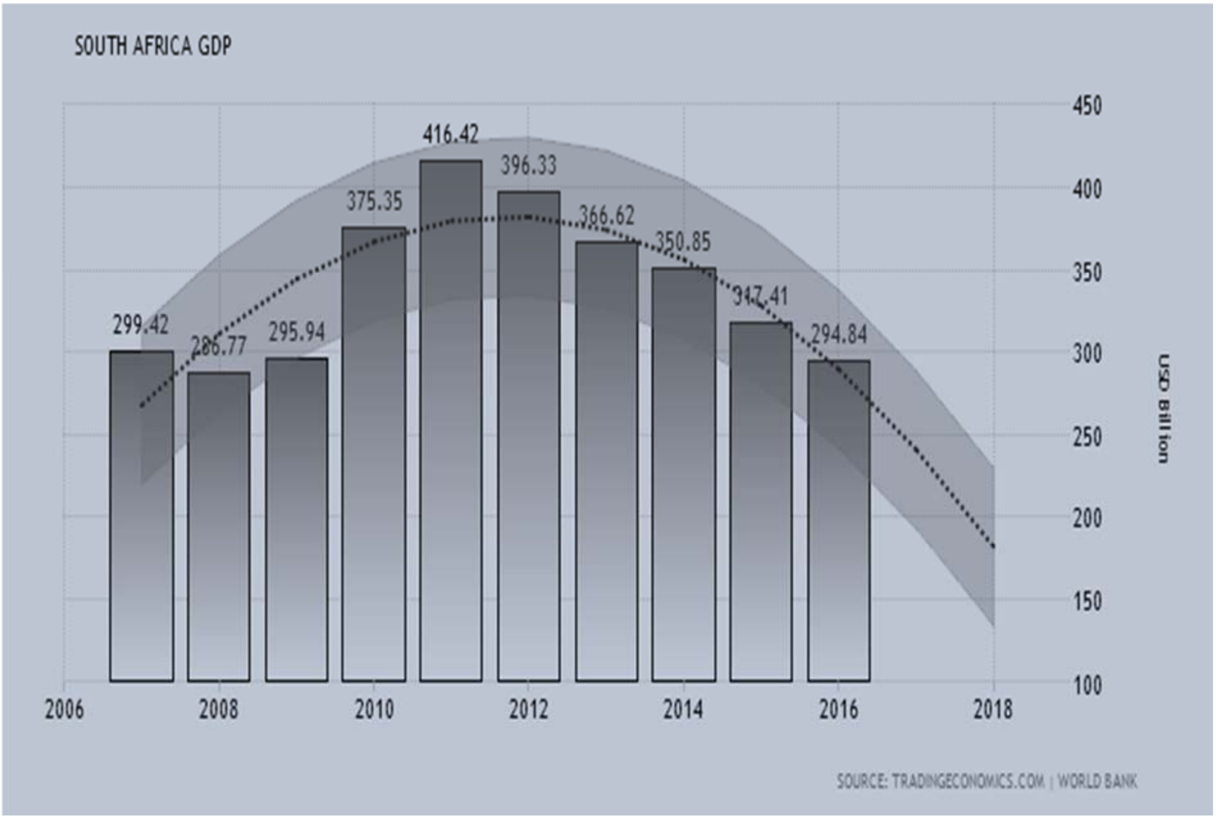


Figure 2.2 S A GDP Projection for 2018. Source: Trade Economics-World Bank (2016)

They further cited that GDP in South Africa is expected to be 360.00 USD Billion by the end of this quarter, according to Trading Economics global macro models and analysts' expectations. In the long-term, the South Africa GDP is projected to trend around 420.00 USD Billion in 2020, according to their econometric models (World Bank, 2017). Second-quarter data shows year-on-year GDP growth was 1.1%, and for the six months' growth has been 1.1%. The nominal GDP is estimated at R1.145bn. Rising debt levels, a further slowdown in economic growth and a large budget deficit are among the reasons that many credit agencies have downgraded South Africa. This situation makes it increasingly difficult to improve living conditions for most of the population, or to tackle unemployment or poverty to any significant extent. It has never been more important or urgent for South Africa's policy-makers to make a strong commitment to growing the economy. This will require far-reaching and radical changes, not only to policies, but to party politics. It is time for the ANC to ensure that it is not putting the party ahead of the country and the economy. In terms of *entrepreneurial intentions* Potential entrepreneurs see good opportunities for starting a business and believe that they have the necessary skills, knowledge and experience to start a business. Entrepreneurs either use the prevailing technology or upgrade to a more productive vintage at the cost of higher risk. A cultural bias towards safe production eventually leads to stagnation where entrepreneurs, because of their considerable proficiency, stay with existing methods of production (GEM, 2017).

This low (zero) growth equilibrium is analogous to colonial and post-colonial regimes where safe employment was highly valued, the pursuit of profits frowned upon and businesses were insular. Escaping stagnation is possible from an exogenous, significant increase to overall productivity or to the human capital specificity of technologies. In the first, growth occurs through innovation by existing entrepreneurial lines that retain their dominant position. In the second, newer entrepreneurial lines emerge that innovate precisely because they lack expertise in prevailing methods. In neither case does culture hold back economic progress. It is however noted that perceiving a good opportunity and having the skills to pursue will not necessarily lead to the intent to start a business. Individuals will assess the opportunity costs, and risks and rewards, of starting a business versus other employment preferences and options, if these are available (Chakraborty, Thompson and Yehoue, 2016). In addition, the environment in which potential, intentional and active entrepreneurs exist needs to be sufficiently enabling and supportive. The challenge cited is that entrepreneurial intentions tend to be the highest among factor-driven economies and lowest among innovation-driven economies, which confirms the already recognized pattern that starting a business is more prevalent where other options to provide income for living are limited. The importance of understanding the difference between entrepreneurship and Intrepreneurship plays a vital role for an individual to succeed in the world of entrepreneurship. The difference between the two phenomena is unfolded in the next paragraph (Gedik, Miman and Kesici, 2015).

2.4. Entrepreneur versus Intrepreneur

It is argued that Entrepreneurship existed before, and it failed. The next question would be why entrepreneurs and intrepreneur are suddenly more important today than before). The response to such question according to Maier and Zevonia (2011) is that world is changing and is heaving influenced by changing technologies as well as increasing competition. Entrepreneurship is the process of uncovering and developing an opportunity to create value through innovation and seizing that opportunity without regard to either resources (human and capital). Intrepreneurship represents the initiation and implementation of innovative systems and practices within an organization, by some of its staff under the supervision of a manager who takes the role of an intrepreneur, to improve the economic performance of the organization, by using a part of its resources. Intrepreneurship is also known as corporate entrepreneurship and corporate venturing. The question may be poised on whether there is the practice of developing a new venture within an existing organization, to exploit a new opportunity and create economic value. Entrepreneurship by contrast is the act of developing a new venture outside an existing organization. There is evidence that intrepreneurship helps managers to renew and revitalize their businesses, to innovate, and to enhance their overall business performance (Maier et al, 2011).

2.4.1. Similarities and differences between entrepreneurship and Intrepreneurship

The intrepreneur acts within an existing organization. The intrepreneur is the revolutionary inside the organization, who fights for change and renewal from within the system. This may give rise to conflicts within the organization, so respect is the necessary key to channel these conflicts and transform them into positive aspects for the organization. Even though intrepreneurs benefit from using the resources of the organization for the implementation of the emerging opportunities, there are several motives why innovation is more difficult to implement in an existing organization, such as (i) *The size*: the bigger the organization the more difficult it is to have an overview of the actions of every employee (ii)-*Lack of communication*:

Specialization and separation, help in concentrating on the areas of interest, but hinder communication. (iii) *Internal competition*: Internal competition amplifies the problem because instead of sharing the knowledge with others it borders the knowledge sharing. Everyone wants to keep the information to themselves. (iv)-*Feedback received in case of success/mistake*: Costs in case of failure are too great and the reward for a successful outcome too small (Dentchev, Baumgartner, Dieleman, Johannsdottir, Jonker, Nyberg, Rauter, Rosano, Snihur and van Hoof, 2016).

Intrepreneurs must be allowed to commit mistakes, because such mistakes are an inevitable part in the entrepreneurial process. The recognition of success is also very rare. No company provides payment in advance, for what an entrepreneur might accomplish, but a lot of them like to talk about the concept of entrepreneurship and expected their employees to get involved and assume their risk. Finally, when motivated employees get involved and have success, their only reward is a small bonus. (a)*Dullness*: Many companies are slow and reluctant to change. Intrepreneurs bump many times into the well-known sentence of believing in doing things in the old or same way which leaves little or no space to creativity. The willingness to try new things appears only when the company's shortcomings become apparent, but even so they don’t give room to an innovative leadership. (b)*Hierarchies*: Organizational hierarchies compel employees to ask permission for actions that fall outside their daily duties. The more complex the hierarchy, the more difficult it is to impose change Maier et al, 2011).

Summarized similarities and differences between Intrepreneurship and Entrepreneurship

Similarities	***Differences***
-Both entail risk and require risk management strategies. -Both entail a window of opportunity Within which the concept can be successfully capitalized upon. Both involve concepts that are most vulnerable in the formative stage, and That requires adaptation over time.	In a start-up venture, one strategic gaffe could mean instant failure; in intrapreneurship the organization has More flexibility for management errors. In a start-up potential rewards for the individual entrepreneur are theoretically unlimited where in intrepreneurship an organizational structure is in place to limit

-Both involve significant ambiguity -Both involve opportunity recognition And definition. -Both require harvesting strategies -Both are predicated on value creation And accountability to a customer. -Both require the entrepreneur to develop Creative strategies for leveraging resources. -Both are driven by an individual champion who works with a team to Bring the concept to fruition. Both require a unique business concept That takes the form of a product and process, or service. Both require that the entrepreneur be able to balance vision with managerial skill, passion with pragmatism and Pro-activeness with patience.	rewards/compensation to the entrepreneur/ employee. In start-up entrepreneurship, the entrepreneur takes the risk in intrepreneurship and the company takes the risk other than career-related risk. In a start-up the entrepreneur is subject or more susceptible to outside influences; in intrepreneurship the organization is more Insulated from outside forces or influence. In start-up the individual entrepreneur owns the concept and business in intrepreneurship; the company typically owns the concept and intellectual rights with the individual entrepreneur having Little or no equity in the venture at all.

Table 2.1- Similarities and differences between intrapreneurship and Entrepreneurship

Source: Edited from Morris (2007) ; Zenovia (2011)

2.4.2 Advantages and Disadvantages of Intrapreneurship and Entrepreneurship

I*ntrepreneurship*	
Advantages	Disadvantages
Access to customers, infrastructure Ability to stay in a friendly, well known environment Practicing your skills within an organization – lower risk Using company's resources, good name, Knowledge	Innovation may not be appreciated Accordingly Reward may not be up to expectation You can be innovative but to a certain limit – you are not your own boss
Entrepreneurship	
Advantages	*Disadvantages*
You have part of excitement and adventure Salary potential – you decide upon your own salary You are your own boss – independency You have the chance to be original The income increases	Mistakes are magnified Long working hours Money pressure – giving up on the security of a regular paycheck All decisions must be made alone Less benefits as the business is new

Table 2.2- Advantages and Disadvantages of Intrepreneurship and Entrepreneurship- Source: Kuratko, (2007); Zenovia (2011)

The above illustrated similarities, differences, advantages as well disadvantages will play an important role behind the rationale of understanding and addressing critical challenges and obstacles encountered when dealing with entrepreneurial activity as some are postulated on the next paragraph. Critical challenges that need to be addressed include inefficient government bureaucracy, which remains one of the major obstacles to entrepreneurial activity and business growth in the country. Improving access to entrepreneurial finance, human capital development, improving market access for small businesses and encouraging an entrepreneurial culture in South Africa are also key areas that need to be addressed. Organizational knowledge is imperative for the success of any entrepreneurial institution. Complexity of knowledge is accumulated through expertise that resides in individuals and it is partially or largely inexpressible. This is because organizations operate as distributed knowledge systems and contain within the various streams of knowledge. Inter-organizational

knowledge transfer is the process in the organization which one unit such as individual, group, and department affects division affected by the experience of another. This affects the performance of the recipient units, knowledge repositories in general and the potential outcomes of knowledge transfer. It is important to note that the business models might originate from entrepreneurs, non-profit organizations, business development of multinationals or their intrepreneurial activities, but also from the initiative of a specific economic sector, groups of citizens or government agency (Fidan and Balcı, 2016; Dieleman et al, 2016).
The management of knowledge therefore includes the process of capturing, analysing, sharing and distributing knowledge, while technical expertise in many organizations has become a scarce and costly commodity; expert transfer has become a convenient, workable and important way to share expertise that may be located anywhere in the world. It is contended that the institution which has broad knowledge management may benefit more from knowledge sharing than from market knowledge acquisition in developing radical innovation. An institution that has massive knowledge continues to accumulate know-how across variety of disciplines and heterogeneous market domains through its extensive knowledge exploration. Contrary, knowledge sharing incorporates the horizontal integration of disparate knowledge, and a broad knowledge base provides diverse knowledge interfaces among functional units. Through increased interactions and knowledge exchange, individual members of different functions recognize how others' know-how bears on their own work and how to synthesize it to serve the common goal of radical innovation creation (Thurik and Dejardin, 2012).

2.5. Entrepreneurship and Black Industrialist

A juristic person that includes co-operatives, incorporated in terms of the Companies Act (2008), owned by Black South Africans as defined by the B-BBEE Act who creates and owns value-adding industrial capacity and provides long-term strategic and operational leadership to a business. A Black industrialist can also be a natural person. The following are characteristics of a Black industrialist-: (a) Provides strategic and operational leadership to the business; (b) Has a high level of ownership (>50%) and/or exercises control over the business; (c) Identifies opportunities and develops business to take advantage of these opportunities (entrepreneurial); (d) Takes personal risk in the business; does business in the manufacturing sector, with reference to Industrial Policy Action Plan research areas; and makes a long-term commitment to the business and is a medium to long-term investor. While there is a desire to support entities with significant and dominant black ownership and control, it is accepted that there may be a need to include other shareholders to attract relevant skills, finance and opportunities. The gap that still prevails within black industrialist is shortage of technological entrepreneurship from patenting to commercializing (the dti, 2015; Katzir, 2017).

2.6. Entrepreneurship within Research and Development Innovation

The working definition employed for this research project is that innovation, as an interactive but non-linear activity, aims to transform entrepreneurial ideas through actionable Research and Development to introduce new need-meeting and benefit-providing product and service inventions to the commercial market. Research and innovative Development plays an imperative role in global as well as longitudinal research initiative through which university students offer entrepreneurship researchers and education administrators data-driven insights into the impact of entrepreneurial education. The role it plays impacts on the motivational processes underlying a student's route to entrepreneurship through the entrepreneurial process and the process of identity transformation from student to entrepreneurship. This calls for vigorous and on-going research, whilst embarking on strategic to continuously improve entrepreneurial education with integration to entrepreneurial culture (Vanevenhoven and Liguori, 2013).

2.6.1. *Entrepreneurship and Research and Development (Rand D) Projects*

These concepts are utilized for innovation, contributing to knowledge, improvement of products or processes. Research and research development is creative work undertaken on a systematic basis to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise new applications (Kahn and Blankley, 2005:10). There is a dire need for HEIs to Understand current forms of collaboration and partnership between university and industry, and the benefits and constraints thereof for research and innovation; Understand the dynamics of best-practice collaboration in key sectors in relation to international trends; Understand institutional dynamics within universities and the policy interventions in the national system of innovation that support and facilitate university-industry interaction. A research and development project between a University and industry partner is can be regarded as a complex effort to achieve a specific objective within a schedule and budget target, which typically cuts across organizational lines, is unique and is usually not repetitive. One reason for this is that knowledge of one context is often applied (or fails to apply) to another and the knowledge is instinctively modified as it is applied within the new context, but this is by no means a simple process (Dentchev, et al, 2016).

2.7. Entrepreneurship within Value chain and Fourth Industrial Revolution

Brown (1997:28) defines the Value Chain as a tool to disaggregate a business into strategically relevant activities. This enables identification of the source of competitive advantage, by performing these activities cheaper or better than its competitors perform. The Value Chain is part of a larger flow of activities carried out by other members of the channel-suppliers, distributors and customers. Global value chain as tool now requires companies to familiarise themselves with fourth Industrial Revolution concept if they want to meet the fast-growing competitive advantage. The Fourth Industrial Revolution is impacting on the industrialization options for Africa inter alia through three interrelated sets of technologies, namely automation, manufacturing and the Industrial Internet. It allows companies to explore new business models of bringing goods and services to consumers. It is noted that entrepreneurship is concerned, policy makers should recognise that industrial policy that are compatible to fourth Industrial revolution and this talks to strong global cultural intelligence (Manyika, Lund and Bughin, 2016).

2.7.1. The value chains

The Value Chain approach views an organization as a series of processes, each of which adds value to the product or service for each customer. It is regarded as chain of activities that the organisation or institution operating in an industry to deliver a service or product within a specific market. It is normally grouped into business processes to follow a sequence and chain of events. For an organization to create a competitive advantage, the value chain needs to enable the company to create a unique value to its customers. There is more than one way in which the company will be able to create unique value for its customers, like lower costs, superior benefits or differentiation. To achieve competitive advantage and creating value for customers, it is important to understand which activities are important in value creation and which are not developed in a value chain model. The value chain consists of primary activities and support activities. Primary activities are directly related to the creation or delivery of the product or service (Johnson, 2010; Reed, Storrud-Barnes, and Jessup, 2012; Schwab, 2016).

Such requires promotion of entrepreneurial experimentation within an appropriate entrepreneurial ecosystem, characterised by live-and-let-die policies that will not support or keep inefficient firms alive; that will minimise rent-seeking and avoid government capture by entrepreneurs; that will provide entrepreneurs with smart government support; and that invests in entrepreneurial skills. One can however not ignore the main threats posed by fourth industrial revolution which are job-losses, the redundancy of the model of industrialization based on low-cost labour in assembly-type manufacturing, and the re-shoring of manufacturing to advanced economies. It is argued that the exponential changes in new technology are characterized by a fusion of technologies across the physical, digital and biological worlds' that are leading to profound shifts across all industries, marked by the emergence of new business models which affects every aspect of society (Naude, 2017).

2.8. Entrepreneurship Theories

2.8.1 Evolution of entrepreneurship Theory

It does not only concern the process that leads to setting up of a business but also to expansion and on-going development. Such entails unpacking of entrepreneurial behaviour as well as dynamics of a business. Its evolutions are traces back from Adam Smith (1776) where according to him an entrepreneur is a person who acts as an agent in transforming demand into supply. Jean (1803) believes that an entrepreneur is a person who shifts resources from an area of low productivity to high productivity. Schumpeter (1934) postulates that the process of entrepreneurship is incremental or evolutionary since it evolves from sole propriety to a public company. It is noted that entrepreneur is a knowledgeable individual and is instrumental in the development of a city state where enterprise will emerge. McClelland (2002) interprets entrepreneur as a person with a high need of achievement and such need is directly related to the process of entrepreneurship. Scholars cited below distinguish different types of entrepreneurs and categories of entrepreneurial behaviour. Innovative entrepreneurs are distinguishable from replicative entrepreneurs who are also known as "opportunity" entrepreneurs (Christensen, 2011; Woodside, Bernal and Coduras, 2015).

Replicative entrepreneurs refer to small business owner-managers whose businesses stay small; these owner managers not seeking to grow their businesses as a priority but to earn a viable income. Culture's role in this regard, as a principal antecedent for entrepreneurial behaviour, remains the most influential. The importance of innovative entrepreneurs and in developing a theory of entrepreneurship's impact is being described. We are however warned that high taxes can encourage replicative entrepreneurship rather than innovative entrepreneurship. Self-employed owners face lower tax rates than the employed. This view is countered by the perspective that self-employed may pay high payroll taxes because they pay both employee and employer shares. This pandemic encourages new business owners to stay small and encourages workers to sell their labour to small companies versus big companies.

Conceptual confusion over the nature of entrepreneurship can also create policy confusion: attempts by governments to boost the number of small businesses can reduce the likelihood that one of those small businesses will out-compete all the others are also cited. Definition of entrepreneurship is more than simple creation of a business as there is a process of innovation and new venture creation embedded in it. Such occurs through four measure dimensions, which are individual, organizational, and environmental and process through collaborative network within the government, education and business sector institutions ((Henreksen and Sanandaji, 2014; Woodside et al, 2015).

2.8.2. Complexity theory and entrepreneurship

Complexity theory is a suitable methodology for the construction of generalizable case-based models that describe, explain and predict simple and complex outcome conditions including case-based modelling at the macro (national) and micro (firm) levels of analysis. It is argued that the level of entrepreneurship is the cumulative amount of innovative thinking that exists in the person hence complexity of combined constructs is required to achieve entrepreneurial culture. Complexity theory encompasses a wide range of theoretical contributions in most scientific disciplines. Among the many definitions that have been proposed, a common one that one is that complexity theory deals with the study of complex systems that are composed of many interacting elements that interact in complex ways. This includes Entrepreneurial activities in one's career which also constitutes one’s entrepreneurial experience. Entrepreneurial experience can also be achieved in a learning outcome. Entrepreneurship Orientation in this regard becomes learning and a training process that increases the frequency of showing entrepreneurial behaviour patterns in the person. In addition to this, administrative obstacles and inadequacies are some of the impediments that build up and accumulate on the complexity theory (Fidan and Balcı, 2016).

2.8.3. The Entrepreneurship and Institutional Theory of culture

Culture is a configuration of two or more factors representing the complex whole of individual dimensions. Institutional theory is traditionally concerned with how various groups and organizations better secure their positions and legitimacy by conforming to the rules and norms of the institutional environment. Institutional theory is thus concerned with regulatory, social, and cultural influences that promote survival and legitimacy of an organization rather than focusing solely on efficiency-seeking behaviour. The main reason for the increasing standing of the institutional perspective in entrepreneurship research lies with the dissatisfaction with theories that venerate efficiency but downplay social forces as motives of organizational action. Three major streams of research have been evident which are institutional setting, legitimacy, and institutional entrepreneurship. Its shortcomings have also been identified which are reliance on single perspective of institutional theory, reliance on the examination of culture. The diagram below postulates how Woodside et al (2015) postulates Asymmetric theory of culture and entrepreneur actions (Bruton, Ahlstrom and Li, 2010; Woodside et al, 2015).

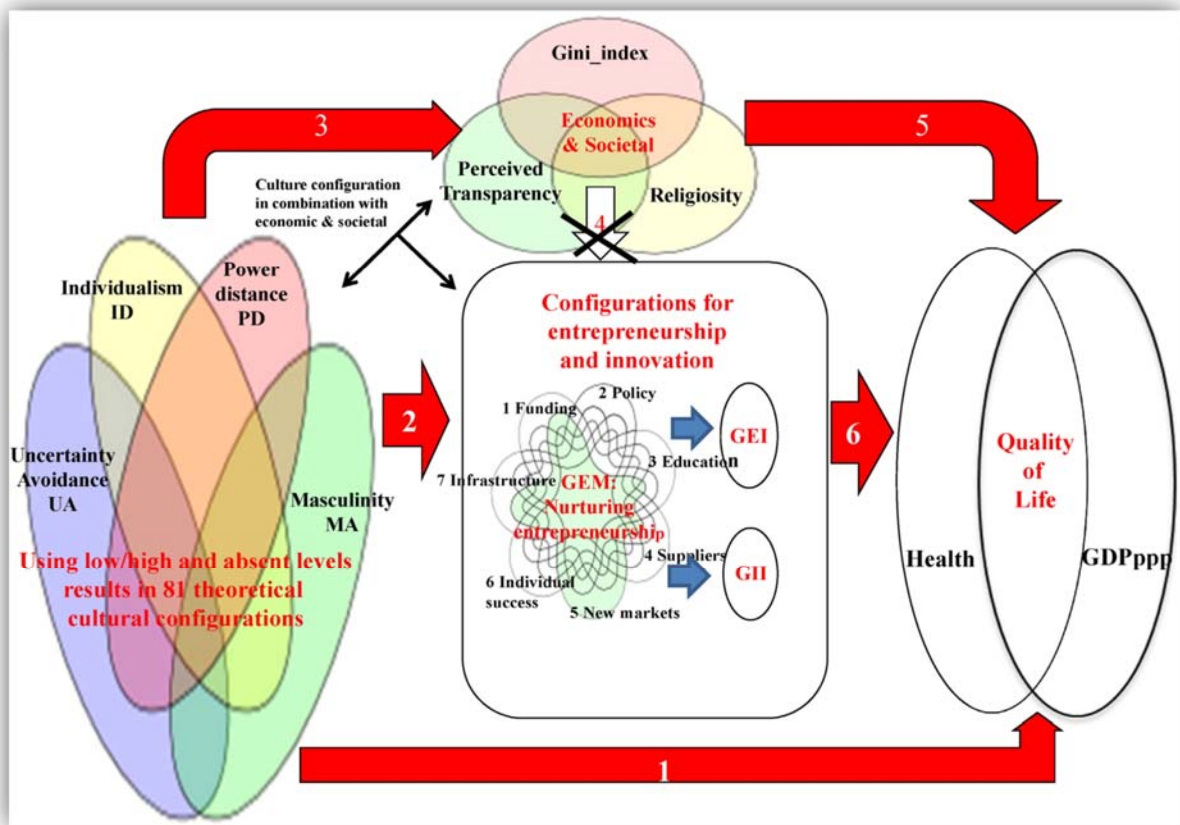


Figure 2.3- Symmetric theory of Culture-Source: Woodside et al (2015)

This diagram as cited by Woodside et al (2015) postulates Asymmetric theory of culture and entrepreneur actions. *GEM = Global Entrepreneur Monitor. GEDI = Global Entrepreneur Development Index. GII = Global Innovation Index. GEM nurturing activities: 1-sufficient venture capitalist funding; 2- national government policy supports new and growing firms; 3-primary and secondary education encourages creativity and initiative; 4- sufficient suppliers, subcontractors, consultants to support start-ups; 5- new and growing firms can easily enter new markets; 6- national culture highly supportive of individual success; 7- physical infrastructure provides good support for start-up* (Wooden, 2015).

They argue that the causal asymmetry tenet that follows from complexity theory is testable using asymmetric set-theory as well by simply calculating the negation of the outcome condition. This confirms the high value in entrepreneurship nurturing behaviour as measured by the GEM. Wooden et al (2015) study contributes to theory by showcasing the substantial theoretical contributions possible to achieve from adopting complexity theory and asymmetric analysis into research on entrepreneurship. This expands to entrepreneurial intention to perform a specific behaviour is mainly motivated by the desire to perform this behaviour and to achieve a specific goal. They further contend that that only those countries with specific cultural tendencies will engender a strong entrepreneurial orientation to demonstrate how different national cultural configurations associate with nurturing versus thwarting entrepreneurship activity, entrepreneurship start-ups innovation (Wooden et al, 2015).

2.8.4. Psychological Theories and Entrepreneurship

The essence of psychological or personal theory is the difference in individuals' attitude. Prospective entrepreneur may have developed numerous evolved psychological mechanisms. Such specific and complex evolved psychological mechanisms may provide humans with the advantage of ensuring that the social behavior of teams, tribes, and families functions smoothly. At the same time, without long-term future thinking and preparing for potential catastrophes now and without being interested in developing new ideas and improving tools and their use, human beings would have suffered and may not have survived. According to this theory the difference in attitude i.e. the internal attitude and ability to judge and forecast the situation lead a man to become a successful entrepreneur. Some important theories of this field are linkages to theory on need for achievement which is the most important one of the various psychological theories on entrepreneurship. The Need for achievement theory emphasizes the relationship of achievement motivation or need for achievement to economic development via entrepreneurial activities (Glaub, Frese, Fischer and Hoppe, 2014). One would expect a relatively greater amount of entrepreneurship in a society if the average level of need achievement in a society is relatively high. This theory advocates increasing level of need-achievement in a society to stimulate entrepreneurship and economic growth. It is contended that entrepreneurs are activated by the high extent of achievement motivation and he also stated a desire to do well, not so much for the sake of social recognition or prestige, but for an inner feeling of personal accomplishment, induce people to be an entrepreneur. Psychological theories, when linked to entrepreneurial concept touch on the awareness of entrepreneurial self-identity as well as other cultural socio ecological aspects of everyday life that in return impact on entrepreneurial outcomes like entrepreneurial failure or success (Hogan and Blickle, 2013; Obschonka and Stuetzer, 2017).

In the theory of withdrawal of status respect Everett Hagen's argument is that certain social changes are cause of psychological changes in a group or in an individual of the society. He believes that the initial condition leading to eventual-entrepreneurial behaviour is the loss of status by a group of collectivity. According to him, loss of status can occur in one of the four ways-(i) the group may be displaced by force; ii) it may have its valued symbols denigrated; iii) it may drift into a situation of status inconsistency and iv) it may not be accepted in a new society, and the outcomes or reactions of the loss of status are retreatism, ritualism, innovation, reformism and rebellion. This theory has however been criticized for two major reasons; (i) that this theory is post hoc that means, Hagen discovered instances of the withdrawal of status respect by looking first at situation in which economic growth occurred and then by looking for status losses that might have preceded that growth. (ii) Criticism has centred on the long period of time- as much as five or more generations are required for the withdrawal of status respect to result in the emergence of entrepreneurship (Arend et al, 2015).

Motive-Acquisition theory which is a revised version of need for achievement known as (n Ach) theory expresses that the mentality, personality, thinking power, attitude etc. are not in-born but they are flexible and changes with situation. It advocates in favour of frequent training and development programs to influence and motivate an individual towards a goal by changing his/her thinking, mentality and attitude. Risk taking theory introduced by Richard Cantillon and John Stuart Mill defined entrepreneurship as a mentality to take moderate or calculated risk, because people taking a very big risk also have a great responsibility to perform this responsibility people must take initiatives and this initiative result entrepreneurship. Internal-External Locus of Control theory highlights the self-confidence of a person, the dependency on fortune and external environment for becoming an entrepreneur. According to this theory internal locus of control i.e. self-confidence, extreme belief over one's ability and power motivates individual of a society to take initiatives for innovation, which is very much helpful for individual side by side for society (Fisher, 2012).

Independence Motivation theory is the like internal-external Locus of control theory, which also emphasizes on the independents thinking of entrepreneurs. This theory expresses that people having independent thinking, self-confidence, self-controlling ability can avoid social condemnation for becoming an entrepreneur. Creativity or Innovation Theory highlights the physical performance as the determinant to evaluate whether an individual is creative or not, because creative individual uses their talents, thinking ability to create new and fundamental ideas or views and they also find out techniques to bring new ideas into practice. Power Motivation Theory has given emphasis on the researcher to do a certain task properly. Especially for entrepreneurship development personal power, which is related to self-interest, is essential. It is argued that one can only understand the behavioural and psychosocial outcomes of a person's personality such as work-related outcomes such as entrepreneurship if one is able to understand the personality of a person as a coherent whole, as a system with specific dynamics between the single components of the personality system and coherence tendencies must be understood and be interacted with knowledge resources (Obschonka., Silbereisen., Cantner and Goethner, 2016).

2.8.5. *Theory of Planned Behaviour and entrepreneurship*

. A theory of Planned behavior is highly influential to the *perceived behavioral control* in the sense that in an entrepreneurial environment it is possible to plan for perceived response to discounted bulk buying which in turn impact on the social norms sometimes thereby disrupting planned savings due to limited resources which forces the society to interfere with their savings and investments beliefs about attitude, control and norms influence behaviour and are mediated by intentions. Theory of planned behaviour also argues that entrepreneurial intention is an effective predictor for entrepreneurial behaviour. Ajzen (2011) defines intention as a person's readiness to perform a given behaviour. It is argued that has regularly been applied to marketing and consumer behaviour. Ajzen (2011) further offers two options for operationalizing behavioural categories. One option is to measure the individual actions that make up the behavioural category, and then aggregate the resulting data to form an index (Ajzen, 2011). Another alternative that is suggested is to employ measures at the level of the behavioural category itself. It is further argued that although theory of planned behaviour is substantial, entrepreneurship research cannot rely solely on evidence from other domains to validate intention as a predictor of start-up behaviour. There is further contention that the measures of theory of planned behaviour should be matched with respect to four components: action, target, time, and context. This theory incorporates attitudes, subjective norms intention and behaviour and perceived behavioural control (Kautonen, van Gelderen and Matthias, 2015; Jie and Harms 2017).

2.8.6. Sociological and Anthropological theories in entrepreneurship

It is saddening that African states have occupied a prominent place in discussions about state failure, collapse and reconstruction. It could be argued that such failure concept does not only indicate a malaise with the post-colonial African state, but reflects a growing dissatisfaction to Africans what are increasing day by day. This could be evidenced by the fact that most of the African countries strived for freedom with the hope to be free through casting of votes. One can not dispute the fact that freedom is more associated to financial freedom (Hagman and Peclad, 2010). Concerns about the role of violence and neoliberal preoccupations with efficiency necessarily put questions of legitimacy at the centre of the hybrid governance approach. This question tends to be addressed by emphasizing the local embeddedness of hybrid systems of authority. There are so many reasons that cause violence, to name a few it could be hunger where people feel they are unemployed; corruption where people feel societal needs are not attended to because some official squander state funds; political reasons such as sanctions where due to ideological conflict. This call can be addressed through proactivity in organisation citizenship behaviour as it has the capability of instilling ownership of one's vicinity. Ownership will bring sense of what one can contribute to change the economy and entrepreneurial culture will indirectly be instilled. Sociological and Anthropological theories are therefore based on sociological and anthropological aspects. This is because socio-cultural factors have a substantial influence in creating entrepreneur as well as entrepreneurship (Li, Frese and Haidar, 2017). Social and cultural factors place a high value on innovation, risk taking, and independence is more likely to produce entrepreneurial events than a system with contrasting values. It is noted that entrepreneurs with a high level of exposure to prenatal testosterone were more successful, but this relationship was significant only for those who postulate a high level of need for achievement. It is argued that there is much effort goes into building markets as a tool for economic and social development; those pursuing or promoting market building, however, often overlook that in too many places social exclusion and poverty prevent many, especially women accessing markets. These values included, first, an emphasis on the inherent goodness of work itself (Unger, Rauch, Weis and Fres, 2015).

2.8.6.1 Entrepreneurial success factors

The entrepreneurial success factors are broadly divided into four categories (Ahmed, 1981). These are (a) Psychological factors which are (need for achievement; risk taking; need for power; internal-external locus of control, motivation for autonomy, creativity, need for affiliation and intelligence) (b) socio-cultural factors (religious values, rural-urban orientation, marginality and tension, social cohesion, etc.); (c) Personal factors (family tradition in business, previous experience, birth order, age at entrepreneurial level, education etc.); (d) Opportunity factors (economic opportunities, peer group assistance, training opportunities and guidance, existing schemes of entrepreneurial training and guided entrepreneurship. Some entrepreneurial success factors are innovativeness and well-coordinated-flexible persistent actions that indicate the quest for something new, like managerial capability, as well as adaptability; self-awareness/self-motivation for achievement; self-confidence and personal initiative; market knowledge relating to business environment like market demand, competition, technology development, product development, social and political issues. It is illustrated below-

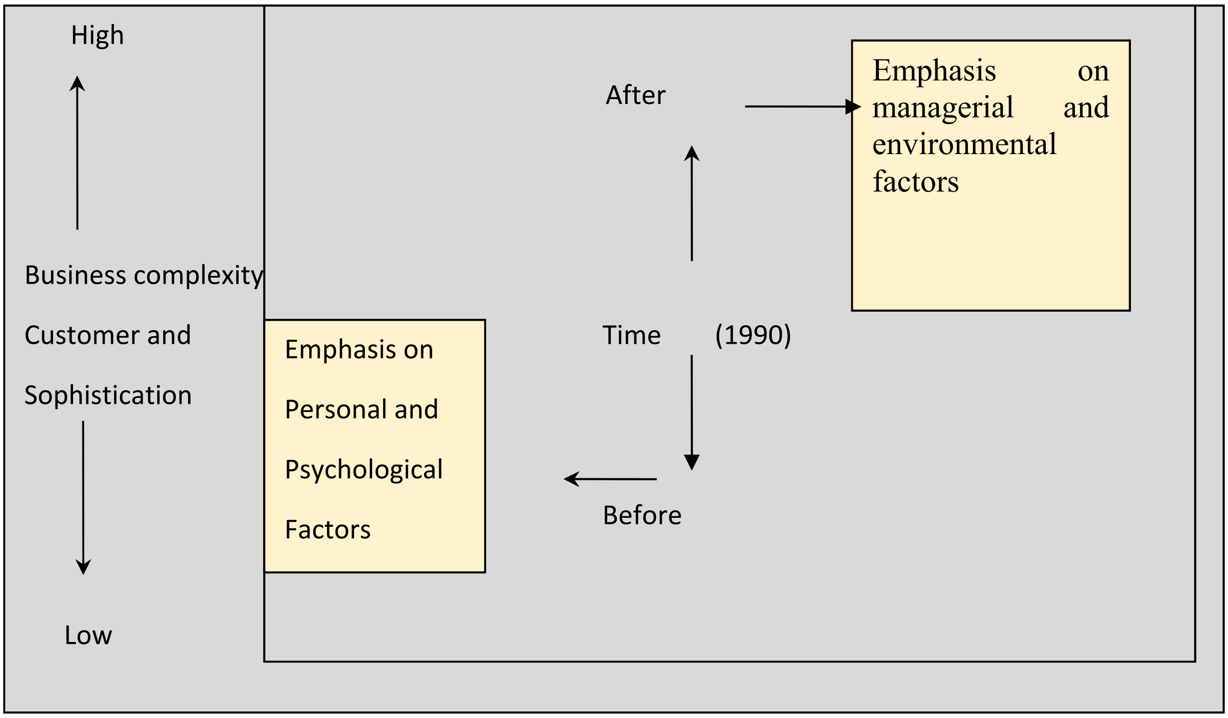


Figure 2.4- knowledge relating to business Environment-Source: Islam and Nazrul (2008)

Entrepreneurship plays the key role for the economic development creating employment, increasing investment and consumption of a nation. Economic Development is regarded as important even in the global environment because it is where entrepreneurship plays vital role in changing the economic spectrum of the world. It is where business and mass production take place since growth is being driven by veritable entrepreneurial revolution. Entrepreneurs are facing the problems of knowledge (information) and coordination to utilize or to use their resources like skill, risk taking ability, capital, and ideas where Unemployment reduces the opportunity to generate income through paid labour and, therefore, may push individuals into self-employment out of necessity. On the other hand, when unemployment increases, entrepreneurs face a decline of markets for their products (i) Development of Entrepreneurship through Technological development (ii) Initiating Strategies for Technology Development (iii)Total development in the technology (iv) Mass Participation in Technological Innovation for Entrepreneurship (v) Development of Entrepreneurship through Networks (Arin, Huang, Minniti, Nandialath and Reich, 2015).

It is noted that findings on the relationship between formal education and aggregate entrepreneurship provide conflicting results. This results from the notion that formal education improves individuals' decision-making skills and their understanding of markets yet, many entrepreneurs tend to be jacks of-all-trades, and their skills do not necessarily align with formal education. A significant amount of entrepreneurship research has shown that the economic context within which opportunities are discovered and exploited which extrapolates that the level of economic development of a country, strongly influences aggregate entrepreneurship. It is argued that while the connections between human capital, level of development, and entrepreneurial activities have received substantial attention, research into the effects of institutions on aggregate entrepreneurship has burgeoned in recent years. Institutions set the rules of the game and have the power to influence the allocation of activity between productive, unproductive, and destructive entrepreneurship and by influencing productivity, technological progress is a primary driver of growth. The theory of regulation however suggests that administrative complexity, by increasing the costs of entry, is negatively associated to entrepreneurship (Arin et al, 2015).

Even in the state and the entrepreneurship perspective, there is an expectation that entrepreneurs will contribute to growth and employment creation in developed, emerging and advanced economies where most of them employ the model below-

-Linking it between franchising network and entrepreneurship and economic development:

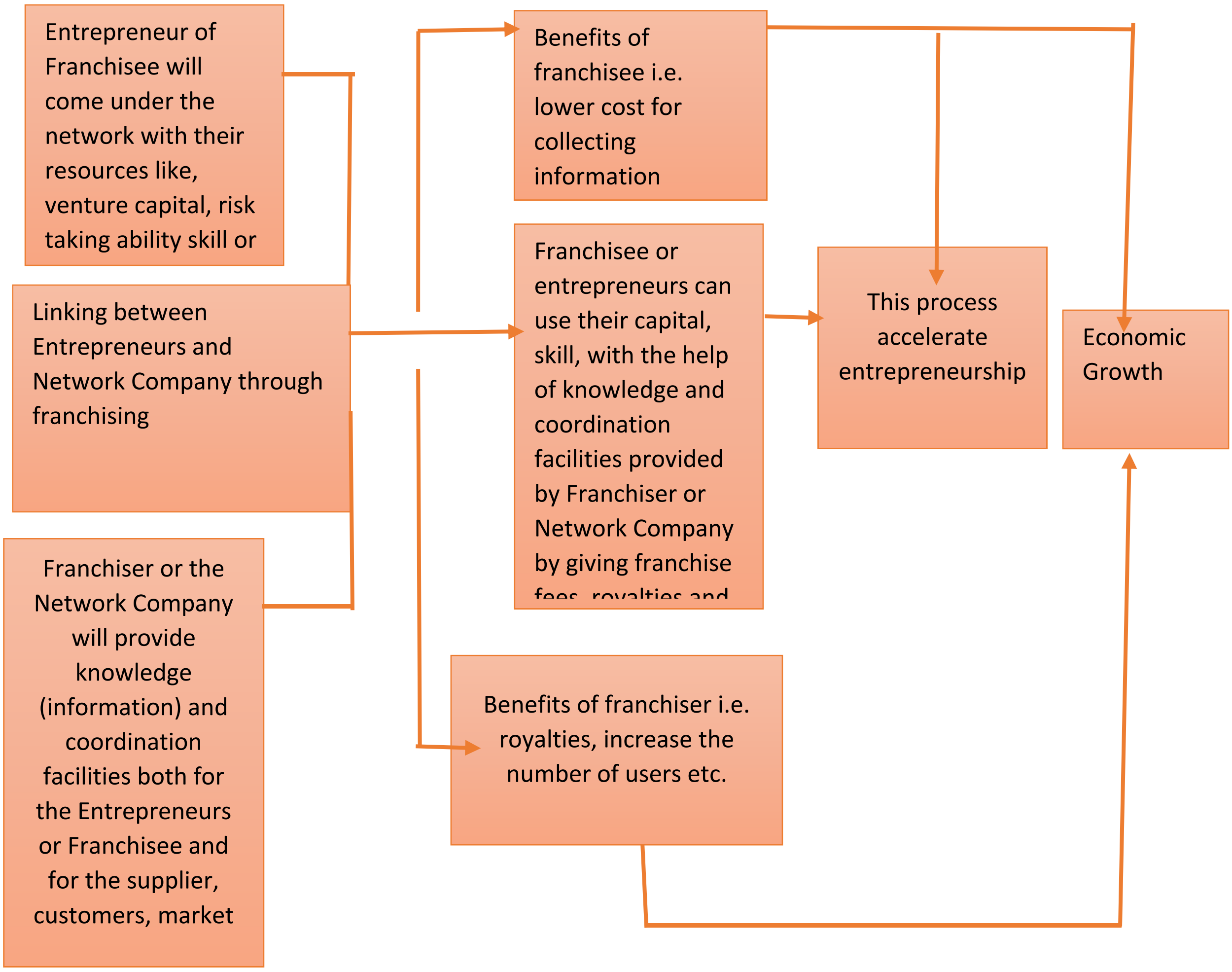


Figure 2.5 Franchising Network and entrepreneurship- Source Researcher (2018)

Shortcomings of this model are- (i) privacy of the information; (ii) efficient personal having the ability to identify wrong information provided by the both network company, suppliers, customers; (iii) this model requires competent and efficient personnel for creating new ideas by analysing the information provided by this network. It should also be noted that the emergence of women entrepreneurs in a society depends mainly on economic, social, religious, cultural and psychological factor.

2.8.7. Theory of organisational readiness

This theory refers to organizational readiness for change and is a multilevel multifaceted construct. It is where institutional members share their expertise to implement change through shared belief and change efficacy. They collaboratively and collectively appraise three key determinants which are implementation capability, resource availability and situational factors. In In short, this theory is described as shared psychological state in which organisational members feel committed to implement change where they apply their optimal level of confidence in their collective abilities to do so.

2.8.8. Action Theory Approach and entrepreneurship

Action Theory Approach view an entrepreneur as an individual who has the goal of self-sustainability by being self-employed. He also maps out the area in which the firm is supposed to operate (opportunity detection may be one facet), plans how to achieve this goal, monitors the process of executing these ideas, and processes feedback from (potential) customers, banks, business angels as well the public aspects. It is argued that for an individual to be ready to pioneer action through proactivity, two hormonal systems may be of particular importance: dopamine and testosterone. One form of biological foundation that undergirds human agency/proactivity is the dopamine system, which is involved in human reward, approach, and motivation system. Dopamine receptor genes have also been reported to be linked to approach-related traits and behaviours, such as novelty and entrepreneurship is found to be related to job satisfaction which has been regarded as an important consequence of proactivity. This may also be tied with status achieving, because after the individual has achieved a high level of status in the society, in this regard through being effective because of his or her successful business. The individual or prospective entrepreneur can have more control over other people through financial muscles and perhaps also the surroundings resulting from high degree of proactivity by following the Frese's action sequence as illustrated below (Li et al, 2017).

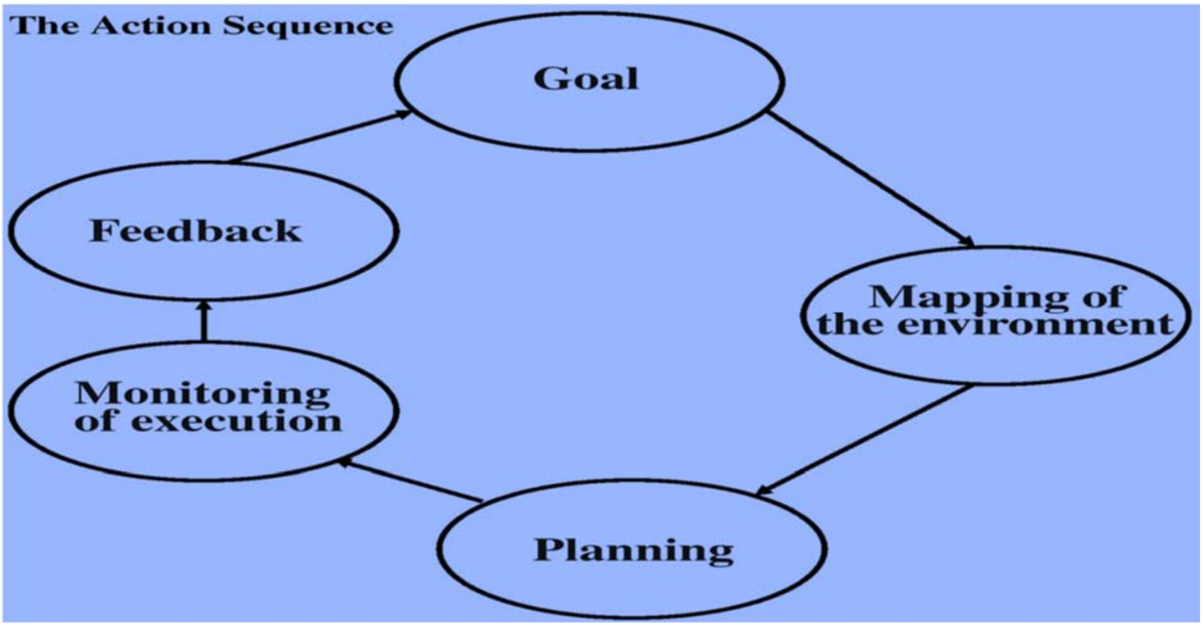


Figure 2.6-Action Sequence- Source: Edited from Li et al (2017)

The above model postulates that Action is *goal*-oriented behaviour; therefore, goals are of primary importance for actions. Goals are anticipated future action results and they are used as set points.

Mapping of environment indicate that Owners must know the environment or acquire knowledge of the environment in which they plan to operate. Large literature on mental models in cognitive psychology has looked at how people understand their environment. The following issues are of importance: (a) realism of mental model, (b) broad signal inventory, including opportunity recognition and the function of quick detection of complex signals (chunking), (c) developing a map of the environment that has operative value, and (d) the right level of decomposition to understand an environment. Mapping of the environment must have operative value.

Plans are thought of as of in the psychological sense that one has order of operations for the next few seconds, minutes, months, or years. Some plans are relatively elaborate, some others just consist of a general idea of how to proceed, and finally some plans are automatized schemata or frames e.g., for talking to a customer. Action theory suggests that planning should help owners to be successful. Planning increases the likelihood that people get started by translating their goals into actions and mobilizes extra effort. Planning helps a person to stay on track and ensures that the goal is not lost or forgotten. Planning produces better knowledge of contingency conditions and time allocation to tasks, and leads to a clearer focus on priorities. It should however be noted that Planning is not free of costs. The more conscious planning is and the more formalized it is (writing it down, using certain planning techniques) and the more one thinks about long-term future events, the higher are the costs in terms of time (and sometimes money).

Monitoring of the execution Monitoring of execution draws heavily on the working memory processes; therefore, omission errors appear. This can be done through chunking several issues into one bit of information.

Feedback may trigger self-related thoughts and thereby divert attention from the task, producing negative performance effects (Kuratko, 2015).

2.8.9. Needs theory and Entrepreneurship

This theory attempts to explain how the need for achievement, power and affiliation affect the actions of people from a managerial context. According to McClelland (1963), social characteristics such as class, religion and industrial occurrences, affect motivational levels primarily as they affect the family, or more specifically the values and child-rearing practices of the parents. This theory sets standards for measuring achievement in terms of high and low scores, stating that people with high achievement motives would seek out situations in which they would get achievement satisfaction. Entrepreneurs differently establish business ventures which provide them with satisfaction in their daily life. It is noted that many people with high achievement happen to be present in each culture, and at some given time things would start to change. The people with high achievement will start doing things in a better way and differently by trying to get achievement satisfaction out of desire to make money, please themselves, or other personal gains, which might be converted into an activity in which standards of excellence were defined and pursued. The process begins when an entrepreneur confronts the uncertain and resource-restricted context and decides whether to engage in the effectual process; if the entrepreneur engages, the process ends when a new market for example, a successful business is created among such activities include the pursuit of business interest and profit which are by themselves entrepreneurial. This theory is criticized as it doesn't consider pre-industrial and undeveloped societies with low achievement-orientation collaboration that such assumption is invalid in view of the demonstration of high achievement (Arend, Sarooghi and Burkemper, 2015).

Needs Theory conclusion is that those with high scores were entrepreneurial types and those with low scores not entrepreneurial proved that it is men and their deepest concerns that shape history. It is this conclusion that draws the usefulness of achievement theory as a guide to this investigation, as seen in the linkage established in the explanations above. Fisher (2012), who believes effectuation is one of the few viable alternative theoretical perspectives describing entrepreneurial action. Coviello and Joseph (2012), also find value in effectuation as an explanation of success in new product development. Arend et al (2015) expands cites the need relating to entrepreneur's available means that depend on who the entrepreneur is, what he/she knows, whom he/ she knows, his/her capability to adapt to contingencies, and his/her imagination (Arend et al, 2015).

2.9. Religion and entrepreneurship

Since Durban is in South Africa and South Africa is known to be a rainbow nation, the researcher felt the need to highlight on religion and entrepreneurship. Religion and economics have had a tenuous relationship. Some religions, such as Islam and Christianity, are found to be conducive to entrepreneurship, while others, such as Hinduism, inhibit entrepreneurship. In addition, the caste system is found to influence the propensity to become an entrepreneur It is difficult to omit religion as a determinant of economic activity given the recent that values and attitudes are as much a part of the economy as institutions and policies are, hence recent studies suggest relationship between religion and economic performance. The burning question may be why religion should influence the decision of an individual to become an entrepreneur. The generally framed decision of an individual (homo economics) which is the concept in many economic theories portraying human as rational and narrowly self-interested agents who usually pursue their subjectively defined ends optimally to become an entrepreneur in terms of the model of occupational choice, where the income generated from entrepreneurship is compared to the wage earned as an employee (Audretsch, Boente and Tamvada, 2007). Functional definition contends that entrepreneurs are individuals who actively form or lead their own business and nurture them for the growth of prosperity. Entrepreneurship is a symbol of business steadfastness and achievement and its revolution is critical to the economic growth. It is therefore argued that the idea that increased trade flows not only allow entrepreneurs to take advantage of international opportunities but also give them access to international capital markets (Terjesen, Hessels and Li, 2014).

It can affect socio economic future in many ways such as (a) Innovative creation of opportunity, e.g. cars, phones trains etc.; (b) working future considering layoffs as well as shrinking of job opportunities for graduates; (c) contribution to local economic growth. A large body of theoretical research emphasizes the importance of human capital for understanding the determinants of start-up organizing efforts. It is convenient at the outset to follow Becker (1964) by distinguishing between general and specific Human capital. General human capital comprises skills, knowledge, experience and capabilities (such as those embodied in formal education) which are useful in a multitude of productive uses, including both existing organizations and new venture creation. Specific human capital in contrast refers to skills, experience, knowledge and capabilities, such as those imparted by training programs, which are primarily useful to the organization which provides them (Terjesen et al, 2014).

2.9.1 Islamic and entrepreneurship

It is noted that entrepreneurship has to do with seeking opportunities and then seeking the needed resources. An organization which is poor in entrepreneurial activities is often poor in supplying the organization with opportunities. Those organizations seeking progress must understand what helps opportunities manifest. It is also important to draw awareness on entrepreneurs and organizations seeking progress that they need to understand what helps opportunities manifest and to succeed. Part of understanding this phenomenon involves understanding religions of other cultures so one does not apply principles that are taboo within the particular society due to lack of understanding other cultures and other religions. The researcher will limit discussion to Islam religion and Christianity where the point of departure will be Islam religion and entrepreneurship as postulated below -:

Islamic entrepreneurship focuses on principles of thought which are (a) Entrepreneurship as an integral part of Islamic religion meaning there is no separation between businesses. (b) By virtue of human nature, Moslem entrepreneurs are '*khalifah*' (meaning they are successors or stewards) of family business group. They have responsibility to develop prosperity and sees business as part of *ibadah (*meaning obedience or submission as the reason for existence of all humanity) or good deed. (c) Moslem entrepreneurs believe that success in Islam is not merely measured by the result but the way and means of achieving them. (d) Islam encouraged its '*ummah'* (which refers to the whole community of Muslims bound together by ties of religion) to venture into business where it is believed that prophet Mohammed expounded nine out of ten sources of '*rizq' (*meaning provision and sustenance) can be found in business. (e) Islamic ecosystem reveals that Islamic entrepreneurship should operate within the domain of Islamic Economic System (f) Guiding principles of Islamic entrepreneurship is Quran (which is Islamic sacred book believed to be the word of God) and al-Hadith (which refers to traditionalists or scholars mostly of Hanbali who rejected '*kalam' (*rationalistic theology) and held on to the early *Sunn*i (which is one of the two main branches orthodox creed (Kavousy, Shirsavar and Ardahaey, 2011).

Entrepreneurial ethics should be based on the conduct of Prophet Mohammed. It is believed that there are seven steps towards success in life according to Imam Al- Ghazali which are (i) Level of knowledge, (ii) Level of Taubut or repentance (iii) Level of temptation, (iv) level of obstacles, (v) level of motivation, (vi) Level of Handicap and (vii) level of Praise and Thankfulness. Wealth is allowed based on the following principles (a) Alla is the absolute owner of wealth, (b) Allah created wealth and is sufficient for all, (c) Wealth is created for mankind; (d) Wealth is entrusted to mankind.

The Islamic model is illustrated as follows-:

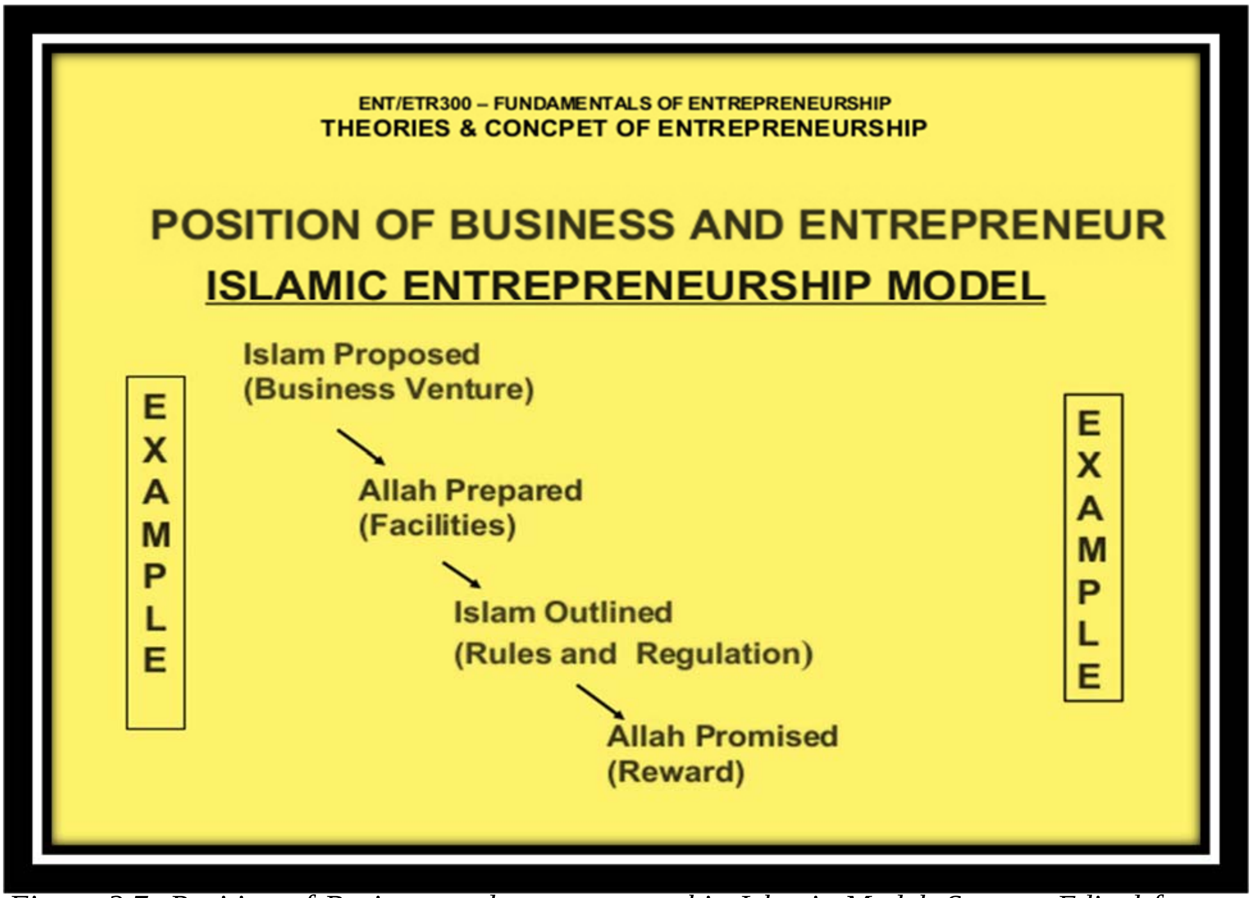


Figure 2.7- Position of Business and entrepreneurship Islamic Model. Source: Edited from Audretsch, Boente and Tamvada (2007)

It is believed that Islamic entrepreneurship should be in the framework of Islamic economic system. Moslem entrepreneurship ethics are as follows (i) Prevention of laziness, (ii) eradication of fear, (iii) search for legitimate ventures (iv) avoid forbidden sources of income and property, (v) Show gratitude and thankfulness of whatever has been acquired (vi) grow and develop capital, (vii) Diversify business ventures and (viii) Avoid greediness. Ethical behaviour is outlined as follows- (a) Avoid malicious behaviour, (b) Avoid squandering, (c) avoid stinginess (d) Pay alms (zakat) (e) Be trustworthy, and (f) Pray consistently. It is also emphasized that business is secondary when being called for religious form of crusades (Audretch et al, 2007).

2.9.2. Christianity and entrepreneurship

Protestantism interpreted success in business as the fruit of a rational mode of life. Weber's theory encompasses various types of entrepreneurs, ranging from Kirzner (1973) arbitrageur to Schumpeter's (1934) destroyers of markets. His work thus provided some initial insights into the mechanisms of how religion, an arguably personal attribute, can become prevalent in society and affect societal members. Seminal work on the Protestant Ethic and the Spirit of Capitalism laid the foundation to understand the mechanisms of how religion, an arguably personal attribute, can become prevalent in society and affect societal members. The question of how religion broadly impacts the creation of new businesses remains topical (Dana 2009; Drakopoulou Dodd and Gotsis, 2007; Galbraith and Galbraith, 2007; Neubert and Beard 2013). A key notion that individual behaviour is guided by religious context. Christian religion is a cultural area with the prosperity doctrine as a basic cultural element, which provides ideological support for entrepreneurial growth and development. With the consciousness of standing in the fullness of God's grace and being visibly blessed by Him, the bourgeois business man, if he remained within the bounds of formal correctness could follow his pecuniary interests. The power of religious asceticism provided him in addition with sober, conscientious, and unusually industrious workmen, who clung to their work as to a life purpose willed by God (Weber, 2011). Contextual theory allows one to theoretically link country-level religiosity and entrepreneurship (Lim and McGregor, 2012). The interest in understanding entrepreneurship from a cross-national perspective has not waned or decreased in its vigour. This is not surprising given the importance of entrepreneurship to a nation's economic growth and development (Pinillos and Reyes, 2011).

However, cross-national research to understand why rates of entrepreneurship differ among countries has focus on institutional drivers or cultural aspects. Furthermore, the extant literature suggests that the cultural approach has dominated such studies although no consensus has emerged about the role of culture in influencing entrepreneurship. While this line of research has contributed greatly to our understanding of cross-national levels of entrepreneurship, religion has mostly been ignored in large scale, cross-national studies. The idea that religion - the sets of beliefs, activities and institutions based on faith in supernatural forces. The teaching and doctrine of religion should influence the personality and daily conduct of each believes the relationship existing between Christian prosperity doctrine and entrepreneurial development as it relates to adherents generally. Entrepreneurial development denotes the establishment of business ventures to stimulate the economy by increasing the level of business activities. A society in which the process of entrepreneurial development is on course is marked by the existence of micro, small and medium size enterprises, established and controlled by members of the society. Christianity is one out of the various religious practices, which includes Islam and African Traditional Religion being predominant among other sects and fraternities (Hayton and Cacciotti, 2013).

These talks to entrepreneurial attitude, if they are guided by achievement, embedded in the prosperity doctrine being an element of the culture of Christians (Okon, Okokon and Asu, 2014). It is contended that knowledge investments in a society matter in terms of providing a context that motivates and enables societal members to pursue entrepreneurial careers. Such findings provide a more refined understanding of the historical link between religion and entrepreneurship. Regardless of whether a person is religious, he or she is influenced by the values propagated by religion. Dana further argues that Islam's prohibition of interest payments also represents a barrier to capital and therefore constrains entrepreneurship. It is further stated that religion that has been shown to be related positively to entrepreneurship is Christianity. Within the Christian tradition, there is a clear moral component of entrepreneurial effort and an already established and strongly positive moral attitude toward work, trade, value creation, innovation and entrepreneurial activity. This poses this question on how Christianity is related to the desire to be an entrepreneur. There seems to be many mechanisms that explain such a relationship. First, as Drakopoulou Dodd and Seaman (1998) argue, religion can often provide the environmental munificence supportive of entrepreneurship. Because of its emphasis on hard work and entrepreneurship, Christianity provides a legitimizing and supportive atmosphere for entrepreneurship (Parboteeah, Walter and Block, 2016).

Second, Galbraith and Galbraith (2007) suggest that the link between religion and entrepreneurship also occurs through economic growth. Because countries with more religious individuals have been found to typically correlate with economic attitudes conducive to highest per capita income and growth, one manifestation of such positive attitudes towards growth is through entrepreneurship. Entrepreneurial evangelists may not share many theological beliefs, but they all appreciate a good business model. They are evangelists who have built television ministries reaching millions of people through Christian colleges. They appreciate brash personalities who play well on television, and they don't mind a little political incorrectness. City press dated 09, November 2015 postulates that the mandate of the Commission for the Promotion and Protection of the Rights of Cultural, Religious and Linguistic Communities constitutes a necessary structure for our democratic society. It is designed to give life to an informed society that is protected against human rights abuses in religion, language and cultural practices. Contested space of South Africa’s religious world, Christianity, is derived from the historical role the SA Council of Churches played during apartheid. City Press further cited that South Africa cannot afford a commission that is not alive to religious and cultural practices (Parboteeah et al, 2016).

2.10. Corporate entrepreneurship

Corporate entrepreneurship refers to the development of new ideas and opportunities that are with large or established businesses. Corporate entrepreneurship values and encourages entrepreneurial culture. Such is witnessed in the sense that Entrepreneurial companies value innovation and encourage risk-taking. An innovative type of corporate culture gives its employees a considerable amount of autonomy. But that flexibility doesn't come without potential problems in the sense that because employees are encouraged to take risks and try new things, they will stand a chance and possibility fail in the process. An entrepreneurial company must decide whether successes can make up for these failures and whether it's willing to bear the costs of such failures. Those ideas lead to an improvement of organisational profitability as well as enhancement of competitive advantage and competitive positioning (Greenwald, 2012). Corporate entrepreneurship postulates the following aspects-:

2.10.1. Active mapping

Activity mapping is a tool that is used to identify an organization's competitive advantage, which identifies an organization's activities, traditionally represented through an activity-systems map and the different types of fit among the activities. (Porter, 1996) believes that there are three types of fit that can lock the activities together: (a) Simple consistency: The firsts order fit simply states a consistency between activities and the overall strategy of an organization. It fits activities together in such ways that they don't cancel the competitive advantages of other activities, but rather accumulate them. (b) Activities are reinforcing: The second order fit is when activities reinforce each other rather than just have a consistence with each other and the overall strategy. (c) Optimization effort: The third order fit optimizes the effort of the activities, for example through coordination and exchanges across the different activities to minimize redundancy ((Lindelöf and Löfsten, 2004; Henreksen and Sanandaji, 2014; Woodside et al, 2015). Active mapping should be looked at, in conjunction with The McKinsey 7S Framework, a management model developed by well-known business consultants who are Robert H. Waterman, Jr. and Tom Peters in the 1980s. This is beneficial to plans for developing a business; changes to systems should be carefully thought out and discussed before their implementation. The 7S Framework provides a useful model for achieving this, as it allows a business to look at the systems currently in place in tandem with the other six elements of the model, rather than considering them in isolation. This provides a more holistic picture and should lead to better decision making – and better results in the long run incorporates a strategic vision for groups, to include businesses, business units, and teams highlights the importance and interrelation between seven essential organizational factors; *strategy, systems, structure, skills, staff, style* and *shared values* which are diagrammatically illustrated below-:

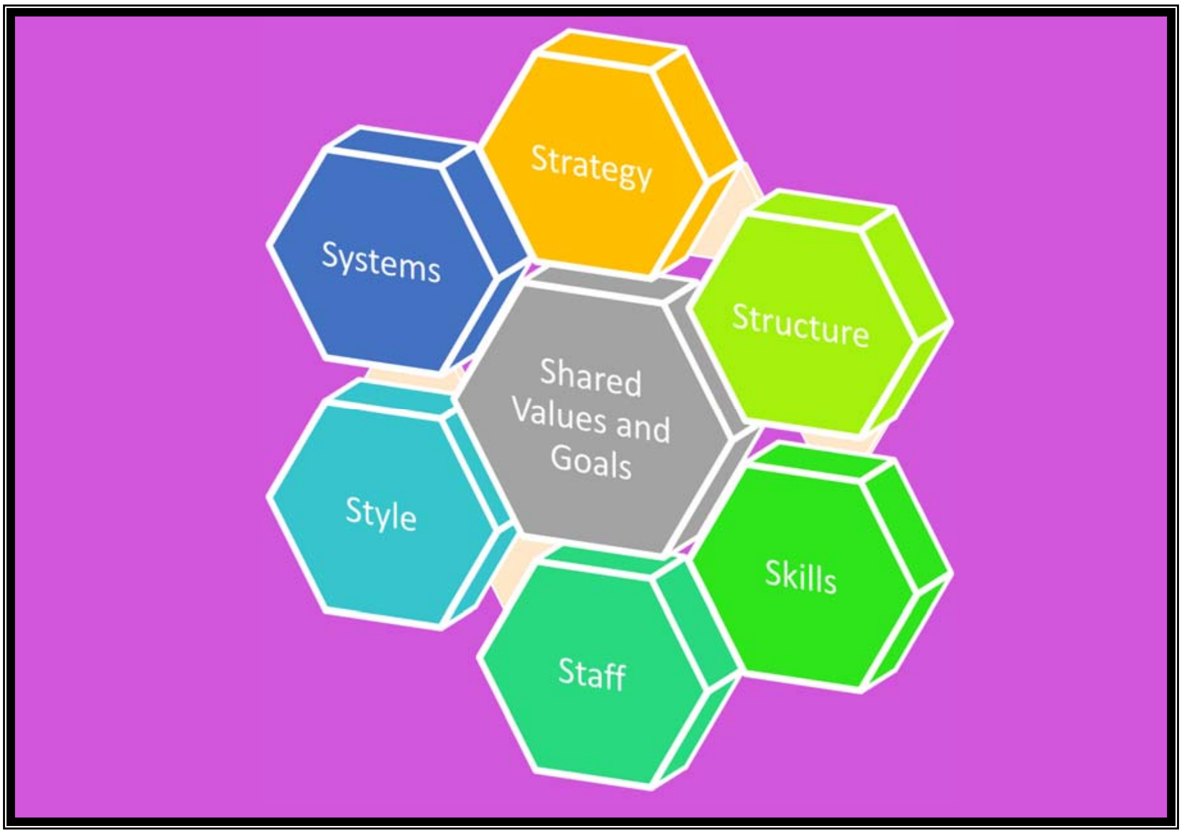


Figure 2.8 Interrelation between organisational Factors-Adapted from McKinsey 7S Model-Kale (2014)

Strategy, *structure* and *systems* are according to Kale (2014) considered to be hard factors that are easier to identify and influence in comparison to the soft factors.

Skills, *staff*, *style* and *shared values* are influenced by culture and create an organizational foundation of great importance when creating a sustainable competitive advantage.

- ❖ *Strategy* is explained by Kale (2014) as a plan, designed to direct the organization in a certain way. Explaining how to adapt to the environment and how to maintain and create competitive advantage by using its full organizational potential.
- ❖ S*tructure* is described as how the organizations should define roles and formal responsibilities concerning the strategy (Kale, 2014).
- ❖ S*ystems* are daily activities, processes and procedures of the organization that support people to perform and determine how business is done (Kale, 2014).

- S*taff* concerns how the people of the organization will be recruited, developed, socialized and motivated to change (Johnson, Scholes, and Whittington, 2011).
- *Skills* are the capabilities in general that are required to support that change (Johnson, Scholes, and Whittington, 2011).
- *Style* is referred to as how the company is managed and which leadership style that is adopted (Kale, 2014).
- *Shared values* are perceived as the core factor of the framework including core values of the organization, the culture and the work ethic (Kale, 2014). It is also described as the purpose of the organization based on their mission, vision and purpose (Johnson et al. 2011).

2.11. Entrepreneurship Values and characteristics

Business failure factor for unsuccessful entrepreneurs becomes pandemic. Unsuccessful entrepreneurs however familiar and know about their weaknesses in management skills. They mentioned lack of management skills, marketing skills, and crisis management skills in their responses. Empirical evidence about entrepreneurial values, Cromie (2000) finds seven distinguishing characteristics between entrepreneurs and non-entrepreneurs. Cromie lists the following characteristics:

- *Tolerance for ambiguity* - Entrepreneurs need to be able to commit to a course of action while remaining open to new information and making mid-course corrections that mitigates risk.

- *Need for achievement* - The need to excel. People who have this characteristic tend to avoid both low-risk and high-risk situations in the favour of mid-risk situations. They need regular feedback to monitor progress and prefer working with other high achievers (NetMBA, 2002).

-*Self-confidence* - Confidence in oneself and in one's powers and abilities

- *Creativity* - Entrepreneurs spot market opportunities and create new combinations of available means to create value

-*Risk taking* - Entrepreneurs are generally considered more likely to take risks than other people, but still on a moderate level.

-*Locus of control* - The extent to which an individual feel in charge (Beugelsdijk, 2007). Entrepreneurs feel that they are not controlled by the environment, third parties, luck or fate, and feel that their actions influence their surroundings

- *Autonomy* - Need and will to be self-governed in pursuing opportunities (Zahr et al, 2014).

2.12. Entrepreneurship and Competitive advantage

Strong national cluster is crucial to an economy for attaining competitive advantage. One competitive advantage that organizations are striving for is knowledge or technology innovation. The innovation process is highly dependent on the knowledge accumulation and learning processes in the organization. To ensure knowledge accumulation and learning from existing knowledge, it is important to apply process management which "involves adherence to routines through the adoption of standardized best practices throughout an organization and ensures that organizational processes are repeated, allowing for continued efficiency improvement. Capability of putting those investment projects into practice able to boost competition between local rivals whilst not overlooking the need to pre-empt increasingly sophisticated and demanding client needs, and to ensure the capacities of local suppliers and industrial clusters is highly imperative (Schwab, 2016).

From Schumpeter's (1942) perspective, entrepreneurship has taken on a steadily more important role within the overall framework of economic growth. It is noted that Production function approach is key to economic growth. Entrepreneurship therefore comes in and act as a process of acting upon previously unnoticed opportunity for profit. It is thus supposed to become an engine to drive economic growth. (Wong et al., 2005; Kim et al., 2011). Competition therefore correspondingly derives from feeding this entrepreneurial spirit as a driving force in modern economies and the background against which organizations engage in struggles for survival from a perspective of necessarily efficient operational processes (Nijkamp, 2003). Entrepreneurship and innovation have thus been defended by a range of different specialists as fundamental factors for bringing about economic development. (Nordqvist and Melin, 2010).

2.12.1. Innovation and competitiveness in entrepreneurship

Competitiveness id defined as a set of institutions, policies and factors combining to determine the level of productivity of an economy and its corresponding capacity to generate wealth and returns on investments and determining the potential for economic growth. Competitiveness structure rests upon twelve foundation aspects which are: institutions, infrastructures, the surrounding macroeconomic environment, healthcare and primary education, higher education and training, the efficiency of goods markets, the efficiency of the labour market, financial market development, and the technological level of development, the market scale, and the level of business and innovation sophistication. He further states that innovation tends to be a decisive challenge for global competitiveness; to achieve success companies must know how to deal with the issues deriving, leveraging the strengths of their location for the creation and commercialization of new products and services. Innovation and entrepreneurship are closely connected concepts. It is argued that entrepreneurs disrupt market equilibrium by introducing new product-market combinations into a market, teaching customers to want new things and driving out less productive firms as their innovations advance the production frontier. Innovation goes beyond just creating novel products and services (Schwab, 2016). To commercialise their innovations, entrepreneurs need to identify new market niches and develop creative ways to offer, deliver and promote their products. All of this requires an awareness of competitive offerings, and the ability to incorporate this knowledge into distinct products and services. Innovation capabilities are thus important to economies' ability to become competitive, particularly in higher-productivity sectors. Set of factors transversal to the economy that supports innovation and including: The human and financial resources allocated to scientific and technological advances, the level of technological sophistication, the public policies affecting innovation related activities, intellectual property protection, fiscal incentives for innovation, and enacting and effectively implementing antitrust and abuse of power legislation (Schwab, 2016).

They put forward a national framework for innovation capacities, and specifying innovation infrastructures and the clusters specific to the innovation environment (Gedik, Miman and Kesici, 2015). This requires the self-starting behaviour which is person who begins work or undertakes a project on his or her own initiative, without needing to be told or encouraged to do so. Self-starting, as a character trait, is relatively unimportant to flourishing early in life but very important at the end of it. This is manifested through assertion as well as through self-expansion. Below is the illustration of national innovation capacity framework. This illustration indicates that shared innovation infrastructures and industrial clusters are reciprocal: strong clusters foster the shared infrastructures while also leveraging the benefits resulting in the following aspect. Self-starting relates to developing one's goal and is linked to intrinsic motivation since it is freely applied out of inherent self-interest that brings satisfaction and enjoyment in performing that activity. Intrinsic motivation has always received high degree of attention since it is regarded as a motivator which is the best tool for entrepreneurs since they expect rewards when assuming the entrepreneurship (Bönte, Procher, and Urbig, 2016).

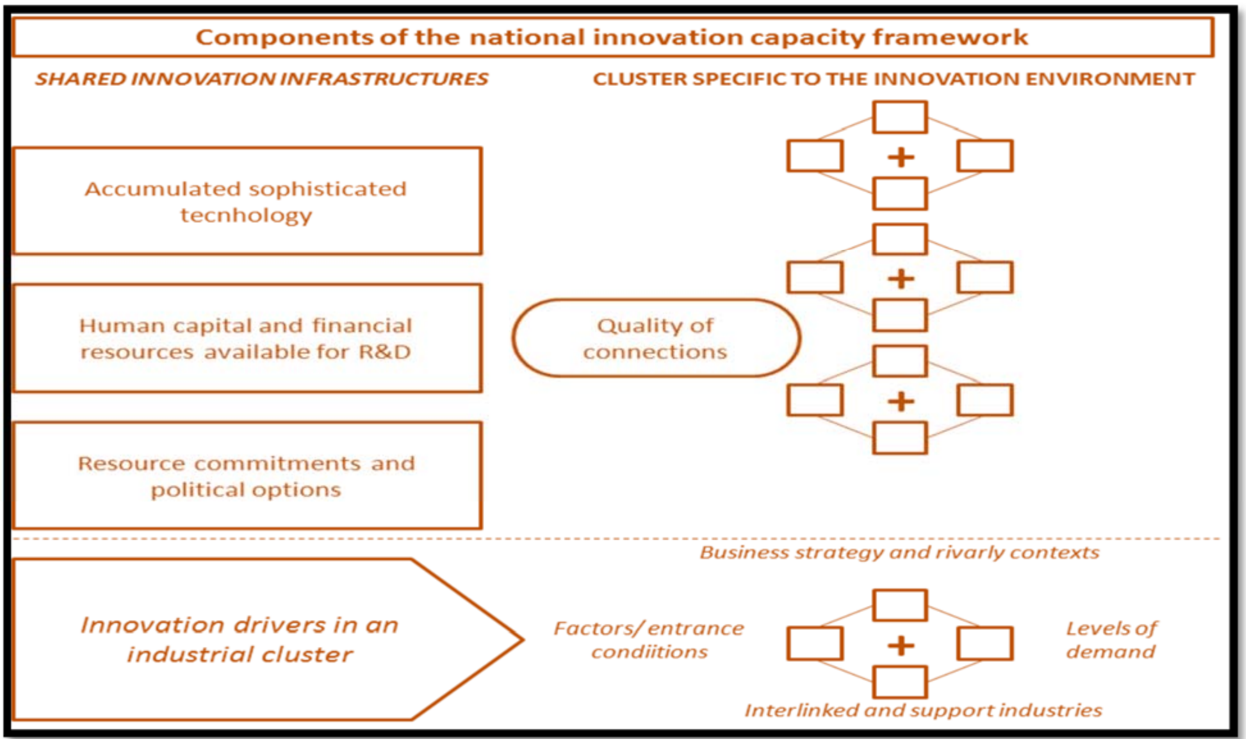


Figure 2.9-Source: *Adapted from Porter and Stern: Competitiveness and Regional Development*

The logics underpinning regional development, the predominance of the relationships between universities–industry–government (state or municipal) and specific local activities such as local technology transfers, the development of human capital and networking, in conjunction, determine better overall results (Smith and Bagchi-Sen, 2010).

Development may also be broken down into exogenous development and endogenous development. Exogenous based factors derive from the respective importance of importing technology and foreign direct investment, sometimes bound up with natural resource extraction. Endogenous development, in turn, is based on boosting local stocks of intellectual capital and support to institutions such as higher education facilities, research centres, company incubators and scientific parks with the purpose of aggregating the value of resources ranging from the agricultural sector through to all the different fields of the economy. The regional innovation concept is based on an interactive set of private and public interests, formal institutions and other entities that operate in accordance with organizational and institutional agreements and establish relationships leading to the generation and dissemination of knowledge (Olugbola, 2017).

2.13. Social and economic impact of science and technology in entrepreneurship

It is argued that Although Science and Technology Parks (STPs) are spreading worldwide because of innovation and competitiveness policies by both established and emerging economies, there are few studies that can certify the success of these organizations. A sense of urgency to find effective methods to measure these innovative environments and their complexity has been motivating many researchers. There is need for data analytics, metrics and indicator's not only to accountability purposes, given that almost all STPs are funded by public resources, but also because studies of these sort may reveal ways and strategies to increase the efficiency of these environments and to direct public programs that focuses on spreading STPs. The highlights of social and economic impact of science and technology in entrepreneurship some positive results such as affirmative impact on regional economic development, patenting performance improvement by companies within the park through diversity enlargement. This track calls for theory, research, and practice in empirical and analytical approaches that intend to develop metrics to measure the performance of STPs. These are organized as real estate enterprises where the so-called triple helix elements academia, private sector and states should work synergistically developing activities based on science, technology and innovation as part of entrepreneurial penetration (Singer, Amoros and Moska, 2015).

2.14 Triple Helix and Entrepreneurship

Whilst there is a common belief among policymakers and academics around the world that Triple Helix relationships between university, industry and government provide optimal conditions for innovation, it should be noted that the Triple Helix concept has been developed from the experience of advanced economies in the West. There is a lack of theoretical considerations and empirical evidence on whether the Triple Helix model is applicable in non-Western contexts. Following the understanding that the evolution of an ideal entrepreneurship that is facilitated by certain institutional logics in Western societies, this paper takes China as an example to examine how the institutional logics in China are different from those of the West. In China there is severe market competition, but competition mechanisms are not well developed. The market competition in China can be seen from two perspectives. First, there is a strong cross-regional competition originally driven by China's transition to capitalism illustrated by the local official promotion tournament" as mentioned early in Section The logic of market competition and its impact on the Triple Helix development in China (Gedik, Miman, and Kesici, 2015).

Second aspect indicates that there is unfair market competition between SOEs and private firms. This is because the SOEs have privileged access to business opportunities and key resources to exploit the opportunities. As documented in the report by the World Bank and Development Research Centre of the State Council of China (2013), SOEs have a close connection with the Chinese government by which the Chinese economy is controlled, occupy pillar industries where the entry threshold for private firms is extremely high in practice, and enjoy preferential access to finance and other important inputs. Hopefully such situations are going to change. In the Resolution concerning Some Major Issues in Comprehensively Deepening Reform issued by the Central Committee of the Chinese Communist Party (2013), a key message was to strengthen the role of market in allocating resources to intensify economic structural reform such as putting private firms on an equal basis to compete with SOEs in the marketplace. While the further changes remain to be seen, currently it has been commonly acknowledged that market competition insufficiency has limited the innovation capability of Chinese enterprises (World Bank and Development Research Centre of the State Council of China, 2013; Wang and Li, 2013).

Either being too easy or too hard to gain the necessary resources would demotivate the enterprises to engage with innovation. More importantly, due to the lack of mature market competition mechanisms, it is unlikely to develop healthy feedback loops for institutionalizing the Triple Helix model. It also looks at how the institutional logics in China would promote or impede the development of the Triple Helix model in China considering an extensive review of the relevant literature and policy documents. Countries therefore need to adjust some elements of its institutional environment to facilitate the interactions between key innovation actors and on the other hand to be innovative in developing its own Triple Helix modes given their uniqueness of institutional environment. Triple Helix model, the one sphere may take the role of the other, for example if the University's core competency is research and the Industry takes research as a second activity to make an innovative contribution to the performance of an innovative outcome. This normally happens at the overlapping. The University, Industry and Government maintain their primary roles, as described below, and keep their distinct identities (Cai, 2014). The University has a special mission of socialization of youth and dissemination of knowledge even as they take on some business and governance functions. The Government is the provider of funding and sets the rules of the game; the Industry is the primary source of productive activities (Etzkowitz, 2008).

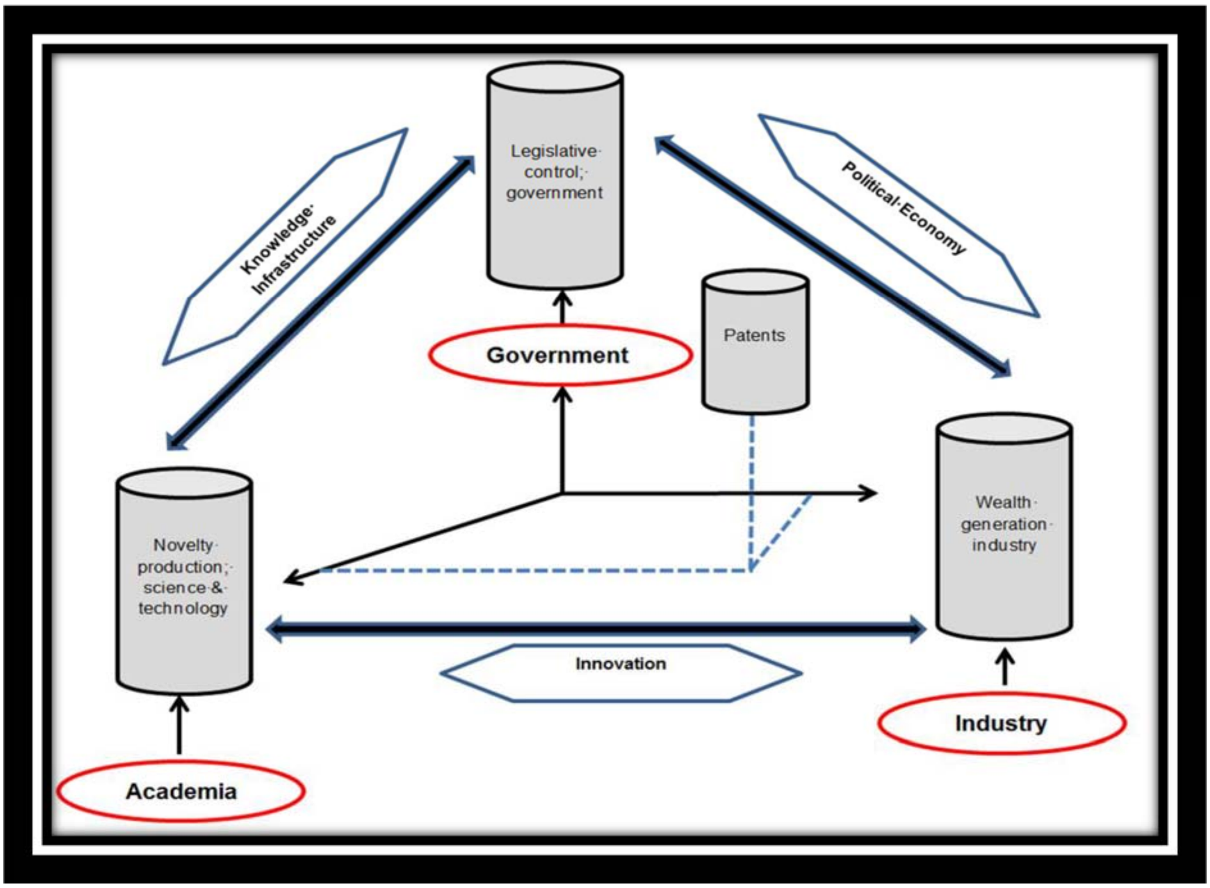


Figure 2.10- Primary Source of Productive Activities -Source: Etzkowitz, 2008

Etzkowitz and Dzisah (2008) cite the triple helix model with special focus on the fact that intellectual resources are, in principle, continually renewable, subject to strengthening and deepening, and therefore stand out as the single best source for regional development. Lundberg and Andresen (2011) also allude on how company behaviour and performance does not only depend on endogenous factors but also on their relational networks. They further elaborate that cooperative relationships designed to bring about research and development constitutes a proven explanatory factor for differences observed in levels of innovation and not only between companies but also between regions. In the academic sphere, there is a vast body of literature on the economic impact of universities, whether at the regional level or the national level, and establishing the contribution made by research and development towards gross domestic product (Lundberg et al, 2011). Entrepreneurship in relation to innovation postulates that Entrepreneurship stands at the centre of economic and industrial policies and incorporates both the founding of new businesses and the development of new business opportunities in already existing firms. The presence of company incubators may also enhance the opportunities for networking, providing tenants (companies) with the appropriate technical and other support infrastructures and service (Salvado, 2010) The next question to be posed is what exactly Triple Helix Model is and to be postulated below-:

2.14.1 Impact of Triple Helix Model on Entrepreneurship

*The concept of the Triple Helix of university-industry-*government relationships initiated in the 1990s by encompassing elements of precursor works interprets the shift from a dominating industry-government dyad in the Industrial Society to a growing triadic relationship between university-industry-government in the Knowledge Society. The Triple Helix has the potential for innovation and economic development in a Knowledge Society. It lies in a more prominent role for the university and in the hybridization of elements from university, industry and government to generate new institutional and social formats for the production, transfer and application of knowledge. This vision encompasses not only the creative destruction that appears as a natural innovation dynamic (Schumpeter, 1942), but also the creative renewal that arises within each of the three institutional spheres of university, industry and government, as well as at their intersections. Through subsequent development, a significant body of Triple Helix theoretical and empirical research has grown over the last two decades that provides a general framework for exploring complex innovation dynamics and for informing national, regional and international innovation and development policy-making (Khan and Park, 2011). This substantive body of Triple Helix literature can be broadly seen from two main complementary perspectives:

(a) **A (neo) institutional perspective**, which examines the growing prominence of the university among innovation actors through national and regional case studies.

These studies look at various aspects of the university 'third mission' of commercialization of academic research and involvement in socio-economic development, such as forms, stakeholders, drivers, barriers, benefits and impact, university technology transfer and entrepreneurship, contribution to regional development, government policies aimed to strengthen university-industry links, etc. The (neo) institutional perspective distinguishes between three main configurations in the positioning of the university, industry and government institutional spheres relative to each other: (i) A *statist* configuration, where government plays the lead role, driving academia and industry, but also limiting their capacity to initiate and develop innovative transformations (e.g. in Eastern Europe, Russia, China, some and Latin American countries); (ii) A *laissez-faire* configuration, characterized by a limited state intervention in the economy (e.g. the US, some Western Europe countries), with industry as the driving force and the other two spheres acting as ancillary support structures and having limited roles in innovation: university acting mainly as a provider of skilled human capital, and government mainly as a regulator of social and economic mechanisms; and (iii) A *balanced* configuration, specific to the transition to a Knowledge Society, where university and other knowledge institutions act in partnership with industry and government and even take the lead in joint initiatives. The balanced configuration offers the most important insights for innovation, as the most favorable environments for innovation are created at the intersections of the spheres.

(b) **A (neo) evolutionary perspective**, which is inspired by the theory of social systems of communication and mathematical theory of communication sees the University, Industry and Government as co-evolving sub-sets of social systems that interact through an overlay of recursive networks and organizations which reshape their institutional arrangements through reflexive sub-dynamics (e.g. markets and technological innovations). These interactions are part of two processes of communication and differentiation*: a functional* one, between science and markets, and *an institutional* one, between private and public control at the level of universities, industries and government, which allow various degrees of selective Institution adjustment. In addition, *internal differentiation* within each institutional sphere generates new types of links and structures between the spheres, such as industrial liaison offices in universities or strategic alliances among companies, creating new network integration mechanisms. The institutional spheres are also seen as *selection environments*, and the institutional communications between them act as *selection mechanisms*, which may generate innovation environments and ensure thus the 'regeneration' of the system. The interactions between the Triple Helix actors can be measured in terms of probabilistic entropy, which, when negative, suggests a self-organizing dynamic that may temporarily be stabilized in the overlay of communications among the carrying agencies. Specific indicators such as bibliometric, patent indicators that can provide insights on trends and patterns of public-private cooperation, their geographical concentrations as well as implications (Leydesdorff, 2014).

The concept of Triple Helix Systems of innovation was recently introduced as an analytical framework that synthesizes the key features of Triple Helix interactions into an innovation system format, defined according to the systems theory as a set of components, relationships and functions. Among the components of Triple Helix Systems, a distinction is made between: (i) Rand D and non-Rand D innovators; (ii) single-sphere and multi-sphere (hybrid) institutions; and (iii) individual and institutional innovators. The relationships between components are synthesized into five main types: technology transfer, collaboration and conflict moderation, collaborative leadership, substitution, and networking. The overall function of Triple Helix systems of knowledge and innovation generation, diffusion and its application is realized through a set of activities in the Knowledge, Innovation and Consensus Spaces. This perspective provides an explicit framework for the systemic interaction between Triple Helix actors that was lacking heretofore, and a more fine-grained view of the circulation of knowledge flows and resources within and among the spaces, helping to identify existing blockages or gaps. From a Triple Helix systems perspective, the consolidation of the spaces and the non-linear interactions between them can generate new combinations of knowledge and resources that can advance innovation theory and practice, especially at the regional level (Ranga and Etzkowitz, 2013).

The Triple Helix concept describes the relations and interplay of University, Industry and Government as a model for knowledge-based economies. The emphasis is on the collaboration across institutions to overcome barriers and to be able to address challenges that cannot be solved by one sphere alone. Furthermore, the roles of partners in such collaborations are no longer fixed in a knowledge-based economy. In an overlay of communications between industrial, academic, and administrative discourses, new options and synergies can be developed that can strengthen knowledge integration at the regional level. The Triple Helix concept comprises three basic elements: (1) Prominent role for the university in innovation, on a par with industry and government in a knowledge-based society; (2) Movement toward collaborative relationships among spheres, in which innovation policy is increasingly an outcome of interaction rather than a prescription from government; (3) Each institutional sphere also takes the role of the other performing new roles as well as their traditional function. In various countries, the Triple Helix concept has been used as an operational strategy for regional development and to further the knowledge-based economy. Prominent examples include Latin America, Sweden and Ethiopia. The city of Amsterdam, for example, adapted the Triple Helix as its working model for economic development as recently as 2010.

Transformational leadership may be regarded as being conducive for towards application of triple helix for the success of entrepreneurship. The subheadings underpinned bellow, are indicative of how triple helix impacts global economic development through innovative systems and cluster developments as well as how it affects National Innovative Systems in a scientific perspective (Den, Hartog and Belschak, 2012).

2.14.2. The Triple Helix Concept and Organisation for Economic and Cooperation Development -A Scientific Overview

The notion of National Innovation Systems (NIS) emerged in the late 1990s and was popularized by the (Organisation for economic Cooperation and Development (OECD)'s work on developing indicators to measure innovation in firms, networks and clusters at a country level on a comparative basis. Among the key challenges addressed in the OECD report were how to measure the innovative capacity of firms, their technology inputs and outputs; the proportion of acquired versus developed new technologies; inter-firm relationships; (university–industry knowledge transfer and partnerships; public–private sector interactions) termed as Triple Helix as well and knowledge flows in general; and mapping the institutional linkages within geographical boundaries. In terms of policy implications, these studies came to the firm conclusion that there was a clear role for government intervention in building innovative culture, enhancing technology diffusion, promoting networking and clustering, leveraging research and development across sectors, responding to globalization, attracting foreign direct investment and learning from best practices (Todeva and Danson, 2016).

Etzkowitz and Leydesdorff (2000) further elaborated the Triple Helix of University-Industry-Government Relations into a model for studying knowledge-based economies. A series of workshops, conferences, and special issues of journals have developed under this title since 1996. In various countries, the Triple Helix concept has also been used as an operational strategy for regional development and to further the knowledge-based economy, for example, in Sweden and Ethiopia. In Brazil, the Triple Helix became a movement for generating incubators in the university context. In the Latin American context, the Triple Helix model accords triangle as a program for endogenous development of technology and innovation. The emphasis on bottom-up learning processes can help to avoid reification of systems or states and interstate dependency relations as barriers to innovation. The Triple Helix model of university-industry government relations is alternating between bilateral and trilateral coordination mechanisms or in institutional terms spheres. The model below postulates the triple helix of University- Industry-Government relations that presents the triple helix configuration with its negative and positive overlap among the three subsystems as illustrated contended by Leydesdorff (2016) in his article.

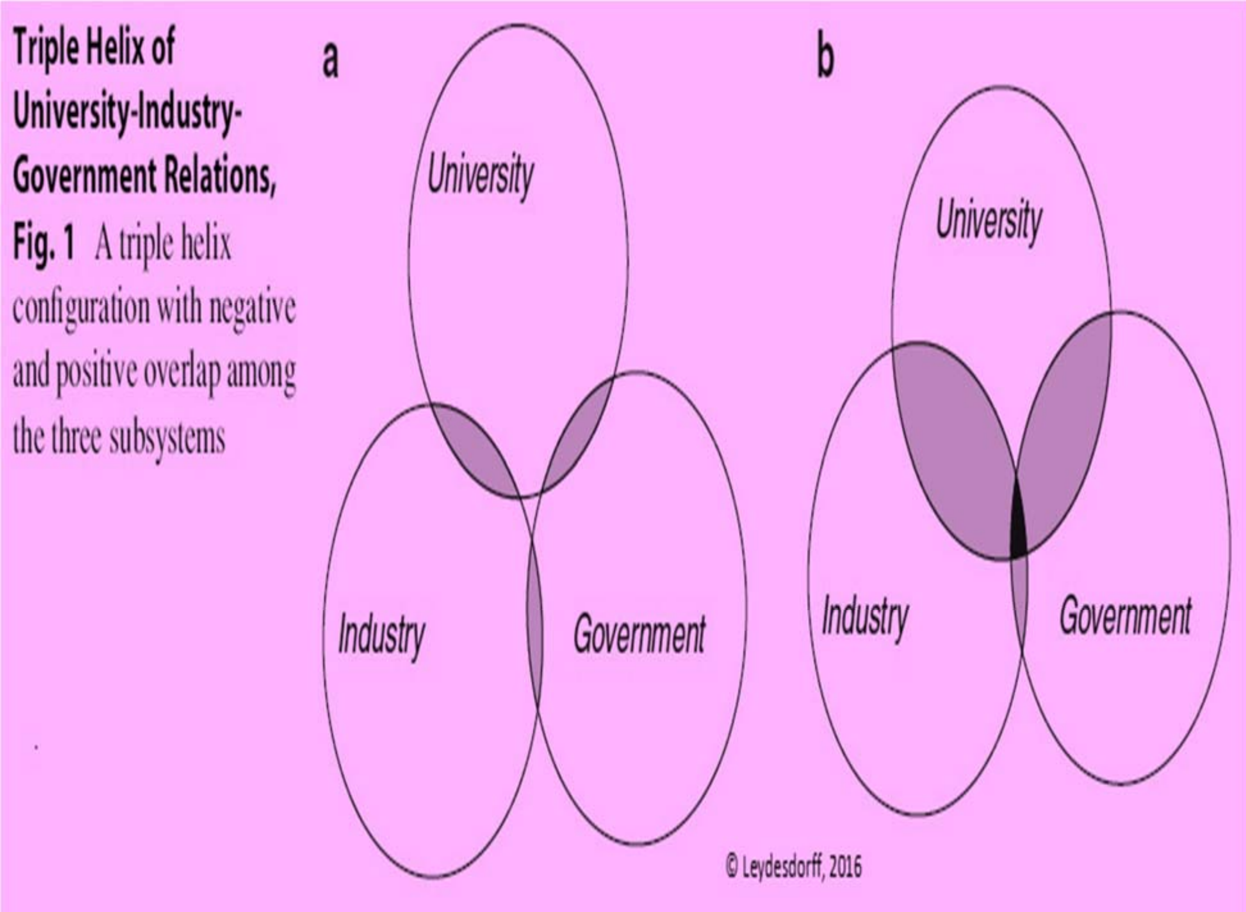


Figure 2.11 Triple helix Configuration-Source: Edited from Leydesdorff (2016).

It is clear from the literature that innovation goes together with learning and investment. Although learning can be associated with local education and universities, the sources of investment in Rand D are hardly localized, but often globalized. Thus, national innovation systems, to the extent they are funded by national governments and by the private sector, are prone to national and global knowledge and resource flows. This creates continuous tension for regional stakeholder initiatives, which are required to attract capital usually from outside the region. In addition, scholars have argued that regional/industry/disciplinary boundaries are constraints to innovation, so the culture of permeability is a necessary condition for innovating regions. Current evaluations of national and regional innovation systems in Europe exhibit numerous elements of the uneven spread of incentives and innovation outcomes across European regional geography (European Union, 2014). Etzkowitz (2016) argue that Europe's fragility has been exposed by a succession of crises from the 2008 financial debacle, onwards. Many putative Europeans questioned whether they wanted less, more or any. The Ecosystem Challenges in the Era of Crises poster elicits controversy and debate over its Rorshach test-like fragmentation image. Only a few years ago, academic observers hailed the introduction of the euro currency as an augur of peace and prosperity. The monetary union, culmination of an evolution from the early post-war European Coal and Steel Community, was designed to consolidate the achievements of the industrial era. At the same time, integration was expected to suppress chauvinistic nationalist movements and worse that had scourged European Civilization in the early twentieth century. A top down highly bureaucratic overlay on nation states was designed to gradually induce cultural harmony through mobility programs that encouraged intermingling and inter-marriage, hopefully producing new generations of Europeans. He also states that European integration, stalled and backsliding may be a failure of innovation theory and practice to propel Europe, with notable hopeful exceptions in university towns and cosmopolitan cities into a knowledge-based era of peace and prosperity ((Etzkowitz, 2012; Leydesdorff, 2016).

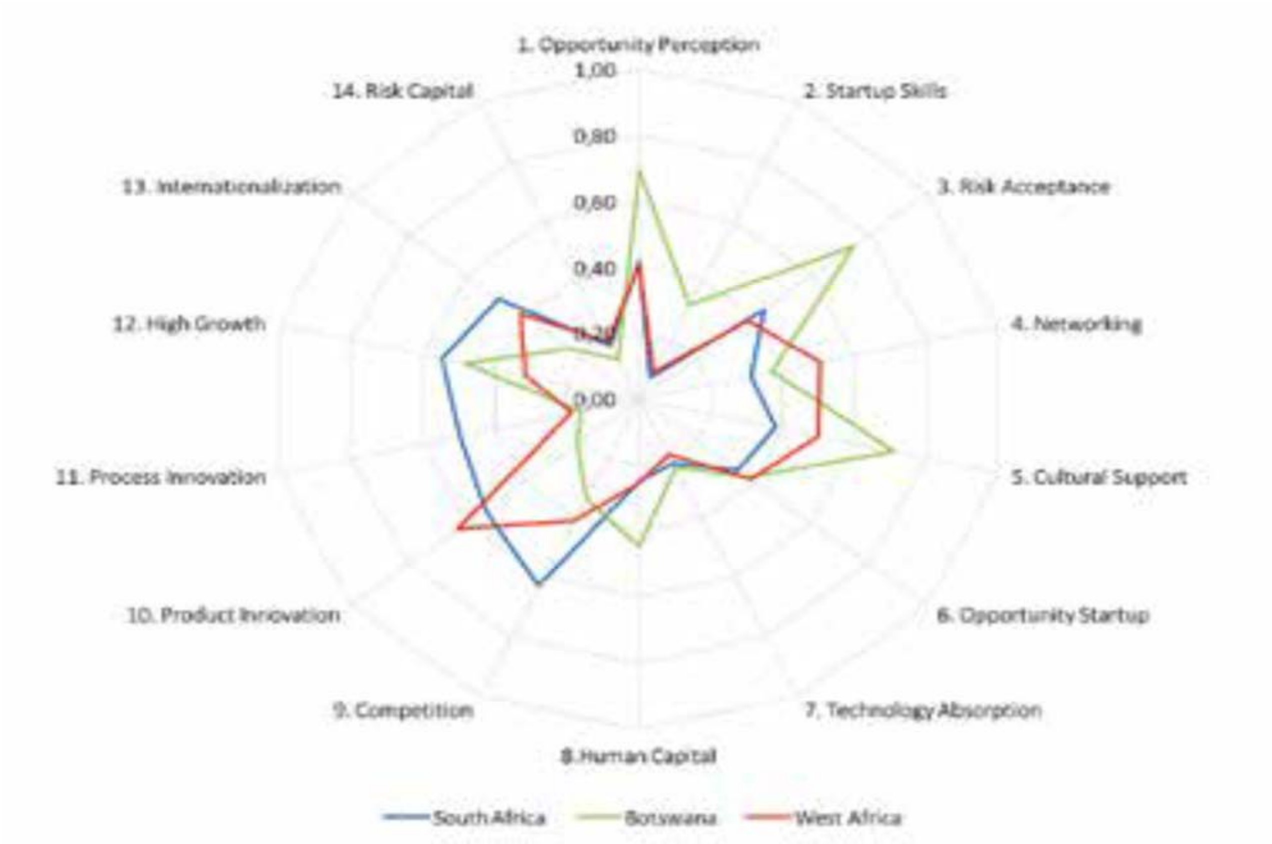


Figure 2.12 Pillar Level Performance of South Africa, Namibia and Botswana: Source: GEDI, (2017):

The above illustration postulates Botswana and Namibia. Botswana’s overall strength comes from entrepreneurial attitudes as compared entrepreneurial aspirations. The spiral graph above is numbered where (1) is for opportunity perception; (2) is for start-up skills; (3) reveals Risk Acceptance; (4) indicates Networking; (5) is for cultural support; (6) is for opportunity start-up; (7) is for technology absorption; (8) is for human capital; (9) is for Competition; (10) is for product innovation, (11) is for Process Innovation; (12) is for high growth; (13 is for internationalisation and (14) which is for risk capital.   In other words, Botswana has better attitudes towards entrepreneurship but not better skills or aspirations. Namibia is stronger on entrepreneurial aspirations, but it is not strong across all the pillars as postulated by Global Entrepreneurship and development Institute Development. It is further revealed that in contrast to the weak showing of the sub-Saharan African region on average, the South African entrepreneurial ecosystem outperforms the region in the most growth-oriented components. South Africa performs better where it counts: in entrepreneurial aspirations, innovation, high growth, internationalisation and risk capital are the pillars that lead to economic growth. South Africa is also very strong on the depth of its capital markets, performing in the top 20% of countries (GEDI, 2017).

A European Triple Helix existed but lacking sufficient impetus to unite lateral interactions with, bottom-up-top down dynamics, in practice. Triple Helix praxis began in New England, the first industrialized US region, in the same era that witnessed the stirrings of National Socialism in Germany. Better understanding the origins of a positive development, such as the New England phenomenon that produced an early working model of the knowledge based innovative region, we may be more likely to replicate the processes that produced its successes. A magisterial work on totalitarianism that did the job for the negative dialectic. Through comparative analysis of developments, like the Brazilian communitarian universities that are apparently linked to cultural and political regions, to discern their potential for replication and adaptation; much as the New England phenomenon was transferred and partly independently invented in northern California as Silicon Valley. The Triple Helix Association (THA) University-Industry-Collaboration Thematic Research Group invite in THA members and conference participants and representatives from local researcher and businesses that wish to become THA members and to join the THA-led research consortium to a round-table discussion on funding opportunities towards the development of the THA professional community (Etzkowitz, 2016).

Round Table discussions were held in Heidelberg, Germany from the 25th to the 27th September 2016. In recognition of this, the European Commission, in its economic policy for industrial renaissance in Europe, has placed strong emphasis on implementing specific instruments for regional Triple Helix development in support of innovation, skills and entrepreneurship – as a milestone and a key priority for ensuring growth. Regional policy measures are closely observed, together with smart specialization strategies, regional cluster development and upgrading of innovation and skills -all entangled in Triple helix stakeholder relationships. Triple Helix practice, particularly in Europe, has predominantly demonstrated a government-led approach in contrast to the model envisaging continuous alterations across the government-industry-university spaces (Etzkowitz and Leydesdorff, 2000). In a study about regional innovation systems, it is noted that the possibility of constructed advantages. Currently, regional and cluster initiatives facilitate the integration of EU firms in global value chains and internationalization (Etzkowitz, 2016).

Further proliferation of the concept can be observed into scientific and political discourses below.

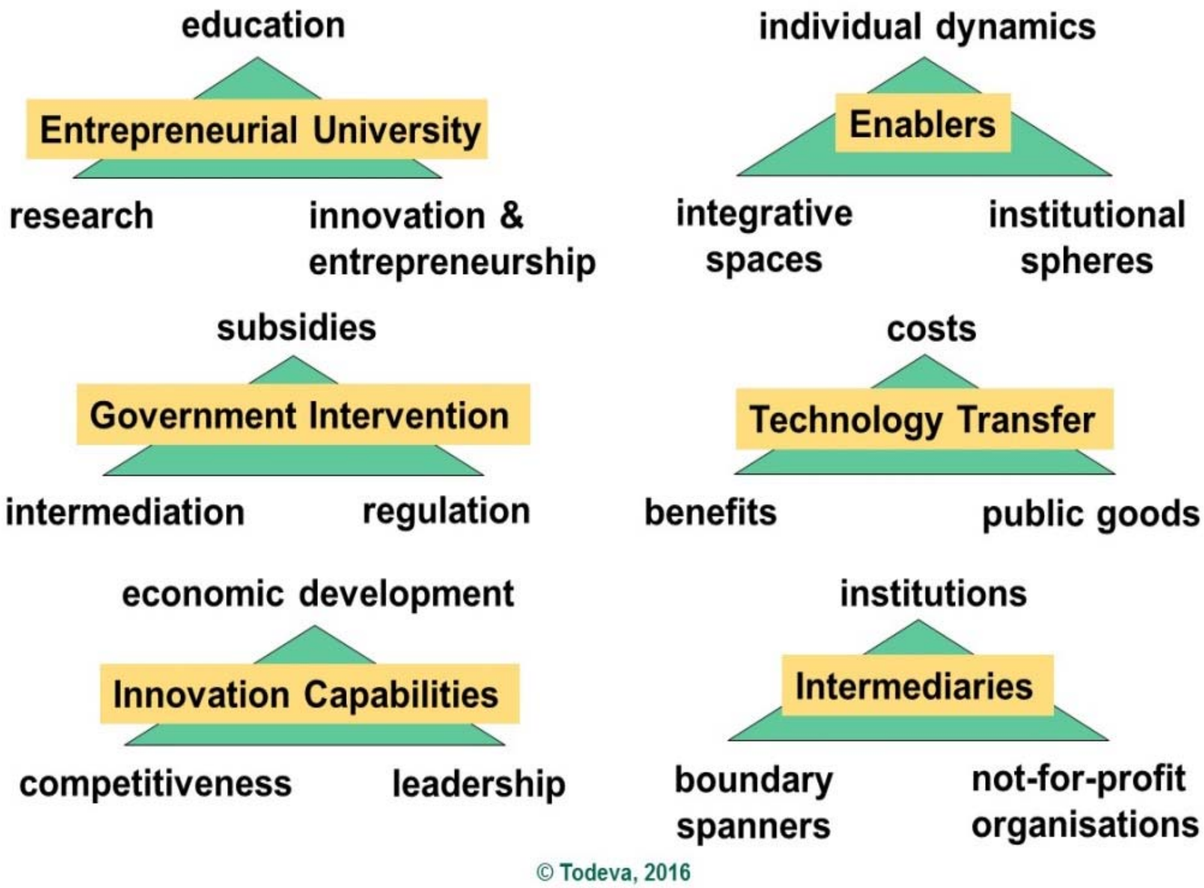


Figure 2.13 - Triple Helix integration-: Edited from Todeva (2016)

The International Labour Organization (ILO) estimated that, at a global level, 73.4 million young people are actively seeking for a job cannot find one. One out of every two young people (52.9 %) is unemployed or a discouraged work-seeker, and not enrolled at any educational institution (ILO 2013). argue that intentions for entrepreneurship can be predicted from the theory of planned behaviour and earlier exposure of entrepreneurship through entrepreneurial self-efficacy (Agbim, Oriarewo and Owocho, 2013).

The study they conducted revealed that only a small %age of graduates became entrepreneurs after graduation. The Triple Helix (TH) model I, II and III were proposed. In THI, three helixes are defined institutionally. In THII, attention is on communication within the system and to different knowledge systems. THIII introduces an integration of universities, industries and government. It is argued that THIII lacks the fourth helix, which is the public hence the Quad Helix model (QH) is introduced to close that gap as it includes talent and context of Complex Management Strategy, plus business magazine stresses the importance of investments on individuals with the emphasis on skills, talents and attitudes. Quad Helix was also enhanced and improved to Quadruple Helix which emphasizes broad cooperation and innovation that describes innovation cooperation between firms, universities, public organizations and users (Arnkil, Jarvensivu, Koski and Piirainen, 2012). Triple-helix was further expanded to quarto-helix with an emphasis on the end-user as crucial to innovation. Strong emphasis is on the need to reciprocate ideas, knowledge and knowhow (England and Felice, 2010).

2.15. The impact of Civil Society on Entrepreneurship

When it comes to how civil society has developed in China there are mixed views and contradictory evidence, but it can be generally concluded that a civil society is emerging but slowly and in a different way from that in the West. What is relevant for understanding the entrepreneurship development is that there are no functional mechanisms that could mediate between top-down control and bottom-up initiatives. It was reported how a bottom-up innovation was blocked by the top-town control of local researcher. The researchers called for China to adopt a co-production approach as commonly used in European countries, which sees ordinary people as resources and contributors in social and economic development, rather than as passive service recipients. Chinese economic reforms as well as the development of national innovation systems have come from top-down initiatives. To encourage university and industry cooperation, the central government has invested heavily in national science parks and national Rand D programmes (Wu and Shen, 2016).

In a situation where there is less trust between academia and industry sectors, such an approach is practically useful especial for national priority projects. It can also waste resources to generate prestige-driven flops and may fail to ensure adequate resources for emerging technologies. The Chinese government does realise the need to stimulate bottom-up initiatives, but lacks effective policy measures. Due to the absence of civil society logics and effective mechanism to coordinate between top-down and bottom-up initiatives, the development paths for bottom-up initiatives may be diversified and unpredictable, depending on the decisions of some key bureaucrats and local conditions. For instance, identify a new path of Triple Helix development in the case study of the Tongi Creative Centre, labelled the delayed government-led mode, representing a different pattern than any of the three models described in the classic Triple Helix literature (Etzkowitz 2002; Etzkowitz and Leydesdorff (2000) or particularly the statist model as is the case in China (Cai and Liu, 2014).

In the initial stage, the interactions between Tongji University and the surrounding industry (mainly the university's spin-off companies) in the cluster were spontaneous and there was no interference from any levels of governments. While the cluster of these companies grew very fast, it gradually got special attention from the Yangpu district government where the Tongji University was located. Then the cluster entered the second development stage, in which the relations between university, industry and (district) government closely resemble the ideal Triple Helix mode. Here, the district government came into the picture as a partner, performing its role through reflective control (Etzkowitz and Leydesdorff, 2000). The local government poured financial resources to promote the cluster's development and matched supportive policies. In the last stage, the Shanghai municipal government and the central government got involved and took control of the overall development of the cluster. Especially, the central government played an important role in integrating the university into the national innovation system, e.g. in building cross-regional linkages among the university, industry and local government and in maximizing the intangible capital of the cluster through many influential programmes ((Broekhuizen, 2016).

2.16. Democracy in policymaking and its impact on Entrepreneurship

It is noted that no feedback loops supported by the policymaking system in China. The nature of the policy making process in China differs from case to case. In terms of educational policy-making process, there is no obvious model and given procedure to go by. Some policies are based on policymakers' occasional discoveries or subjective decisions; other policies are determined by irrational factors such as policy makers' interests or even personalities. However, China is now trying to change its political system, though the pace is slow. Some progress can be seen in the process of preparing the *Outline for Medium and Long-term Education Reform and Development (2010–2020)*, where there was a dramatic increase in the use of social participation in the document drafting processes. Not only were hundreds of experts involved in the policymaking process, but the opinions of society were openly collected (Cai, 2011).

Nevertheless, there is no institutional guarantee of democracy in policymaking. Many studies on Chinese innovation system and university as well as industry linkages have pointed out many challenges in China and provided policy recommendations. Although these studies have been published in a time span of more than a decade, the challenges and suggestions identified there are very similar. The major challenges include low degree of technology transfer between university and industry, weak IP protection, insufficient competition coordination for innovation. The policy recommendations are all about measures to solve these problems and improve the institutional environment for innovation. This situation shows a problem in the policymaking process: feedback can hardly be assimilated by policymakers (Wang and Li 2013).

2.17. The impact of market orientation in South African Entrepreneurship

There are many difficulties in managing projects across organizational boundaries; their cultures and their mission differ. The goal and the prime objective of the industries are to make a profit and build value for shareholders. The universities missions are to develop new knowledge and educate the next generation. Factors that may prevent research collaboration with Industry from being successfully accomplished are: (a) The practical difficulties of managing collaboration; (b) Deleterious effects on faculty and students, (c) Impact on the mission; (d) Reputation and financing of the University; (e) Industry needs to overcome the following hurdles to foster greater collaboration; (f) Respect the value of research collaboration; (g) Incorporate University research into product development; (g) Management barriers.

Until the beginning of the 20th century, research was accomplished exclusively in the university environment, drawing on a rich tradition of academic freedom specializing in scientific freedom. When businesses began to introduce their own Rand D programs, profit has been established as a new research driver. The current changes in South Africa can be traced to at least three developments (Meagher, 2012).

The new political dispensation in 1994, with the elections, opened international doors. The advances in information and telecommunication systems are driven by the Internet and ecommerce, a drift towards mixed financial systems which have made South African part of the global economy. South African country, through aggressive cooperation with South African Tertiary Institutions, South African economy stands a positive chance of improving. There are however some bottlenecks that are pointed out as key issues, but it is cited that if they are addressed, will have a disproportionate positive impact on the overall ecosystem. The factors holding back the South African ecosystem can be narrowed down to six areas. Those bottlenecks are as follows (i) Access to finance from formal finance institutions, the criteria being used is not in favour for small businesses, due to their high-risk factor incorporated with factor is the role of regulation and red tape. The government does not always work efficiently to promote entrepreneurship. (ii) Skills represent those tools that individuals need to start and run a business (iii) one of the aspect holding back South African ecosystem relates to access to markets. Many small firms do not have access to markets because of large firms dominating the economy (iv) Inability of small business to employ skilled labour which limits their barrier to growth (v) another factor holding back the South African ecosystem is factor holding back the ecosystem was education. Education is important because it provides the human capital needed to develop an economy. (vi)Another factor is networks, primarily in terms of support structure and accessing opportunities, which is strongly influenced by structural inequality in the country. Finance of new and growing firms, access to markets for firms both domestic and international, skills, education, networks and culture, and regulation (Meagher, 2012).

In South Africa, the Triple Helix model is managed under the name of THRIP (Technology and Human Resource for Industry Programme), by the National Research Foundation (NRF), on behalf of the Government, for the Department of Trade and Industry (DTI). THRIP fosters collaboration among Industry, Higher Education Institutions (HEIs) and the Government's science, engineering and technology institutions (SETIs), as a means of contributing to the removal of previous inhibitions to joint activity among these three sectors (GEDI; 2017; DTI, 2016).

2.18. Entrepreneurship activities and alignment to institutional transformation

This is internal transformation is characterized by taking the role of the other. This means that in addition to performing its traditional tasks (as primary activities), each takes the role of the other (as secondary activities), but meanwhile university, industry or government respectively maintain their primary roles and distinct identities. In this stage universities engage directly in business activities, such as selling education and research services; companies further strengthen the research and development activities and even establish corporate universities to develop the skills of their professionals and managers; government also provides venture capital to help start new enterprises to promote potential economic growth. The supporting institutional logics for these activities are the cultures of market orientation and process management. Taking the role of the other can be perceived as both organizations learning from each other and a way of organizational innovation (Westhead and Solesvik, 2015).

One of the main drivers for organizational learning and innovation is market orientation, which is defined as the organization culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and, thus, continuous superior performance for the business. Adopting a market orientation approach in an organization is about how the organization is oriented to the market, paying more attention to consumers' needs, competitors' advantages, and inter-functional coordination. Market oriented culture has been a key to enhance competitive advantages for organizations to best pursue interest and profit. In this light, innovation is more incremental and exploitative in nature rather than explorative. Exploitative innovation builds on an existing technology trajectory, while explorative innovation involves a shift to a different technological trajectory. They further note that organizations will innovate more rapidly as they incrementally improve innovation processes, yet the variance in the resulting innovation and/or new product development outcomes will be reduced. It is argued that the success of technology innovation in the West is largely attributed to the culture of process management. The ethos of process management can also be reflected in research activities in the West. In a Western conception, research is basically about knowledge accumulation and transmission through the "trial and error" method and by following a rigid academic protocol (Lang, 2009; Stephen, Pathak, 2016).

It follows that new knowledge is always generated from existing knowledge and the process of knowledge generation is well-documented. Following the logic of process management, organizations' competitive advantages when "taking the role of the other" are based on their existing know-how. Thus, the Triple Helix model enables knowledge and technology organizations to contribute to innovation through incorporating existing knowledge/technology (Cai and Liu, 2015).

2.19. Entrepreneurship and learning

This phenomenon calls for extensive collaboration and synergy between the workplace and learning concept. This is highlighted because for the academic institution to be able produce positive learning the following aspects listed below must be understood-:

Reflective learning**:** Reflective learning is about reflection-in-action and refection-on-action. It is noted that reflection-in-action and 'reflection-on-action' are how practitioners learn. In the workplace, employees have been transformed into practitioners and specialists. As workers perform their respective duties, they encounter challenges and start to apply their specialized knowledge which at an instance might not be the solution. That requires one to analyse, search, and see things differently. Reflection consists of those processes in which learners engage to recapture, notice, and re-evaluate their experience, to work with experience to turn it into learning. Through entering a dialogue with our experience, we can turn experiential knowledge, which may not be readily accessible to us, into propositional knowledge which can be shared and interrogated". Looking at both these definitions, reflective learning and action learning result in double-loop learning. Both the former are about changing the status quo, promoting interactive planning for the effective next action, sharing of information, and team work. An institute of higher learning mainly employs people who possess high qualifications. The reflective learning process therefore attempts to form a link between formal education and workplace learning. Qualifications and informal training / workplace learning are not self-sufficient, but are complementary processes.

- ***Transformational learning:*** Workplace learning is about bringing change and improving performance. Transformational learning is about how to bring about significant and needed change in individuals, teams, and the organization.
- ***Propositional learning:*** This is learning about things in our environment or knowledge about what we know. The environment, community and level of education have a great impact on how we accumulate our knowledge. Human beings can learn from what they are exposed to.
- ***Strategic learning:*** It is of utmost importance that everybody in the organization understands the strategy of the organization. Strategic learning is concerned with the understanding of the business of the organization and knowing where an employee fits in.
- ***Systemic learning:*** We live in a world of interrelationships where knowing and understanding the systems in the organization are essential at strategic learning as understanding the basic business systems and process of the organization, how they are developed and implemented, and how they can be improved.
- ***Dialogic learning*:** It is the type of learning where sustaining knowledge is achieved by sharing it with others. Through dialogues like in meetings, teams, conferences, and communities of practices, people share knowledge. People learn about things and how much they know, which helps them to understand their circumstances better. The purpose of it is not to compete and show off how much we know, but rather to learn from each

other. Dialogic learning the principles of learning organization emerge, such as shared vision and mental models.

- ***Action learning:*** It is learning that encourages the autonomy and creativity which adult learners require for learning. This is empowering and discretionary. Action learning is noted for its development of the individual with greater autonomy and independence. Action learning works primarily by individual set members bringing their issues to set and working towards some form of resolution and potential action". Action learning encourages the involvement of both the physical being and the cognitive being because human knowledge may not be divorced from practices. It is noted that whoever wants to know a thing has no way except by meeting it; that is, by living (practising) in its environment.

- ***Self-reflective learning:*** This type of learning promotes understanding of self among people. It is very transformational and requires introspection which may lead to change of behaviour and identity. Personal mastery is also informed by the principles of self-reflective learning, which is learning to understand yourself as an individual, determining your weaknesses and strengthens to understand others, and working with them to achieve a common goal. This is also called self-recreation.
- ***Single-loop learning:*** This type of learning is defined as the one that enables people to take corrective measures for errors they have detected; it therefore forms an integral part of individual learning. Single loop learning is concerned to improve the methods by which one pursues a goal". Single-loop is more informal, unstructured, and unintended learning, yet it is very powerful as it happens when the person is relaxed.

Double-loop learning: Double-loop learning involves questioning the goals or values being pursued through action. It is argued that double-loop learning is achieved through organizational inquiry by setting new priorities and weighing of norms, or by restructuring the norms themselves together with associated strategies and assumptions. Double-loop learning occurs when people are willing to change their theory-in-use their world views and their mental models (Duma, 2013).

2.20. Entrepreneurship and South African Entrepreneurial intentions

In terms of *entrepreneurial intentions* Potential entrepreneurs see good opportunities for starting a business and believe that they have the necessary skills, knowledge and experience to start a business. It is however noted that perceiving a good opportunity and having the skills to pursue will not necessarily lead to the intent to start a business. Individuals will assess the opportunity costs, and risks and rewards, of starting a business versus other employment preferences and options, if these are available. In addition, the environment in which potential, intentional and active entrepreneurs exist needs to be sufficiently enabling and supportive. The challenge cited is that entrepreneurial intentions tend to be the highest among factor-driven economies and lowest among innovation-driven economies, which confirms the already recognized pattern that starting a business is more prevalent where other options to provide income for living are limited (Battistella, Biotto, and De Toni, 2012).

2.21. South African Economic Growth and entrepreneurship

South African per capita income has now had two years of growth that is below its annual population growth of around 1.6%, which means that the country is going rapidly backwards in terms of per capita incomes. South Africa entered 2016 facing another year of weak economic growth. The World Bank, in its recent economic update report on South Africa, noted that the economy is flirting with stagnation, if not recession, warning that poverty in South Africa is likely to increase. The World Bank Projected South Africa growing at a dismal 0.8% in 2017 year (down from an earlier forecast of 1.4%), while the Reserve Bank lowered its growth outlook for the year to 0.9% (from 1.5%). The International Monetary Fund pegs it at 0.7%. Rising debt levels, a further slowdown in economic growth and a large budget deficit are among the reasons that many credit agencies have downgraded South Africa. This situation makes it increasingly difficult to improve living conditions for most of the population to tackle unemployment and poverty to any significant extent. An urgent call for South Africa’s policy-makers is required to make a strong commitment to growing the economy and to focus on exerting it effort to prospective graduates’ entrepreneurial intentions with the purpose of addressing unemployment and poverty (Storen, 2014). This will require far-reaching and radical changes, not only to policies, but to party politics. It is time for the political organisations to stop putting the party ahead of the country, and the economy. On the other side there is also emphasis on the importance of on-going dialog and reflexivity which is termed as pedagogy for critical hope in South African Higher education (Bosalek, Carolissen and Leibowitz, 2013). Boselek et al (2013) postulate that critical hope in South African Higher Education is processes associated with practice. The challenge remains that graduation rate norm for a three-year degree programme is 25% and that is regarded as an international norm. The question that may be posed is what happens to the 75 %? This study therefore attempts to investigate the entrepreneurial culture gap, develop and implement the model of framework that will be applied within a South African Higher education institution (DHET, 2013).

The public debates contain many myths and misconceptions about what free tertiary education would mean, ranging from the implications of free higher education proposals for poverty and inequality to the feasibility of funding such proposals. Unless these myths are unmasked the free higher education debate will remain misguided and likely lead to very different, negative outcomes. Public discussion about higher education funding in South Africa has been beset by numerous fictions and misunderstandings since the Fees Must Fall movement emerged in 2015. Students have questioned not only the lack of transformation in the higher education sector but also the settlement that ended apartheid more than two decades ago. The settlement between the apartheid regime and the African National Congress 'the series of political, social and economic deals in which the racial inequalities of apartheid and wealth disparities largely remain intact and which benefits whites in general'. While the 1994 settlement has brought political change, it has not done much to tackle poverty and inequality, which is an all-too-common lived experience of the black majority. Thus, the student activists speak about disrupting 'whiteness' in society, the economy and at universities. The whiteness they are trying to disrupt has been imposed since colonial times as a symbol of purity and has defined 'what it means to be civilised, modern and human. It is argued that The universities have done very little since 1994 to open up 'to different bodies and traditions of knowledge and knowledge-making in new and exploratory ways'. While all universities have had new policies and frameworks that speak about equality, equity, transformation and change, institutional cultures and epistemological traditions have not considerably changed. Policies might be there but the willingness to implement them is lacking Department of Education (Garuba, 2015). South African Higher education institutions enrolment per year between 2013 and 2015 per year excluding TVETS;

	University Name	**2013**	**2014**	**2015**
1	Cape Peninsula University of Technology	33477	33186	32674
2	Central University of Technology	13303	14352	14193
3	Durban University of Technology	26059	26472	27023
4	Mangosuthu University of Technology	11375	11377	11518
5	Nelson Mandela University	26361	26510	26305
6	North West University	60975	63135	64074

7	Rhodes University	7485	7519	8007
8	Sefako Makgatho Health Science University	0	0	5074
9	Sol Plaatjie	0	124	328
10	Tshwane University of Technology	54159	56785	57246
11	University f Zululand	16591	16663	16891
12	University of Cape Town	26118	26357	27809
13	University of Fort Hare	12315	13063	13458
14	University of Free State	31877	31032	30418
15	University of Johannesburg	48386	49789	49452
16	University of Kwazulu-Natal	44002	45465	45506
17	University of Limpopo	22914	23384	18907
18	University of Mpumalanga	0	140	816
19	University of Pretoria	57553	56376	55984
20	University of South Africa	355240	328491	337944
21	University of Stellenbosch	27418	28869	29613
22	University of the Western Cape	20383	20582	20382
23	University of Venda	11818	13497	14146
24	University of Witwatersrand	31134	32721	33777
25	Vaal University of Technology	20633	19319	17678
26	Walter Sisulu University	24122	23946	25993
	Total	**983698**	**969154**	**985212**

Table 2.3 Headcount per institution. Source: DHET (2015)

This table indicates the synopsis of the total head count of each institution per year. The statistics reveals the numbers between 2013 and 2015. The statistics is revealed to indicate the potential pool that may add to the unemployed labour forces and that excludes the potential pool by TVETS. To give synopsis even further, the table below now includes the TVETS, although the researchers focus is limited to a South African Higher Education institution.

	2013		2014		2015	
	Headcounts	**FTEs**	**Headcounts**	**FTEs**	**Headcounts**	**FTEs**
CPUT	33477	24903	33186	24494	32674	24354
UCT	26118	20042	26357	20055	27809	20776
CUT	13303	9963	14352	10824	14193	10010
DUT	26059	19237	26472	19371	27023	19586
FH	12315	10305	13063	10601	13458	10987
FS	31877	23462	31032	22897	30418	22888
UJ	48386	36747	49789	38264	49452	38083
UKZN	44002	33296	45465	34227	45506	34212
UL	22914	19149	23384	19747	18907	16724
NMMU	26361	19664	26510	19803	26305	20002
NWU	60975	41033	63135	42383	64070	42556
UP	57553	41001	56376	40980	55984	41794
RU	7485	6163	7519	6136	8007	6479
UNISA	355240	197102	328491	187043	337944	190878
SU	27418	21803	28869	22476	29613	23203
TUT	54159	37903	56785	40745	57246	41419
UNIVEN	11818	9682	13497	11161	14146	11821
VUT	20633	13744	19319	12851	17678	11649
WSU	24122	19662	23946	19608	25993	21987
UWC	20383	15977	20582	15708	20382	15513
WITS	31134	23507	32721	24779	33777	25523
UZ	16591	13764	16663	14863	16891	16060
SPU			124	125	328	335
UMP			140	136	816	647
MUT	11375	7745	11377	7669	11518	7603
SMHSU					5074	3755
	983698	**665857**	**969154**	**666946**	**985212**	**678842**

Table 2.4 Synopsis of total Headcount Source: Centre for higher education trust (2013 to 2015)

This statistic was retrieved and edited from South African Higher Education Performance indicators through the data source which is Higher Education Management Information System (HEMIS). This is an indication that South Africa's higher education institutions accommodate more than 1 million students, with plans by government to add 500,000 to that total by 2030. It is argued that in the media and political statements are worsening labour market outcomes for South African graduates, the shortcomings of existing research on the relationship between HE and the labour market imply that there is still much confusion about the labour market prospects that graduates are likely to face. He contends that this confusion is exacerbated by prominent reporting of graduate employment and unemployment figures that are out-dated, unverified, or taken out of context (higher education Data analyser, 2015).

He further states that paradox of high levels of graduate unemployment combined with persistent skills shortages in the South African labour market has often been attributed to structural changes which are held to have resulted in a misalignment between the skills that graduates traditionally have to offer and the skills that employers demand. It is claimed that the effects of this supposed skills-mismatch are further exacerbated by the severe heterogeneity in the quality of education received, even at the tertiary level, by different groups and cohorts in South Africa (Broekhuizen, 2016).

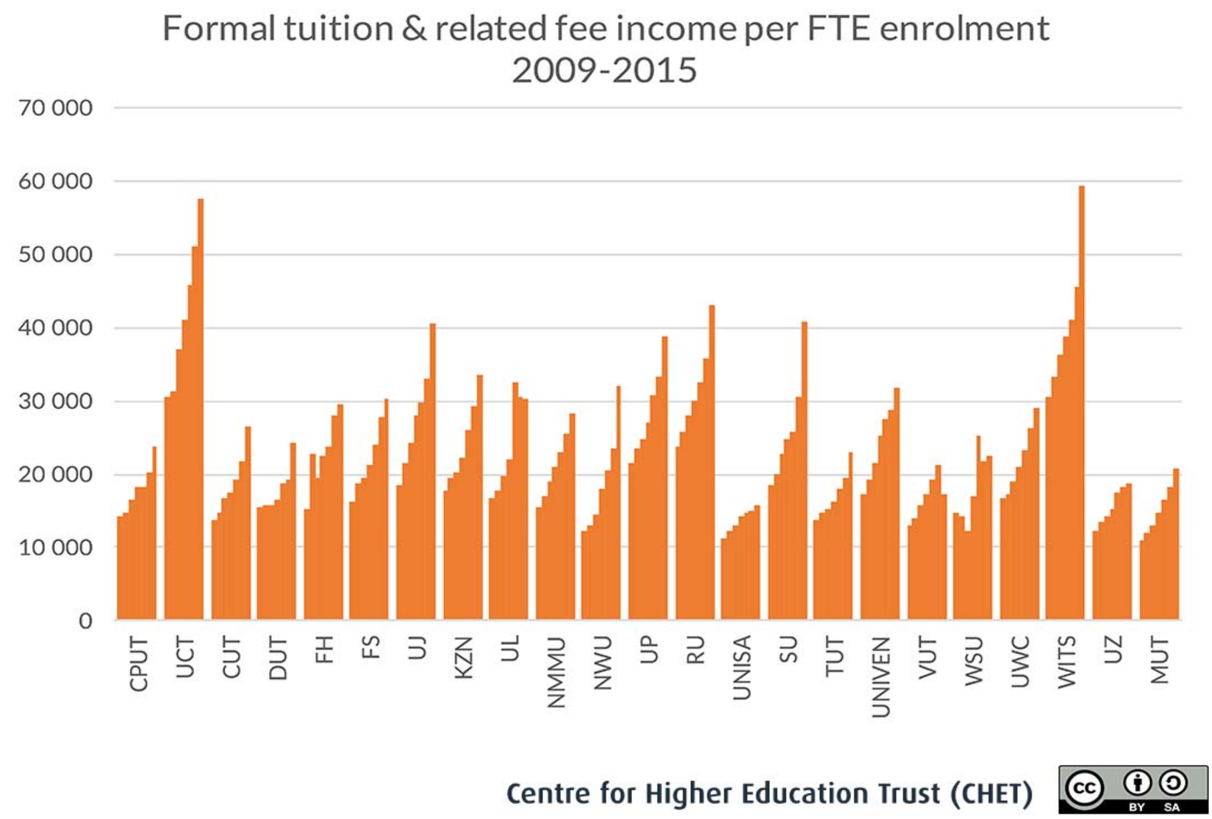


Figure 2.14 Centre for Higher Education Trust- Source: CHET (2016)

In a nutshell, this is a graphical illustration that depicts the formal tuition and related fee income per further education and training enrolment and this is synopsis between 2009 and 2015 (Centre for Higher Education Trust, 2016).

It is noted that the main driving force has been the increase in demand for higher education from the middle classes to which governments have responded by finding ways to support increases in participation and by building new infrastructures. Little if there is any, has been aggressively implemented towards assisting South African Higher education institution to help them achieve the targeted goal towards breeding of entrepreneurs through instilling of entrepreneurial culture (Marginson, 2016).

It is argued that the main focus of higher education institution has always been on the enrolment number of higher education entrants however grow year by year. Such growth continues to add to the pool of unemployed graduates. It is argued that the main focus for universities was on refining their ideas of sustainability in all relevant academic disciplines, research on sustainable development issues, greening campus operations, inter-university cooperation, partnerships with governments, civil society and industry as well as the moral obligation of higher education to work for a sustainable future. There has never been any push and consequent management that will push them to breed entrepreneurs or self-sustainable graduates considering the ever-growing number of unemployed graduates joining the pool yearly (Wu and Shen, 2016). As a result, international aid investments in higher education have been fractured and only a small proportion builds sector capacity in country (Owens, 2017).

Enrolment issues continue to emerge and this was witnessed in DHET statement where it advised colleges that 2017 year’s 829 000 enrolment target will not be reached and this year’s enrolment of 710 535 will have to be maintained next year. Targets after 2017 “will not increase if additional funding is not available the document stated. It was noted that, of the 710 535 students at colleges, 45 787 were funded by the Sector Education and Training Authority, National Skills Fund and others. Of the remaining 664 748 students, 429 638 are fully funded in accordance with the TVET funding norms. The table below witnesses the above-mentioned statement where we see the projected headcount between 2014 to 2018 increases. Department of higher Education made the projections as per table below which means more challenge for South African Higher Education institutions.

HEAD COUNT	Actual (Audited)	Preliminary	Projected target		
	2014	**2015**	**2016**	**2017**	**2018**
Total enrolments	969 154	985 212	1 035 931	1 041 100	1 062 009
Engineering	73 945	74 432	75 300	77 593	79 661
Life and Physical Sciences	44 872	46 426	44 693	47 756	49 958
Animal and Human Health	42 988	44 966	50 768	50 078	51 570
Teacher Education	106 832	116 201	115 034	119 050	124 191

Table 2.5 Projected budget. Source: DHET (2016)

This table forms part of 2016 presentation, slide number 16, where the department of higher education was sharing 2017 readiness f universities and TVETS. The projected total enrolment for 2017 was 1041100 and the projected total enrolment for 2018 is 1062009 according to the department of higher education. The revised total enrolment is illustrated graphically from 2010 to 2019 as below-:

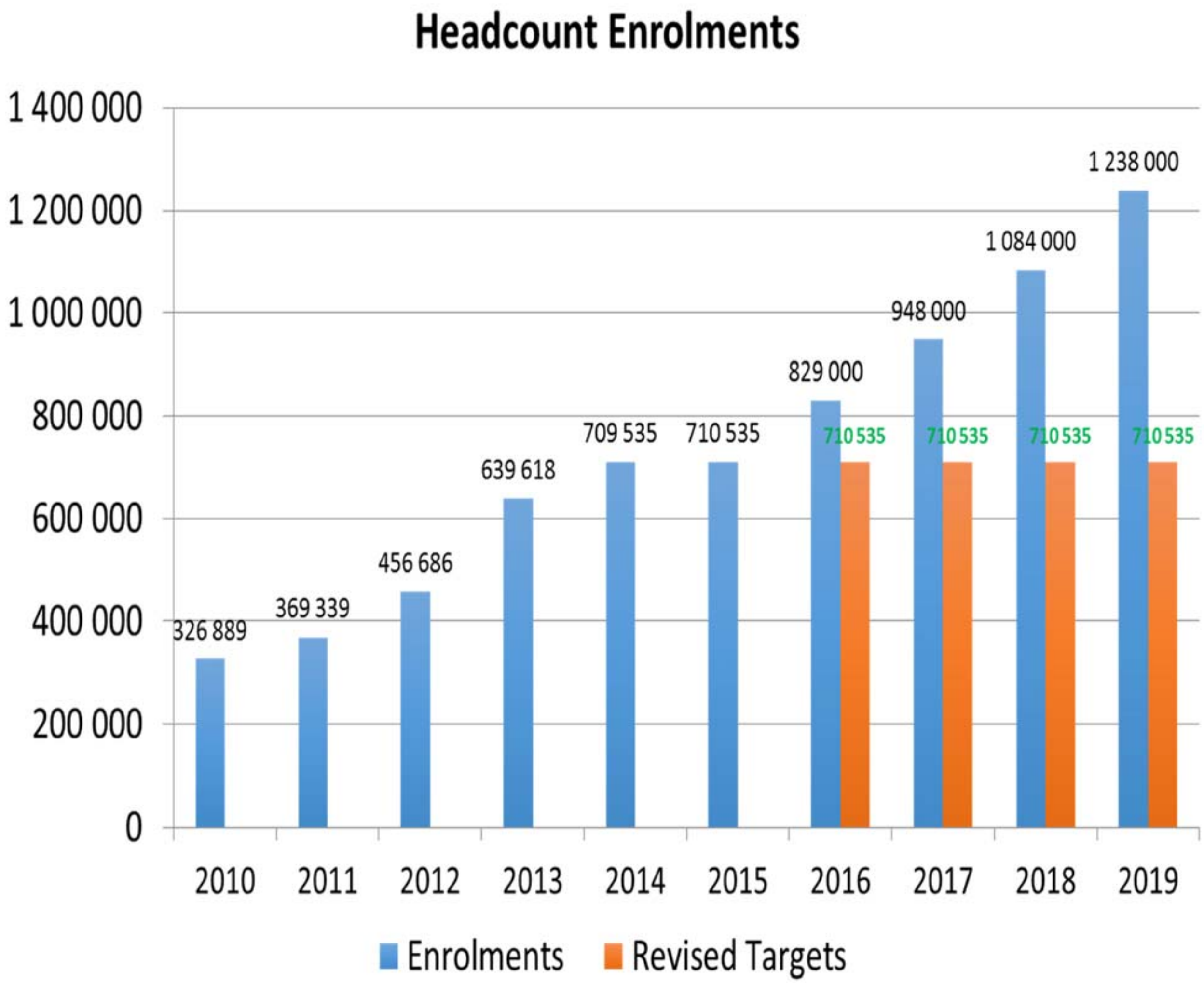


Figure 2.14 HEIs Headcount Enrolments. Source: CHET (2016)

The above illustrated graph reveals the projection of total headcounts targets from 2010 until 2019. The figures indicate that in 2010 the total headcounts for post matric education was 326889. The 2019 projection indicates the figure of 123800. One should note that the numbers are growing yearly and that adds to the pool of unemployed graduates. This poses a challenge to a South African higher education to come up with innovative ways of how the level of breeding unemployed graduates can be curbed.

The first-time expected entrance remains remains a perennial challenge given the obvious limitation of places that the HEIs have to contend with, and budget allocations (block and earmarked grants) from the Department of Higher Education and Training that do not match increase in student numbers. Linked to this, the sector is still grappling with the need to strike a balance between student access and student success evident in high-drop-out rates and low graduation rates. This challenge is compounded by the sudden increase of Grade 12 NSC passes meeting minimum entry requirements for Higher Education studies. is tabled below as per slide number 17 of department of higher education is tabulated below-:

HEAD COUNT	Actual (Audited)	Preliminary	Projected target		
	2014	**2015**	**2016**	**2017**	**2018**
Total FTEN	168 356	171 930	212 472	196 391	204 835
Engineering	14 794	13 606	16 517	15 890	16 709
Life and Physical Sciences	12 906	12 474	12 871	13 227	13 806
Animal and Human Health	8 367	8 713	11 541	10 513	11 255
Teacher Education	17 985	18 682	22 785	24 341	25 582

Table 2.6 Projected First Time Entrance up to 2018. Source- DHET (2016)

Such numbers pose an urgent attention that is South African Higher education institutions do not swiftly attend to the increasing number of unemployed graduates there by attending to reviewing and revisiting entrepreneurial culture within the institutions and within faculties, the number of unemployed labor force will escalate, and government will have increased number to support. It should be noted that as much as the researcher is projecting the entrepreneurial higher education institutions, she is not ignoring the financial implications and crisis currently faced by the department of higher education. The table below indicates the projected funding shortfall as per department of higher education presentation slide number 30 of 2017 readiness presentation slides

Funding Categories	2016/17	2017/18	2018/19	Total Shortfall: 2016 MTEF
	R’000	R’000	R’000	R’000
Budget Requirement	19 803 000	23 803 000	28 584 000	72 189 000
Baseline	-9 072 000	-9 567 000	-10 087 000	-28 726 000
Projected Shortfall on:				
80% Programme Funding	-4 732 000	-6 749 000	-9 231 000	-20 712 000
National Student Financial Aid Scheme (NSFAS)	-2 489 000	-3 383 000	-4 457 000	-10 328 000
8% Fee Increase	-504 000	-605 000	-727 000	-1 836 000
DHET Goods and Services (Including Examination Shortfall)	-3 006 000	-3 498 000	-4 082 000	-10 586 000
Total Projected Shortfall	-10 730 000	-14 236 000	-18 497 000	-43 463 000

Table 2.7 Projected Funding shortfall- Source DHET (2016)

It is noted that even if the funding may be adequate, the following key issues remain hindering factors. (i) The poor performance of students at universities can be attributed to key factors that there are internal and external to higher education; (ii) Expected transformation in university education that lies in the effective and equitable distribution of the benefits of higher education across the population. This cannot be achieved by access alone; access must be integrally linked to a successful completion of qualifications; (iii) High and racially skewed failure rates in higher education are a major but largely unacknowledged contributor to the anger and alienation underlying the recent student protests (as well as being an obstacle to economic growth; (iv) Possible disproportionate share of resources will be shifted to student financial aid, at the expense of institutional funding. (v) Possible and spontaneous policy changes without observation of budgetary consequences such as prompt free education announcements without observation of financial implications (Mail and Guardian, 20 October 2017).

This results in an implication on enrolments as illustrated below-:

Categories	2016	2017	2018
Enrolment Targets:			
Headcount (Annual Performance Plan- Ministerial and Occupational)	829 000	948 000	1 084 000
Headcount (National Certificate Vocational and Report 191)	755 000	862 000	985 000
Full-Time-Equivalents (NCV and Report 191)	368 888	422 008	482 355
Funded FTEs	238 744	246 547	255 522
Unfunded FTEs	(130 145)	(175 461)	(226 833)
Unfunded Headcounts	(325 362)	(438 652)	(567 083)
Funded Headcounts	429 638	423 348	417 917
% Funding on Headcount	**56.9%**	**49.11%**	**42.43%**

Table 2.8 Projected enrolment target up to 2019. Source: DHET 2016

The implications illustrate projections for the year 2016 as a base year to 2018. It is for that reason that there should be more emphasis on entrepreneurial academic institutions as postulated below-:

2.22. Interactions between organizations and Universities on entrepreneurship

Universities in different national, political, and organizational settings have come to share the same tasks, routines, and norms. One important element in the development of this self-regulation has been the establishment of research funding agencies controlled by the researchers themselves. The dominant institutional order within the academic system has been the system of collegially based norms, emphasizing quality assessment. The question is then pondered on how, then, can changes in institutional orders and re-structuring of organizational fields like the one postulated in the triple helix model, be explained? In this article, we concentrate on the role of research sponsors. Funding agencies operate on all three levels of influence coercive, normative and cognitive: their operational routines and administrative structures form the basis for the researchers' applications (Cai and Liu (2014).

2.23. New Organizational Mechanisms and universities

New organizational mechanisms, such as incubators, science parks, and networks among them become a source of economic activity, community formation, and international exchange. New modes of interdisciplinary knowledge production, involving higher education institutions partners, inspire research collaboration and firm-formation projects. As institutions raise their technological level, they engage in higher levels of training and in sharing of knowledge. Corporations foster intrapreneurship and start-up investors as Government acts as a public entrepreneur and venture capitalist, in addition to its traditional regulatory role in setting the rules of the game. The interaction among universities as well as through multi-national corporations and international organizations result in the emergence of an interactive model of innovation. Innovation has therefore expanded to an activity that involves institutions not traditionally thought of as having a direct role in innovation such as universities.

2.24 Knowledge flows and the Role of Universities

Universities and industry have been cooperating for centuries, transferring knowledge and uniting their strengths for their own and broader societal benefits. When companies and universities cooperate to exchange knowledge, not only do they develop and strengthen their competitive advantage, they also become a powerful engine for innovation and economic growth. This postulates university business cooperation conceptual framework which is described as interaction between universities and business is commonly considered as taking the form of a strategic alliance, given that their cooperative agreements are initiated voluntarily for exchange, as well as share or co-develop capital, technology or specific assets (Galon-Muros and Plewa, 2015). Galon-Muros et al (2015) further contend that education-related cooperation occurs in (1) curriculum design and delivery (CDD), which consists of the joint development of a fixed program of courses, modules, majors or minors, planned experiences as well as guest lectures by delegates from external private and public organizations within undergraduate, graduate or PhD programs; (2) lifelong learning (LLL), and thus the provision of adult education, permanent education and/or continuing education involving the acquisition of skills, knowledge, attitudes and behaviours by universities to people employed by external organizations; and (3) student mobility (SM), which embraces the temporary movement of students from universities to business.

There are barriers, which are cited within the university business cooperation, which are as follows-: (i)relationship barrier that relates to the high level of bureaucracy, mainly within but also outside the university; (ii) the conception of time regarding goals, deadlines and results is commonly different and a likely point of conflict; (iii)Possible cultural differences between universities and business; (iv) Potential conflict in communication, language and differences in terminologies between business and university. The increased importance of knowledge and the role of the university in incubation of technology-based firms as a source of new firm formation - especially in advanced areas of science and technology- have given it a more prominent place in the institutional firmament (Hughes, 2011).

Organizational capabilities to formally transfer technologies rather than relying solely on informal ties are becoming crucial. Furthermore, universities are also extending their teaching capabilities from educating individuals to shaping organizations in entrepreneurial education and incubation programs. The entrepreneurial university takes a pro-active stance in putting knowledge to use and in broadening the input into the creation of academic knowledge. This calls for intensive knowledge management engagement. Management is the creation, archiving and sharing of valued information and expertise insight within and across communities of people and organizations with similar interests and needs, the goal of which is to build competitive advantage through incubation. Chao and Li-Chung (2009) defines knowledge management as a conscious strategy of getting the right knowledge to the right people at the right time, and helping share and put information into action in ways that strive to improve organizational performance. Having knowledgeable staff into the organization should be one of any strategic organisational objectives. Knowledge comes in different forms but for this study emphasis is made on two forms; the first form is tacit knowledge which is intangible; like experience, and the second is explicit knowledge which can be written, or saved in soft or hard records (Duma, 2013; Jansen, van de Zande, Brinkkemper, Stam and Varma, 2015).

2.25. Entrepreneurship and Leadership

It is argued that new leadership may need to change the functional structure of the institution to effect change to instil entrepreneurial culture. Management should also allocate the funds and resources to increase compliance audits, monitoring, internal controls, provide a helpline and sufficiently staff the organization for instilling entrepreneurial culture (George Fox University, 2015). This calls for a strong ethical leadership that will incorporate the six Cs of leadership necessary for leaders to possess as outlined below-: (1) Courage seen through willingness to stand up for one’s beliefs, admit mistakes; (2) Challenge the status quo when necessary in the spirit of “constructive contention; (3) Competence that underpins demonstrated proficiency in hard technical skills and soft behavioural, influencing, and leadership skills; (4) Composure that entails the ability to remain calm under fire; (5) Character that is revealed through consistent demonstration of integrity, honesty, respect, and trust; (6) Conviction that is informed by the passion and commitment toward [the leader’s] views or the views of others; (7) Care that is shown thorough [demonstration as well as concern for the personal and professional well-being of others (Thomson, 2010).

It is noted that instilling entrepreneurial culture requires collaboration of both internal and external stakeholders to be successful. Basic understanding between the various parties for social interaction, communication and cooperative behaviour to occur is therefore of vital importance. Trust is therefore necessary for stronger connections and communications in organizations, economies, and society because all interpersonal relationships depend on a certain amount of trust between individuals and groups to function. This is noted as a matter of fact that because these stakeholders will mostly focus on what is in for them (Snell, Chan and Zou, 2016).

2.26. The Entrepreneurship and Entrepreneurial University

Entrepreneurship should be a central concept to university hence universities are expected to actively contribute to the country’s economy. If one may put it, all higher education institutions are expected to be entrepreneurial institutions to positively impact on the economy. It takes a pro-active stance in putting knowledge to use and in creating new knowledge. It operates according to an interactive rather than a linear model of innovation. As firms raise their technological level, they engage in higher levels of training and knowledge sharing. Government acts as a public entrepreneur and venture capitalist, in addition to its traditional regulatory role in setting the rules of the game. As universities develop links, they can combine discrete pieces of intellectual property and jointly exploit them. Innovation has expanded from an internal process within and even among firms to an activity that involves institutions not traditionally thought of as having a direct role in innovation such as universities. The academic ‘third mission’ - involvement in socio-economic development, next to the traditional missions of teaching and research, is most salient in the Entrepreneurial University (Galan-Muros and Plewa, 2015).

Collaborative links with the other innovation actors have enhanced the central presence of universities in the production of scientific research over time, disproving former views that increasing diversification of knowledge production loci would diminish the role of universities in the knowledge production process. The Entrepreneurial University also has an enhanced capacity to provide students with new ideas, skills and entrepreneurial talent. Students are not only the new generations of professionals in various scientific disciplines, business, culture etc., but they can also be trained and encouraged to become entrepreneurs and firm founders, contributing to economic growth and job creation in a society that needs such outcomes more than ever. Moreover, entrepreneurial universities are also extending their capabilities of educating individuals to educating organizations, through entrepreneurship and incubation programmers and new training modules at venues such as inter-disciplinary centers, science parks, academic spin-offs, incubators and venture capital firms (Paulsen, 2015).

Entrepreneurial universities also have an enhanced capacity to generate technology that has changed their position, from a traditional source of human resources, cultural intelligence and knowledge to a new source of technology generation and transfer (Wood and St. Peters, 2014). Rather than only serving as a source of new ideas for existing firms, universities are combining their research and teaching capabilities in new formats to become a source of new firm formation, especially in advanced areas of science and technology. Universities increasingly become the source of regional economic development and academic institutions are re-oriented or founded for this purpose. The problem in South Africa is not isolated to the quality of entrepreneurship education and training but is a broader problem education in its entirety (Galan, et al. 2015).

2.27. Entrepreneurship and unemployed graduates

The International Labour Organization (ILO) estimated that, at a global level, 73.4 million young people are actively seeking for a job cannot find one. One out of every two young people (52.9 %) is unemployed or a discouraged work-seeker, and not enrolled at any educational institution (ILO 2013). argue that intentions for entrepreneurship can be predicted from the theory of planned behaviour and earlier exposure of entrepreneurship through entrepreneurial self-efficacy (Agbim, Oriarewo and Owocho, 2013).

It is indicated that only a small percentage of graduates became entrepreneurs after graduation. Attention is on communication within the system and to different knowledge systems. Integration of universities, industries and government seem to be the life saviour to the unemployed graduates should have been introduced to entrepreneurship at the institutional environment stage to close that gap. This should have included talent identification within the context Complex Management Strategy. The importance of investments on individuals with the emphasis on skills, talents and attitudes cannot be overemphasised. Quad Helix was also enhanced and improved to Quadruple Helix which emphasizes broad cooperation and innovation that describes innovation cooperation between firms, universities, public organizations and users (Arnkil, Jarvensivu, Koski and Piirainen, 2012).

Allowing parents to indoctrinate their children in an occupation different from their own and to alter their own biases depending on market outcomes would be one way to study how the social esteem with which certain occupations are held changes over time. Secondly, there are likely complementarities between entrepreneurship and the pace of technological progress. An innovation or adoption process that indigenizes the productivity gain from new technologies for example if technologies can be upgraded by more than one step, could yield different implications for the growth rate which, at present, is independent of culture. If the human capital specificity of new technologies is altered by the entry of newer generation of entrepreneurs, more growth may be associated with more intergenerational social mobility. Alternative cultural factors such as norms of egalitarianism that provide insurance to members of a group but lower the rewards from striking out on one's own-could also limit innovation and growth. Specific political and economic shocks may produce significant deviation from those norms, fostering innovation, cultural change and economic development (Chakraborty et al. 2016).

There is uncertainty avoidance and entrepreneurship attitudes such as risk aversion, pertain to individuals and may vary widely within groups. At the level of nations, *cultural traits* related to these *individual psychological traits* may be distinguished. Empirically, these traits may be derived as mean, modal or extreme values of individual observations or through a direct analysis of ecological data (pertaining to national practices and achievements). Cultural traits or *aggregated psychological traits* - represent a nation's 'mental programs' that are developed in socialization processes in the family in early childhood and reinforced in schools and organizations. Accordingly, cultural traits may differ between societies. A cultural trait strongly associated with individual attitudes towards risk and uncertainty is uncertainty avoidance. Uncertainty avoidance relates to the extent to which societies tolerate ambiguity. A culture is characterized by high uncertainty avoidance when its members feel threatened by uncertain or unknown situations (Kirzner, 2015).

People in such cultures look for structures in the organizations as well institutions and relationship that make events clearly interpretable and predictable. Every country needs to take cognisance of its cultural performance since there is a possibility of its interference with entrepreneurial activity in countries with lower uncertainty avoidance: not only familiar but also unfamiliar risks are accepted, such as changing jobs and starting activities for which there are no rules. Low uncertainty avoidance thus implies a willingness to enter into unknown ventures. They operationalize uncertainty avoidance using three survey questions about whether employees feel company rules should not be broken even when the employee thinks it is in the company's best interests about their personal expected job stability and about how often they feel nervous or tense at work (Riley, 2016). On the other side there is also emphasis on the importance of on-going dialog and reflexivity which is termed as pedagogy for critical hope in South African Higher education (Bosalek, Carolissen and Leibowitz, 2013).
Boselek et al, (2013) postulate that critical hope in South African Higher Education is processes associated with practice. The challenge remains that graduation rate norm for a three-year degree programme is 25% and that is regarded as an international norm. The question that may be posed is what happens to the 75 %? This study therefore attempts to investigate the entrepreneurial culture gap, develop and implement the model of framework that will be applied within a South African Higher education institution (DHET, 2013).

2.28. Conclusion

The Triple Helix model not only serves as a framework for understanding relationships and interactions between key actors in Chinese innovation systems, but has also become salient in Chinese national industrial and science and technology policies. However, what remains unknown in the existing studies is how well the Triple Helix relationships have been developed and what affects the development of the Triple Helix interactions. To better understand these issues, this study identified some key institutional logics in the Chinese context and discussed their impact on the development of Triple Helix in China. The contribution of this study to the literature on the Triple Helix, particularly in the context of China, is three-fold. First, the study has primarily proved the relevance of an analytical framework (Cai, 2013). It shows that the seven dimensions for understanding the institutional logics aligned with Triple Helix activities in Western countries serve a relevant tool for understanding the institutional logics in China. As the study is strictly guided by the framework, however, whether there are other institutional logics that are beyond the seven dimensions, but affect the Triple Helix development in China, remains for future research to find out. Second, with the understanding of institutional logics in China based on the study, one may better explain the reasons behind the problems in the development of Chinese innovation systems. This allows for the opportunity to make a more accurate diagnosis of what institutional elements of the Chinese context cause what problems. Thus, more pertinent policy recommendations can be expected. This will necessitate further in-depth analyses. Although this study addresses many common institutional logics in China, the situations may differ from one region to another. Therefore, more detailed analysis must be managed by Head of Departments at regional levels (Wang and Li 2013).

The institutional logics perspective and especially the mapping of institutional logics in China may provide a normative framework for designing Chinese innovation policies, e.g. its own Triple Helix models. To this end, a variety of models of interaction between university, industry and government at both national and regional levels needs to be examined. The empirical information gathered from these practices will be used to make two kinds of analysis: what institutional logics impede the implementation of the Triple Helix model in China? And what models of university-industry-government interactions best suit China's institutional environment. Environmental factors such as social, political and economic perspectives) are influential in creating unique business and entrepreneurial contexts particularly in South African country. It should therefore not be ignored that entrepreneurs disrupt market equilibrium by introducing new product-market combinations into a market, teaching customers to want new things and driving out less productive firms as their innovations advance the production frontier. Innovation goes beyond just creating novel products and services (Hughes, 2011).

To commercialize their innovations, entrepreneurs need to identify new market niches and develop creative ways to offer, deliver and promote their products. The pillars that are holding entrepreneurship back are: Start-up skills (education and skill perception - people think they have the skills to start a business but the education level suggests that they do not). The poor education system is regarded as key to this aspect. Risk capital; Human capital (flexibility of labour markets, an institutional variable and staff training); Technology absorption. The areas that South Africa is strong on is: Competition; Product innovation; High-growth firms; Process innovation. It should be noted that it still lacks in technological innovation. All of this requires an awareness of competitive offerings, and the ability to incorporate knowledge into distinct products and services. Innovation capabilities are thus important to economies' ability to become competitive, particularly in higher-productivity sectors (Wang et al. 2013).

CHAPTER 3

Entrepreneurial Culture and Success Factors

3.1. Introduction

This chapter postulates the linkage between entrepreneurial culture and the success factors. Entrepreneurial attitudes and perceptions play an important part in creating an entrepreneurial culture and societal attitudes. Regardless of whether entrepreneurship is a good career choice or not and regardless of high status given to successful entrepreneurs as well as media attention drawn to successful entrepreneurs, the main concern is to project important influence on the pool of potential and intentional entrepreneurs. The point of departure will be to extrapolate culture and climate with reference to entrepreneurial culture and success factors.

Previous Studies on entrepreneurship and entrepreneurial Education				
Researcher/s	*Measured items*	*Approach Employed*	*Contribution towards body of knowledge*	*Gap*
Seun and Kalsom (2015a)	Entrepreneurial readiness, opportunity identification (*personal characteristics, environmental trends, essential quality*), entrepreneurship training	Hypothetical deductive approach	Opportunity identification (+)	The study considers single variable
Ekpe et al. (2015)	*Self-employment practice, entrepreneurial skill acquisition, self-motivation*	Conceptual model	Entrepreneurship practice five years after graduation	Lack of empirical Analysis

Coduras et al. (2016)	Entrepreneurial readiness	Conceptual paper	Conceptual paper	It lacks empirical back-up
Lau, Dimitrova, Shaffer, Davidkov, and Yordanova (2012, p. 155)	Entrepreneurial readiness capability, willingness	Hierarchical regression analyses	Capability (+) entrepreneurial willingness (−)	This research emphasizes on entrepreneuria l readiness towards firm growth and less attention on youth readiness on business creation
Sharma and Madan (2014	Intention after completion of degree, prior experience in business, intelligence level, work experience	Chi-square test	Prior experience in business (+) Intelligence level (+) Work experience (no relationship)	This study is based on intention after the completion of degree

Table 3.1 Studies on entrepreneurship and entrepreneurial education

Although the researcher has not mentioned all of them, but she managed to cite a few which she has perused.

3.2. Culture and Climate

Institutional climate refers to shared perceptions and attitude about the organization whilst institutional culture is known as the shared beliefs and assumptions about organizational values and expectations. The deeper side of culture includes unwritten rules and perceived expectations. Some aspects of culture incorporate knowing the business, checking decisions with superiors, making good impression, being able to take on challenging tasks, no expectation of making the mistake. Cognitive approach to organisational culture reveals that while the dynamic construct view of culture provides an overall philosophical framing for studying culture, it is still necessary to specify a definition and the elements of interest which constitute an organizational culture. One of the most influential perspectives of organizational culture has been cognitive-cultural framework. In their review of culture research over 30 years, Weber and Dacin (2011) noted that culture and climate has remained consistently prominent among researchers over the decades. This includes organizational culture studies in entrepreneurship research (Wong, 2014).

Climate change related environmental stresses are already having a major impact on South Africa and other African countries, most notably the drought and related food insecurity crisis in the Southern African region. In a recent scientific survey of climate change and meteorological trends in 30 African countries, two thirds of the countries surveyed were experiencing warming faster than the world. Critical economic disruptions, particularly in the agricultural sector, are expected, with as much as 20 to 30% decline in yield for major agricultural crops by 2050. Previous research has focused on cultural values, the shared ideals and long-term goals of societies, which are also the cornerstone of cross-cultural and international business research. Cultures valuing key aspects of entrepreneurship such as the willingness to bear uncertainty, and individual competitive actions were thought to drive entrepreneurship ((Bishop 2017).

The question like what makes an entrepreneurial culture may be posed. This question has brought the attention of researchers as well as policy makers who view entrepreneurship as a means of stimulating economic growth and job creation. The observation of persistent cross-country differences in entrepreneurship levels cannot be explained by economic factors alone. Researchers have turned to cultural values which are the shared ideals and long-term goals of societies which are to characterize entrepreneurial cultures. Entrepreneurs thrive in cultures that do not merely strongly endorse desirable charismatic leaders, but are also able to tolerate at least some of the less desirable self-protective leadership behaviours. It is argued that while that social and commercial entrepreneurship both create value, they differ in the primary objective of the activity. Social entrepreneurs identify opportunities arising from neglected problems in society involving positive externalities, which are neither incorporated into the market nor addressed by the government (Santos, 2012).

By realising those opportunities, social entrepreneurs create social welfare (Mair and Marti, 2006; Zahra et al, 2009) while taking the financial viability of their venture as a constraint. In contrast, commercial entrepreneurs maximise private welfare by creating value while capturing the residual for themselves. *Social valuation* affects entrepreneurial behavior since it includes social capital and citizens' wellbeing. The entrepreneur has the responsibility to understand the social value of his or her business and must ensure that it is as high as possible (Santos, 2012). Because the goals and the way in which value is created differ for social and commercial entrepreneurs, they may need to rely upon different skills and abilities; implying that the two types of entrepreneur may not be drawn from the same pool of talent (Zahra, Fahimeh and Neda, 2014; Stephen, Pathak, 2016).

3.3. Comparative description between culture and climate

Despite the large number of studies into climate and culture, there is even evidence that the two terms have frequently been used synonymously. That is the reason why it is essential to postulate documented arguments between the two concepts-Main strengths of the research and thinking on organisational culture are (a) relatively complete specification of the deep psychological attributes (values, beliefs, and meanings) that can be used to characterise culture and (b) a focus on the development or aetiology of culture over time, especially through socialisation processes.- Main strengths of the research and thinking on climate are (a) the strategic focus of climate research on identifiable organisational imperatives (e.g. safety, service) and (b) the measurement and statistical documentation of the degree to which climate is shared by organisational members. These two concepts which are organisational climate and organisational culture, are related, in that the former is a measure of the perceptions of individuals working in the organisation, of the organisation's culture and their reaction to it. Organisational climate is concerned with how employees perceive the characteristics of an organisation's culture. It is further argued that climate can be problematic because it can be locally created by what circumstances apply, how environment presents itself or what leaders do. These two concepts are however phenomenal in transforming the organization (Reed, Storrud-Barnes and Jessup, 2012).

They become more beneficial if three aspects are taken to consideration to attain and achieve shared results which are *stabilize, grow and innovate.*

(a)Stabilize entails a wide Management and Head of Department on improving quality and road-map of institutional improvements with the purpose of creating common core, whilst reinforcing expectations to plan, cooperation amongst the team as well as meeting commitments. (b)*Grow* entails new strategies, measurable targeted growth and achievable goals. It works well with cross functional teams with the purpose of learning from organizational level Management and Head of Department in the stabilize phase and apply that to sub-team approach in grow phase. (c)*Innovate* works well if there is a cross functional innovation team that will decide when to meet (normally weekly works well) to launch industry leading innovation within a shorter period whilst encouraging collaboration. During this phase the institution is expected to implement an improved individual employee development system (Anderson, Dodd and Jack, 2012).

It is emphasized that institutions must not get stuck on climate because it is the institutional culture that as team comes and goes out of the institution. It also allows the institution to effectively deal with new challenges, goals and problems if it is solid. There are also eight critical culture change secretes which are outlined below-: (i) Never to focus on trying to change culture, rather focus on a challenge, goal as well as how the current culture is impacting the related work negatively and positively; (ii) Define a paradigm shift between defensive (both passive and aggressive) to constructive expectations. That include the basis of norms, beliefs, assumptions as well as mind-sets on why the institution exists. (iii) Team needs to know that culture transformation starts with personal transformation. This relates to understanding (including leaders) on how individual behaviour and mind-set issues may impact the success of the institution. It is noted that 90% of behaviour in the organization is driven by cultural rules, if it is successful, and people like it and it becomes the norm, then one can say it is a cultural change; (iv) Results and consequence management are necessary for any new cultural attribute to form; (v) It is critical to adjust management, motivation, communication systems as well as habits to be able to translate plans into effective action and shift the operating model; (vi) Culture is built through shared learning and DUT experience; (vii) It is critical to understand the underlying cultural norms and expectations that are driving most of current behaviour; (viii)The cultural change agent must repeatedly engage groups to define and continuously refine plans to improve results with meaningful mission, priority and support to the targeted paradigm shift(Wong, 2014).

Culture is the result of a learning process. Through interaction with each other and the environment, humans develop values, behaviours, symbolism, and more, that form culture. Although aspects of culture, such as smiling, are universal organizations tend to differ culturally because they have had different learning experiences. The definition of organizational culture that will be used in this study is the values, customs, rituals, and norms shared by all the members of an organization, which must be learnt and accepted by new members of the organization (Kroeber and Kluckhohn, 1952; Law, 2014).

3.4. Entrepreneurial culture and Black Tax

Part of challenges that face emerging entrepreneurs is black tax. When young entrepreneurs are certain that they are becoming financial stable through the profits gained from pursuing entrepreneurial career, there is anxiety that comes with knowing that for example the aunt, who raised that emerging entrepreneur and their children do not have money to buy a loaf of bread. Some were raised by more than two parents in a culture of polygamy. In the case where the dad had six wives, there expectation is that the emerging entrepreneur needs to support these six wives plus their children. This is mostly in African culture where the black professionals are expected to support their extended families every month.

3.5. Role of culture in an entrepreneurial activity

The importance of effective human resources plays an imperative role in ensuring that the entrepreneurial phenomenon is positively influence by the considering the aspect of the role of culture. Research indicates that national culture can trigger entrepreneurial activity, although to date no consensus about the nature of this effect has emerged (Hayton and Cacciotti, 2013). Some scholars propose a direct effect of culture (Uhlaner and Thurik, 2007; Stephan and Uhlaner, 2010). Other scholars suggest mediating effects between aspects of culture and religion in shaping entrepreneurship (Drakopoulou Dodd and Gotsis, 2007). Another group posits that it is the interplay of culture with institutions, including religion, what fosters entrepreneurship within a society (Li and Zahra 2012; Pinillos and Reyes, 2011).

The diagram illustrated below indicate the inter-linkage between Entrepreneurial Personal attraction, entrepreneurial intention, perceived behavioural control, social valuation, as well with the social norms at the centre. The diagram is more unpacked below-:

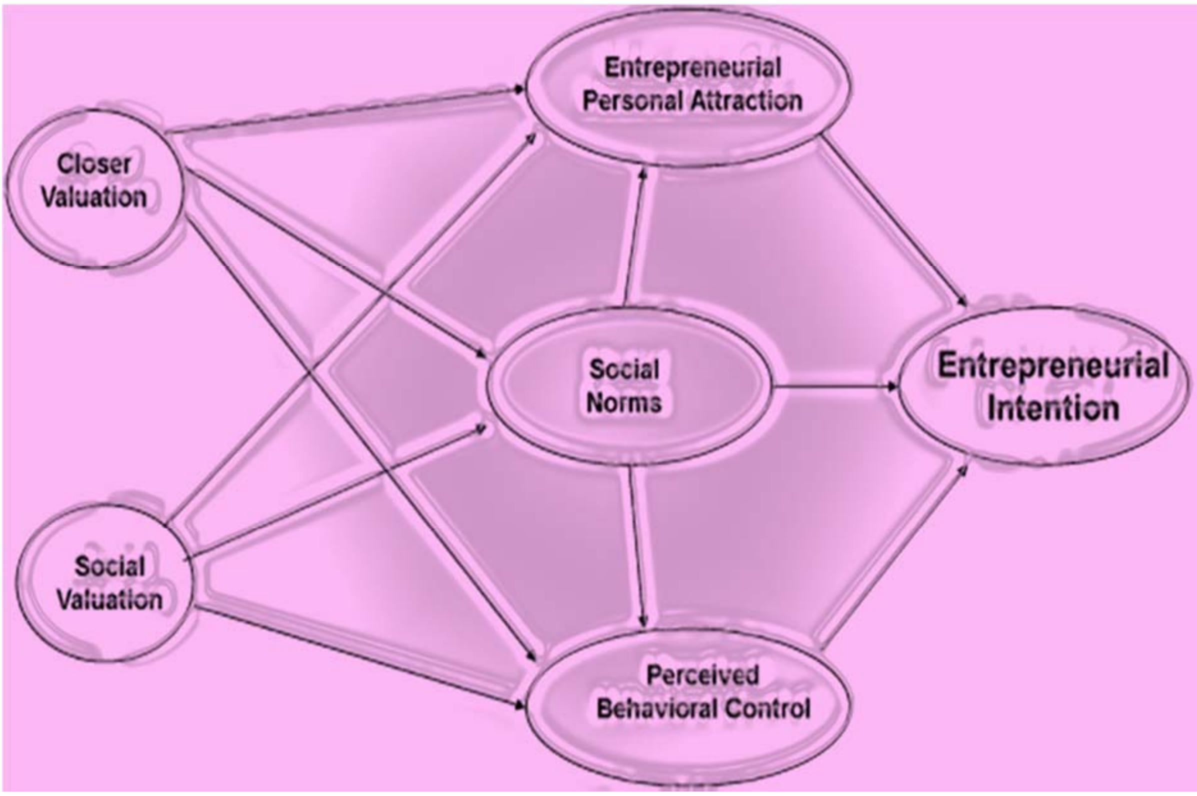


Figure 3.1- Interlinkages for Entrepreneurial Activity- Adapted from Santos*, Roomi and Linan (2014)*

It is noted that the disposition of culture can be influences by the surrounding culture. Culture is likely to indicate how the person is likely to react in each a given situation. Such reaction may affect, or impact *entrepreneurial personal attraction* as illustrated on the above diagram. Cultural context can significantly influence the way of conducting business and forces it to adapt its activity to socio- cultural requirement as per local community practice. When citizens decide on whether to buy the entrepreneurs product or services, the social value orientation plays a vital role for that customer to decide. It is noted that both closer valuation and social evaluation have positive effect on entrepreneurial intentions (Heuer and Kolvereid, 2014; Linen, 2014).

3.6. Categories of Entrepreneurial Success Factors

The discussion below postulates the four categories around entrepreneurial success factors which are socio-cultural factors; Personality factors; opportunity factors and political factors.

3.6.1. Socio-cultural factors

Fear of failure and perceived capabilities are the most relevant socio-cultural factors for female entrepreneurship. The aspects of social environment indicate that social cognitive around the social environment on individuals plays an important role in shaping their cognition. The social status of entrepreneurship or it being a respected career path will raise the individuals' interest in entrepreneurship and new venture creation. Social capital includes both strong ties among members of a family or ethnic group and weak ties. Cognitive social capital refers to types of understandings that develop among individuals depending on a shared meaning of language, codes, and culture. From a cognitive perspective, both types of social capital with strong and weak ties play a different and complementary role in transmitting values and ideas that will influence perceptions and intention. This calls for intellectual capital that is defined as the knowledge and knowing capability of a social collectivism such as an organization, intellectual community, or professional practice (Qureshi, Saeed and Wasti, 2016).

It is important to consider the interplay between different levels of social influence in explaining the entrepreneurial orientation. The social influence on entrepreneurial attitudes and behaviours is exerted at both the macro- and micro-levels. The micro-social or closer environment derives from links with family, friends, or acquaintances. Even though entrepreneurship is a vital factor in the economic development process, in practice it must face the problem of adequate information regarding the potential opportunities in environment, demand and choice of potential customers, sources of necessary resources for that new goods, various aspects of the markets, market penetration strategies, existing and probable competitors, suppliers of raw materials, required technology and expert personnel, etc. As a result, if entrepreneurs want to collect this information by using the traditional methods then it will cost more to the entrepreneurs and this cost also leads to increase in the production and as a transaction cost. Participation in this closer-environment network will provide, among other things, advice, support, and legitimacy. In this sense, closer valuation refers to the way individuals perceive the entrepreneurial activity to be valued in their closer environment (family, friends, and ethnic group). This influence received from the closer environment values contributes to the generation of more favourable perceptions toward start-up. Therefore, the value assigned to entrepreneurship in this closer environment is likely to promote a more positive perception of personal support if the individual decides to start a venture. These perceived valuations may increase self-confidence in the ability to successfully start a venture through entrepreneurial career and the desirability toward the entrepreneurial culture (Noguera, Alvarez, and Urbano, 2013).

3.6.2. Personal Factors

Entrepreneurs should have some characteristics and personality traits before starting a business. An entrepreneur should have ability to plan that develop business plans to reach goals in variety of areas, including finance, sales, production, marketing and personnel. An entrepreneur should have good communication skills that discuss, explain, sell and market their goods or services. An entrepreneur should have good marketing skills which result in people wanting to buy goods or services. An entrepreneur should have interpersonal skills that ability to establish and maintain positive relationships with customers and employees, clients, financial lenders, investors, lawyers and accountants. An entrepreneur should have basic management skills that hire others to deal with the tasks of the business. An entrepreneur should have leadership skills that develop a vision for company and to inspire employees to pursue it is imperative for success. An entrepreneur should have taking lessons from other's failures to become successful. Before starting a business, entrepreneurs should research businesses and other entrepreneurs' mistakes. An entrepreneur should make sure the enterprise or business is what he/she wants (Gedik, Miman, and Kesici, 2016).

3.6.3. Opportunity Factors

Opportunity factors entail aspects such as that creativity is something: new, innovative, original, and unique. For opportunity factors to succeed especially for entrepreneurial university it is imperative that institutions such as formal and informal channels of university-industry knowledge transfer, and the local economic impact of their dynamic interaction work together to incorporate individual creativity and organisational creativity. Characteristics of creativity are postulated as follows (i) Imagination: defines what the process of creation always implies: imaginative thinking or behaviour; (ii) The imaginative activity / thinking / behaviour must be applied to a purpose or to achieve an objective; (iii) The imaginative and creative processes must generate something original; (iv) The creative result must be of value to the objective or purpose (Gedik et al, 2016). The approach for opportunity factors is illustrated below-:

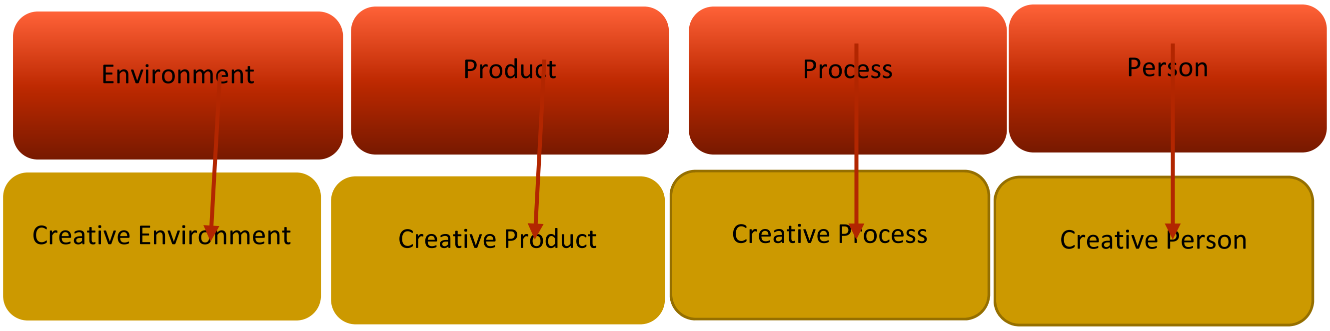


Figure 3.2 Approach for opportunity Factors-Adapted from Mooneys approaches on creativity (2016)

Creative entrepreneurship concept has become a term that refers to the business activity of entrepreneurs belonging to the creative industries. There is a general belief that everyone has the entrepreneurial spirit inside of him/her, a spirit that just waits to come out. Entrepreneurship starts with a vision and most importantly for an entrepreneur is to be unstoppable! One thing that many do not know is that entrepreneurship is not genetic, but can be taught. The will, skills, knowledge are some of the features that one can learn and improve through practice. Although entrepreneurship exists in each one, without hard work only few entrepreneurial qualities obtained at birth can help one in the long term. Entrepreneurs make things to become reality using their own will, their own qualities and knowledge, traits that can be learned and developed. Creativity should incorporate business plan competition. Business plan competitions act as entrepreneurship support programs and provide a platform to the participants to enhance their entrepreneurial skill sets and increase their self-confidence (Qureshi et.al, 2016).

3.6.4. Political Factors

Political factors can affect entrepreneurship in many ways such as imposing of taxation and tariffs that may impede the flourishing of the entrepreneur. There can also be the possibility of regulation whilst on the other side entrepreneurs may monopolise the service success only to note that very few are benefiting in that industry. That is why it is important for the entrepreneur to understand the industry politics, national politics as well as global politics. It should however be noted that Role of political factors in wellbeing and quality of life during long-term constraints is highly unpredictable since one cannot foretell how political game will be on the next day.

3.6.5. Psychological Factors

Education is inextricably linked to entrepreneurial intentions and growth as it influences entrepreneurs' confidence in whether they have the skills and knowledge to start a business. Although the processes included in ASA theory function in many different contexts and across many different careers or occupations, there are reasons for suggesting that they may have especially strong effects with respect to entrepreneurship. First, intense media attention has fostered widespread knowledge of the demands associated with becoming an entrepreneur, presumably reducing the attractiveness of this field for individuals who doubt that they possess the required knowledge, skills, or characteristics to effectively cope with such demands. Second, rates of attrition are very high in entrepreneurship, such that a high proportion of new ventures cease operating within their first 3 years of existence (Baron, 2013).

This is often, but not always, due to failure; entrepreneurs also withdraw from new ventures for many other reasons, including the recognition of better opportunities Regardless of the precise reasons, many individuals do indeed leave entrepreneurship, or withdraw from new ventures they have started. Employed persons who do not achieve early success in one position or task may simply receive additional training or be transferred to another position within the organization. Such paths are, however, not an option for entrepreneurs. If their performance is poor or perhaps merely mediocre and their new ventures fail, their current position is terminated. Together, environmental and self-selective factors combined produce a population of entrepreneurs who are above average in their capacity to deal effectively with stress tolerance. Persons who are relatively low on this dimension, in contrast, exit from the field Ucbasaran, Shepherd, Lockett and Lyon, 2013).

Psychological Well-Being is cited as a measure of entrepreneurial success. In the past, entrepreneurial success has almost exclusively been defined in terms of financial outcomes Return on investment (ROI), profits, growth in sales. While such measures are indeed important indicators of success, there is currently growing recognition in the field of entrepreneurship that entrepreneurs often seek other goals aside from purely financial ones, and reap many nonfinancial benefits from their entrepreneurial activities. Research findings indicate that many choose this role because of strong motives to achieve greater autonomy and independence and the opportunity to engage in work they find meaningful. Individuals often become entrepreneurs because they are seeking emancipation from social structures or conditions they find restricting. Together, these suggestions indicate that a somewhat broader definition of entrepreneurial success one that includes subjective well-being as well as financial outcomes may be useful. Reflecting this point, the primary dependent variable in the present research is a measure of entrepreneurs' subjective well-being (Baron, Franklin and Hmieleski, 2013).

3.6.6. Shifted entrepreneurial success factors

Shifted entrepreneurial success factors can be used for overcoming the shortcomings of psychological and sociological models and enhance their applicability. The entrepreneurial success factors are broadly divided into four categories as mentioned above. These are psychological factors (need for achievement, risk taking, need for power, internal-external locus of control, motivation for autonomy, creativity, need for affiliation, and intelligence); (b)socio-cultural factors (religious values, rural-urban orientation, marginality and tension, social cohesion, etc.); (c) personal factors (family tradition in business, previous experience, birth order, age at entrepreneurial level, education etc.); (d) opportunity factors (economic opportunities, peer group assistance, training opportunities and guidance, existing schemes of entrepreneurial training and guided entrepreneurship). It is however noted that among these factors risk taking is the most important success factors irrespective of business size, location and types as well for the entrepreneurs; of course, according to the researchers this risk should be calculated and moderate in nature. The second, third, fourth and fifth important success factors are innovativeness. They are well-coordinated-flexible persistent actions that indicate the quest for something new, like managerial capability, as well as adaptability; self-awareness/self-motivation for achievement; self-confidence and personal initiative; market knowledge relating to business environment like market demand, competition, technology development, product development, social and political issues etc. respectively. After 90s they tend to be different in the focus regarding success factors of entrepreneurs.

On the other hand, after 1990s managerial and environmental factors of business i.e. market knowledge and well-coordinated flexible persistent managerial action factors followed by risk taking capability, innovativeness, self-motivation, moral attitudes and values, and business and other environmental consciousness, are the most important success factors for the entrepreneurs Podsakoff, Mackenzie and Podsakoff, (2012).

The figure table below indicates the shifting of the global entrepreneurial success factors-:

Global shift on entrepreneurial success factors

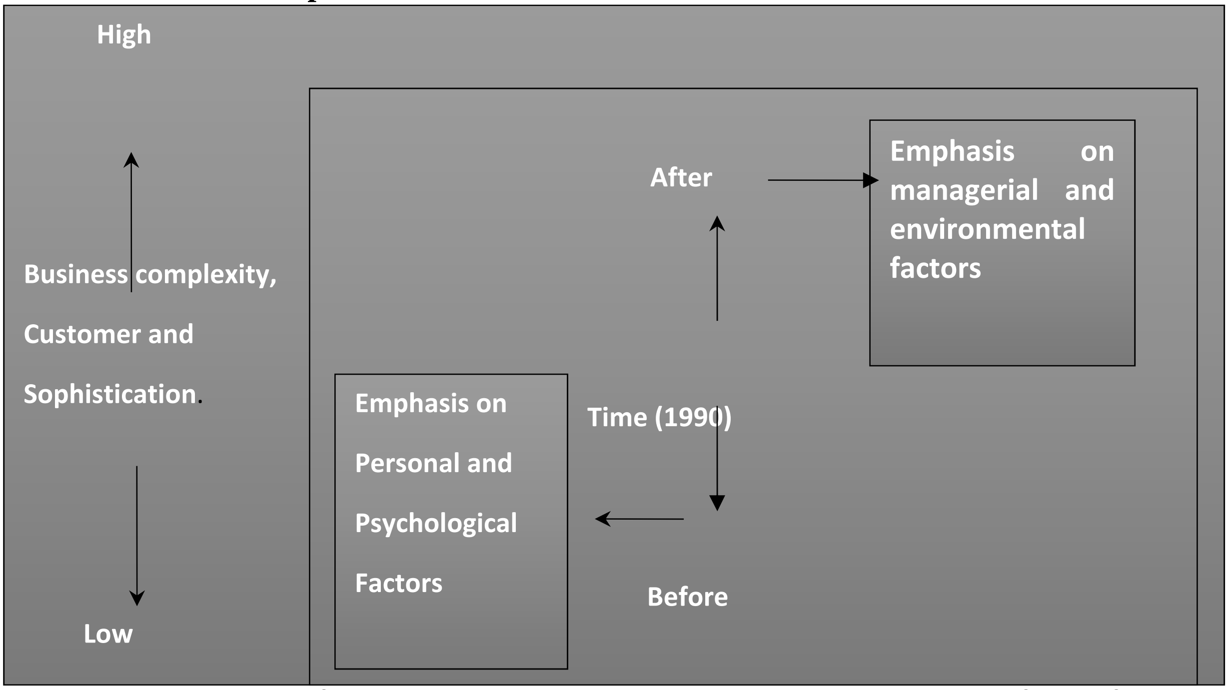


Figure 3.3 Global Shift on entrepreneurial success Factors-Source: Edited from Afrin, et al (2008)

This diagram indicates that before 90s, complexity in business was less; customer and product sophistication, development of information systems and globalization of business were low in degree. Entrepreneurial successes were dependent on personal and psychological factors of entrepreneurs. On the other hand, due to the increase in business complexity, customer and product sophistication, development of information system, globalization of business after 1990, the entrepreneurial success focus has been changed towards managerial and environmental factors. So, the shift in success factors from past to present reveals that present dominating success factors are knowledge, information and coordination. Before 1990s personal and psychological factors i.e. risk-taking ability of entrepreneurs, innovativeness, and self-confidence, well-coordinated flexible persistent managerial actions, personal initiative and industriousness, dynamism and self-motivation are the most success factors. It can be stated that entrepreneurial success factors have been shifted from personal and psychological factors to managerial and environmental factors due to the increasing complexity in business and development of information, demanding products and customer sophistication, globalization of business Vernon, 2014).

On the other side great emphasis must be exerted on the importance of linkage between entrepreneurship and economic development as well as cultural intelligence. Cultural intelligence is defined as a person's capability for successful adaptation to new cultural settings in relation to unfamiliar settings attributable to cultural contexts. In this case network Company must collect all necessary information for the entrepreneurs. This network company must give permission to the entrepreneurs to use their network facilities probably in the form of franchise business where entrepreneurs must pay royalties, franchise fees and other required fees. This type of network facilitates for knowledge (information) and coordination estimates individual to act as an entrepreneur. Such network can help in providing facilities accelerate entrepreneurship development side by side of economic growth. This works well when intertwines with global mind-set. It also entails embracing the complexity and contradictions inherent in global interactions. This implies that entrepreneurs both accept and embrace the complexity involved in adapting to foreign markets in a global economy. Global mind-set involves four facets: personal attributes, cognitive knowledge and skills, motivation, and resources for adapting behaviour as expanded below though the diagram lacks global mind-set aspect (Jie and Harms, 2017).

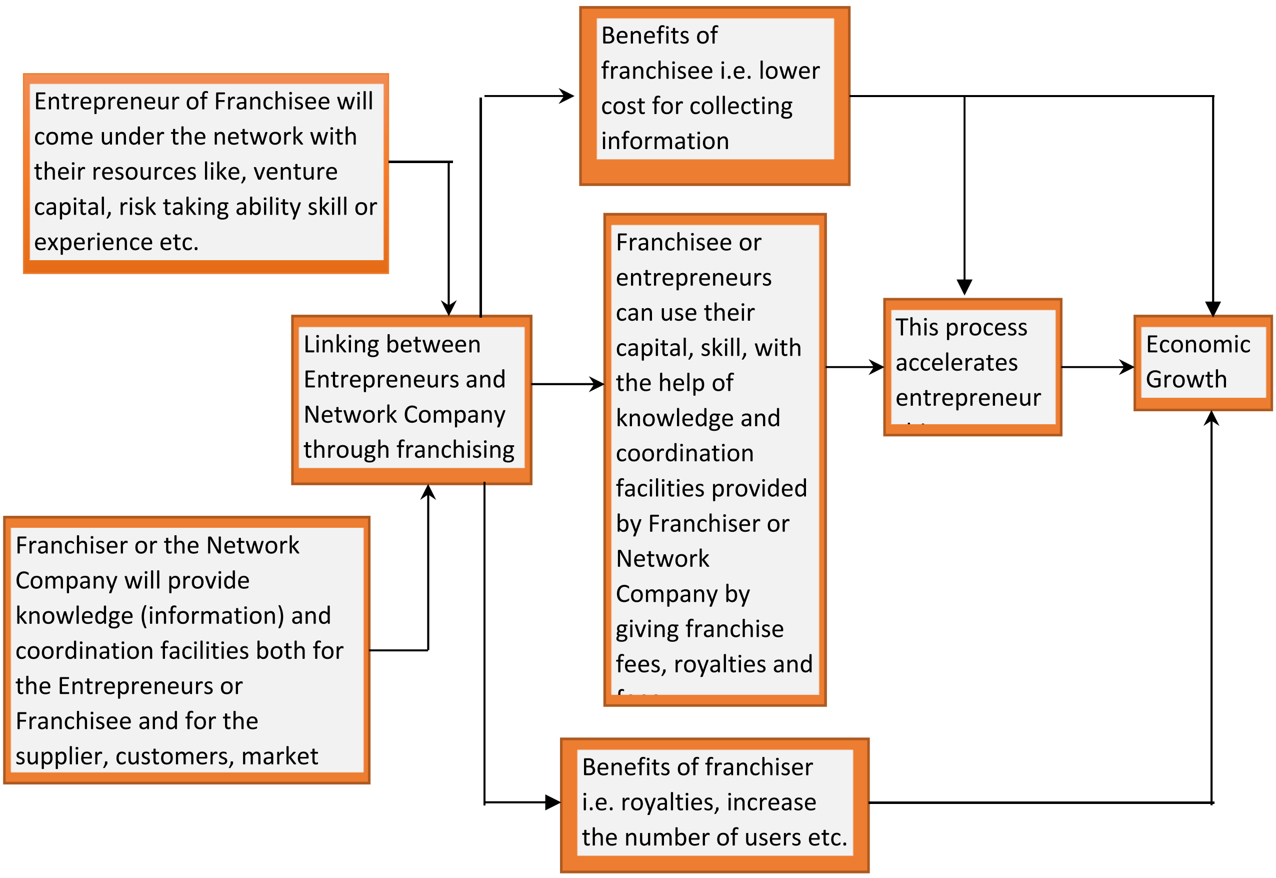


Figure 3.4 Global facets for behaviour adaptation- Source: Adapted from Jie et al (2017)

Although this model could be beneficial there are however some shortcomings that are highlighted in it. (i) Privacy of the information (ii) this model requires competent and efficient personnel for creating new ideas by analysing the information provided by these networks; (iii) Efficient personal having the ability to identify wrong information provided by the both Network Company, suppliers, customers. Such entrepreneurial factors can be might have positively impacting if the institutions take proactive cognisance of them. This calls for creating strong knowledge constituency. This has been proven to be fruitful in other institutions and have even been found to be common in most universities depending on the size of the university. That knowledge constituency is better influencing if the following illustrated model is employed as per below- whilst applying the following aspects and functions that are found to be common in the most universities and have proven to have similar functions depending on the size of the university. Another important cited aspect is creating knowledge with outside constituents where the customers are given opportunity to give meaning to the product or service as illustrated below-:

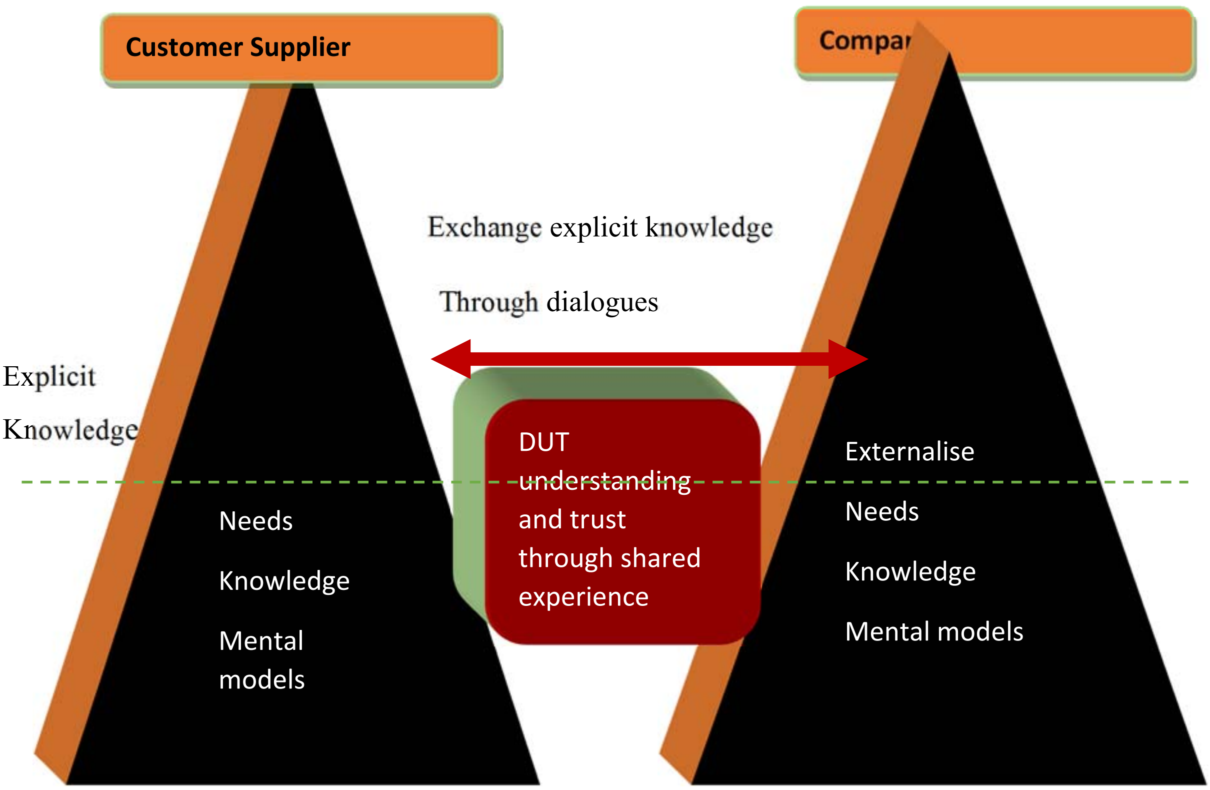


Figure 3.5 Creating knowledge with Outside Constituents: Source Edited from (Gumede, 2014)

This calls for an institution to extend its scope by thinking outside the box and being able to compete in a global competitive environment with the characteristics that are postulated on the table below. The table below now incorporates the global mind set. The researcher believes that the motivational aspect of global mind-set addresses the willingness to engage in global activities. The motivational facet of global mind-set indicates that prospective entrepreneurs with a strong global mind-set are more willing to learn from others and adjust themselves to dynamic global environments. With a strong global mind-set, entrepreneurs are more motivated to seek rather than reject globally oriented behaviour, such as international entrepreneurship activities postulated below (Gumede,2014; Jie et al, 2017).

GLOBAL MIND SET This entails knowledge of and sensitivity to multiple cultures that becomes essential
CULTURAL AGILITY It is where organizations become ethnically and racially diverse due to immigration and create new dimension in the workplace
RELATIONSHIP MANAGEMENT Where reaching institutional objectives is to know how to collaborate and when and from whom to get input across borders to the advantage of the institution. It is however a challenge to create an environment that allows employees from different backgrounds, nationalities and different value system to function in a creative and innovative way.
ADAPTABILITY This has to do with the ability to deal with uncertainties and unknown challenges, especially emerging markets. The motive behind id developing excellent reputation for managing diversity to become an attractive employer

Table: 3.2 International entrepreneurship activities- edited from Gumede (2014)

Various scholars have therefore contended that to be globally competitive the institutions have to be learning organizations and satisfy the following properties-: (a) Learning organization has a shared vision of the future and challenges its people to change and contribute to it; (b) It learns from experience, uses systematic problem-solving techniques and transfers skills knowledge quickly and efficiently throughout the organization by means of formal training programmes; (c) It integrates work and learning and seeks excellence, quality and continuous improvement; (d) It mobilizes human talent by putting emphasis on learning education and training planned for this purpose; (d)It empowers people, broaden horizons and recognizes individual learning styles. It learns and relearns constantly to be innovative, inventive and invigorative; (f) Learning becomes an integrated strategically used purpose; (g) The corporate climate encourages rewards, and accelerates individual and group learning; (h) Well-developed core competencies serve as a take-off point for new projects and initiatives; (i) Learning organizations seeks to integrate task and people factors where people's needs are continuously identified to align needs with organizational goals; (j)Learning institutions study their competitors locally and abroad (van Woerkom and Poel, 2010).

3.7. Culture and Corporate entrepreneurship

The concept of corporate entrepreneurship is meant to expand the territory of entrepreneurial culture. It is generally believed to refer to the development of new ideas and opportunities within large or established businesses, directly leading to the improvement of organizational profitability and an enhancement of competitive position. It can provide concerted and collective response on the questions and current responses on current issues. This was witnessed on the 2016 round table discussion that was responsible for identifying social entrepreneurship opportunities in both academics and social entrepreneurs discussed the evolution of the contemporary society and business environment to identify stimuli and risks associated with new social entrepreneurship ventures. Considering the complex changes in the contemporary society, social entrepreneurship is increasingly more popular in many economies. This is only one of the aspects changing the business landscape. Social entrepreneurs face many challenges, but also can valorise the trends in contemporary society and economies. Having this in mind, the round table debated mainly the innovative aspects of social entrepreneurship, as well as how to overcome the various problems social entrepreneurs encounter (Chang, Benamraoui and Rieple, 2014).

Similar engagement helped PhD students involved in researching the entrepreneurial field to develop their knowledge and ability related to qualitative research. It offered participants a hands-on, in-depth and advanced training on methodologies of qualitative data collection and research design issues. This interdisciplinary session addressed key issues including, qualitative research versus quantitative research, qualitative research design and planning, selecting appropriate research methods to investigate research questions, identifying limitations in data collection and inferences, ensuring rigor in qualitative research, acquiring criteria for judging the merit of qualitative research, crafting a contribution to the field, presenting qualitative data. Open discussion was encouraged, and participants shared their experience from their own research with their peers. This concept in turn affords universities an opportunity to engage directly in business activities, such as selling education and research services; companies further strengthen the Rand D activities and even establish corporate universities to develop the skills of their professionals and managers; government also provides venture capital to help start new enterprises to promote potential economic growth. The supporting institutional logics for these activities are the cultures of market orientation and process management. Taking the role of the other can be perceived as both organizations learning from each other and a way of organizational innovation. One of the main drivers for organizational learning and innovation is market orientation, which is defined as the organization culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value for buyers and, thus, continuous superior performance for the business. Adopting a market orientation approach in an organization is about how the organization is oriented to the market, paying more attention to consumers' needs, competitors' advantages, and inter-functional coordination. Market oriented culture has been a key to enhance competitive advantages for organizations to best pursue interest and profit (Hattab, 2014).

3.8. DUT background and culture

Durban University of Technology is the Higher leaning institution that is in South Africa KwaZulu Natal Province in Durban. Since the study is conducted at Durban University of Technology that is situated at KwaZulu Natal, the point of departure will be to portray the KZN map and Durban Map respectively. The purpose is to provide a perspective of where the institution is situated. The map illustrated bellow indicates where the institution the researcher is researching is situated. To protect it the researcher will simply say it is in KwaZulu Natal

Durban

Source: www.google.co.za

Durban Map

Source: www.google.co.za

This institution is known to be a student-centred institution and the leading University of Technology in KwaZulu Natal that was formed in 2002. It emerged during merger transition through the merger of former Technikons Natal and Former ML Sultan previously known as Durban institute of Technology. It has five campuses in Durban and two Campuses in

Pietermaritzburg. During the year 2016, Durban University of Technology had an enrolment of around 27023 (twenty-seven thousand and twenty-three) students. It is one of the five Universities of Technologies that offer Doctoral Degrees around the continent. The campuses it currently has Brickfield campus in Durban, Durban City campus, ML Sultan campus in Durban, Ritson Campus in Durban, Steve Biko campus, Riverside campus and Indumiso campus both in Pietermaritzburg. It has created opportunity employment for 577 head counts with 22% of them holding Doctoral Degrees. It should be noted that this institution has been cited as DUT for protecting it though there is full permission of granted for conducting research. By 2014, the higher education institution report indicated that it provided the following snapshot (Durban University of Technology, 2016).

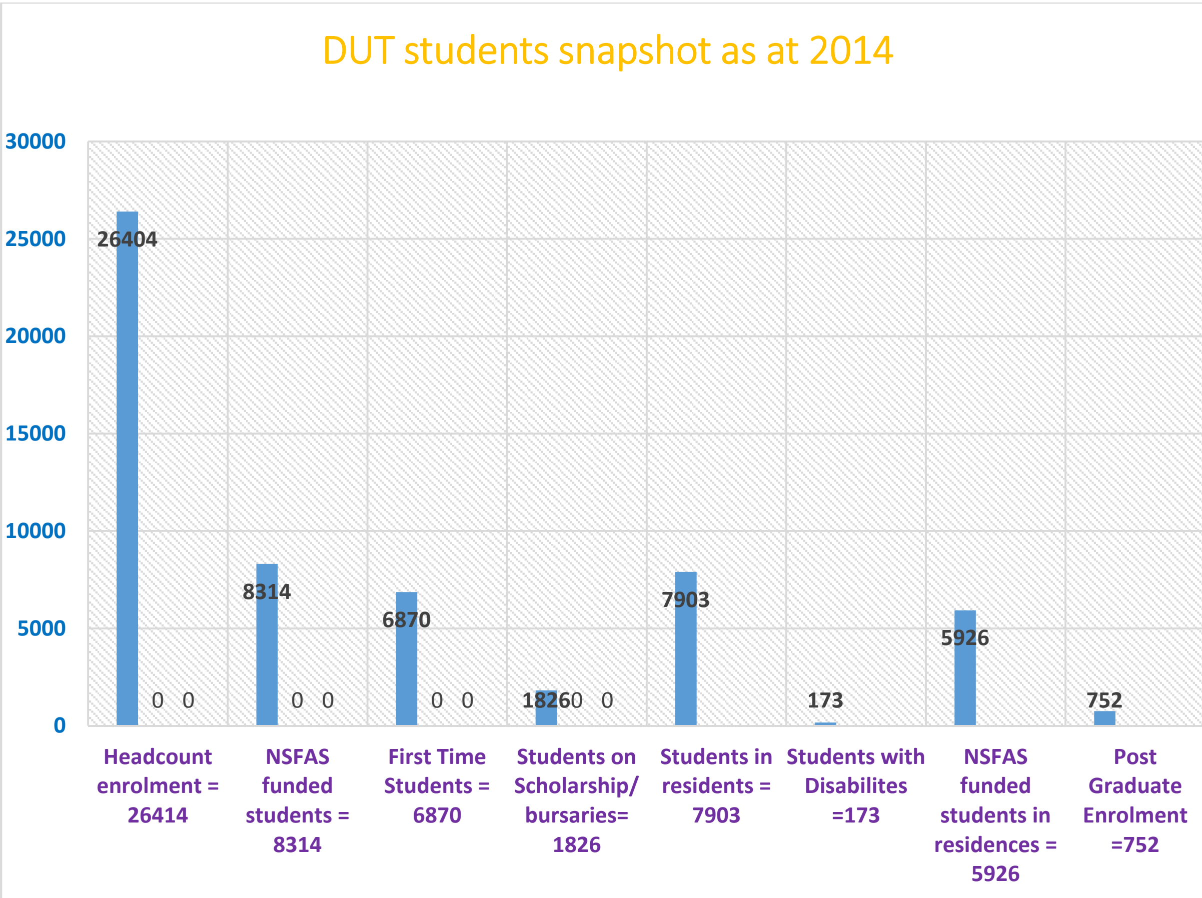


Figure 3.6 (a) DUT Synopses-Source: edited from www.dut.ac.za website

The above depicts graphical illustration of the institutional synopsis which summarises the headcount enrolment; NSFAS fund students, first time students, students in re scholarship students in residents, students with disabilities Post graduate enrolment students. The table below further expands n strategic management focus areas as well as targets and actual numbers as at 2014.

3.8.1. DUT Strategic Management focus areas as well as selected actuals and target

The strategic Management focus area concept assists the leadership with the principles and approaches that guide the institution towards driving and maintaining on-going improvement. That also incorporates impacting practical areas of continuous culture improvement. It provides proper direction towards understanding business process improvement. Every organisation has its own unique strategic area focus. The diagram below illustrates the strategic management focus specifically customised for Durban University of Technology as highlighted in the 2014 in the University report.

	Indicators	Actual	Target
Communities of living and learning	Headcount enrolment	26404	26176
	Number 0f Students in residents	7903	No target according to 2014 report
	First Time Students	6870	7176
	Students with Disabilities	173	No target according to 2014 report
	International students of student boy only	3%	No target
	NSFAS Student funded in residences	5926	No Target according to 2014 report
Research and Innovation for Development	Post Graduate enrolment	752	673
A Learning organization	Students funded by institution	714	No target according to 2014 report
A Sustainable university	NSFAS student Funded	8314	No target reflecting according to 2014 report
	Students on Bursaries/ Scholarship	1826	No target according to 2014 report

Figure 3.7 DUT strategic focus areas: Source- Edited from DUT 2014 report.

The table illustrated above postulates Durban University of Technology Strategic Management focus areas, indicators, actual numbers as well as targeted numbers. The report is based on the

2014 institutional report. The focus areas are communities of living and learning; Research and Innovation for Development; A learning organisation as well as sustainable university. In 2014 the total headcount was 26404 which were higher than the targeted 26176. The total number of students accommodated by university resident was 7903 which is 30.19% of the total head count. Students funded by NSFAS was 8314 which is indicates 31.76% of the total headcount. Students n Bursaries and scholarships were 1826 which is 6.98% of the total head count. The strategic Management focus area cannot be achieved without the institution understanding its product line. Understanding the institutional product line or services line channels the institution towards understanding and holding on to its critical capabilities. Critical capabilities refer to the crucial enabler that is essential for the institution to function towards accomplishment of the specified assumed objectives. It incorporates the assessment methods and improvement roadmaps. It can serve as a useful guide and tool towards setting goals and evaluating performance. Since the study focus is on Durban University of Technology, the institutional critical capabilities will be diagrammatically postulated later in figure 3.9 later in the chapter.

3.9. DUT Critical Capabilities

Critical abilities can be described as an institutional attitude towards, products, services and regarding information and a set of skills that enable the key stakeholders and strategists to systematically examine, evaluate, and make use of information. Critical abilities are generally attributed to the ability to think clearly and rationally about what to do or what to believe. It includes the ability to engage in reflective and independent thinking. Someone with critical thinking skills can do the following: understand the logical connections between ideas. Two important and interrelated ingredients are necessary to operate with a high level of critical ability: (a) Broad and (b) generally accurate information about the world. Critical capabilities can also be attributed to the capacity to act on that instinct and draw reasonable conclusions during the meaning making process. The extrapolation of critical capabilities will be confined to the DUT capabilities for this study and they are illustrated below-:

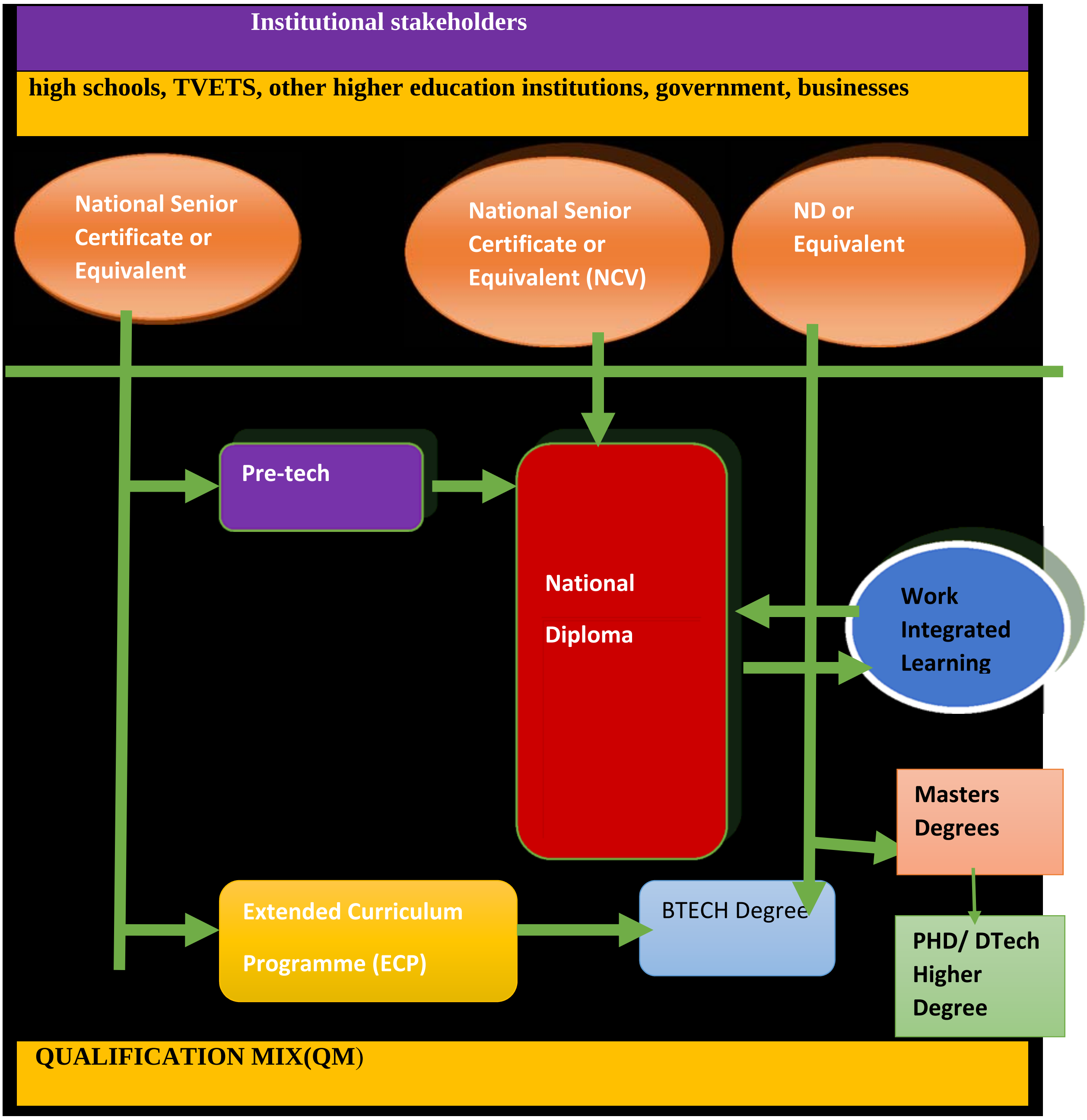


Figure 3.8 Critical institutional Capabilities - Source: Researcher (2017)

The above diagram postulates the DUT critical capabilities that with Qualification mix includes service offering such as PhDs, higher degrees like Masters, BTech degrees, extended curriculum programmes, Pre-tech as well as Work Integrated Learning. This incorporates other stakeholders like TVETs etc. Open University (2010) postulates the following aspects related to critical institutional capabilities as outlined below-: (a) *Flex-everything*- where the changing world requires organizations to master the capabilities of speed, agility, culture change, reducing cycle time and transformation. It allows organizational structures to be more fluid and more dynamic; (b) *Human (intellectual) Capital* which represents the collective knowledge, skills, and abilities of all employees within the organization. It is tracked through this formula -:$market\ value \div replacement\ value$. Well known knowledge creating firms are firms. Intellectual capital assesses competence against commitment of employee within the work unit. HRD practices such as hiring, training, incentivizing, governing employees with the right set of skills and in a right way may increase human capital; (c) *Leadership depth* where the institution Management focuses on finding successors for senior management positions. This encourages the institution to produce unique brand or identity for leaders; (d) *learning:* Learning organizations are encouraged as they seem to have the capacity to reinvent them. It is argued that organization that learn tend to be more innovative, able to manage knowledge workers and able to create strategies. Successful organizations have the capacity to regenerate themselves by both generating ideas and generalizing those ideas); (e) *Customer connection* where the institution can track individual customer's preference as well as including customers in training, staffing and communication practices and it results in customer intimacy; (f) *Shared Mind-set* or common culture that represents the extent to which employees have a collective agenda; (g) *Strategic clarity:* Where employees will have common answerer to same question. That will also help employees to know what is expected of them and customers to know how to differentiate the firm from its competitors; (h) *Organizational Diagnosis and assessment* where the organization will worry less about the structure and worry more about the capabilities (Open University, 2010).

Twenty First Century organization groom employees who prepare today to respond to tomorrow through the following aspects-: (i) Self-resilience: Where the individual plans how he will assume his responsibility for his own career; (ii) Resilience: Where the individual meditates on what is the lifecycle of his knowledge and how must he stay current; (iii) Results: where individual meditates on the recipients of his work and the value it adds to them; (iv) Relationships: Where the individual thinks of people who care about him and whom he cares about; (v) Resolve: Where the individual meditates on what needs to be resolved and how it should be resolved.

This could be made possible if the institutions practice the basic control Lever. The basic control lever is the one that is extracted from Simons as postulated below as cited by Open University (Open University, 2010).

3.10. Basic Control Lever

The levers of control are designed to assist management on to apply and utilise innovative control system to drive strategic intent. It is regarded as a tool of sharp framing the problem before it takes place the way it could be expected and thereafter lay out a ringing manifesto for business. Open University (2010:47) further illustrates the basic control lever extracted from (Simons, 1995) as follows-:

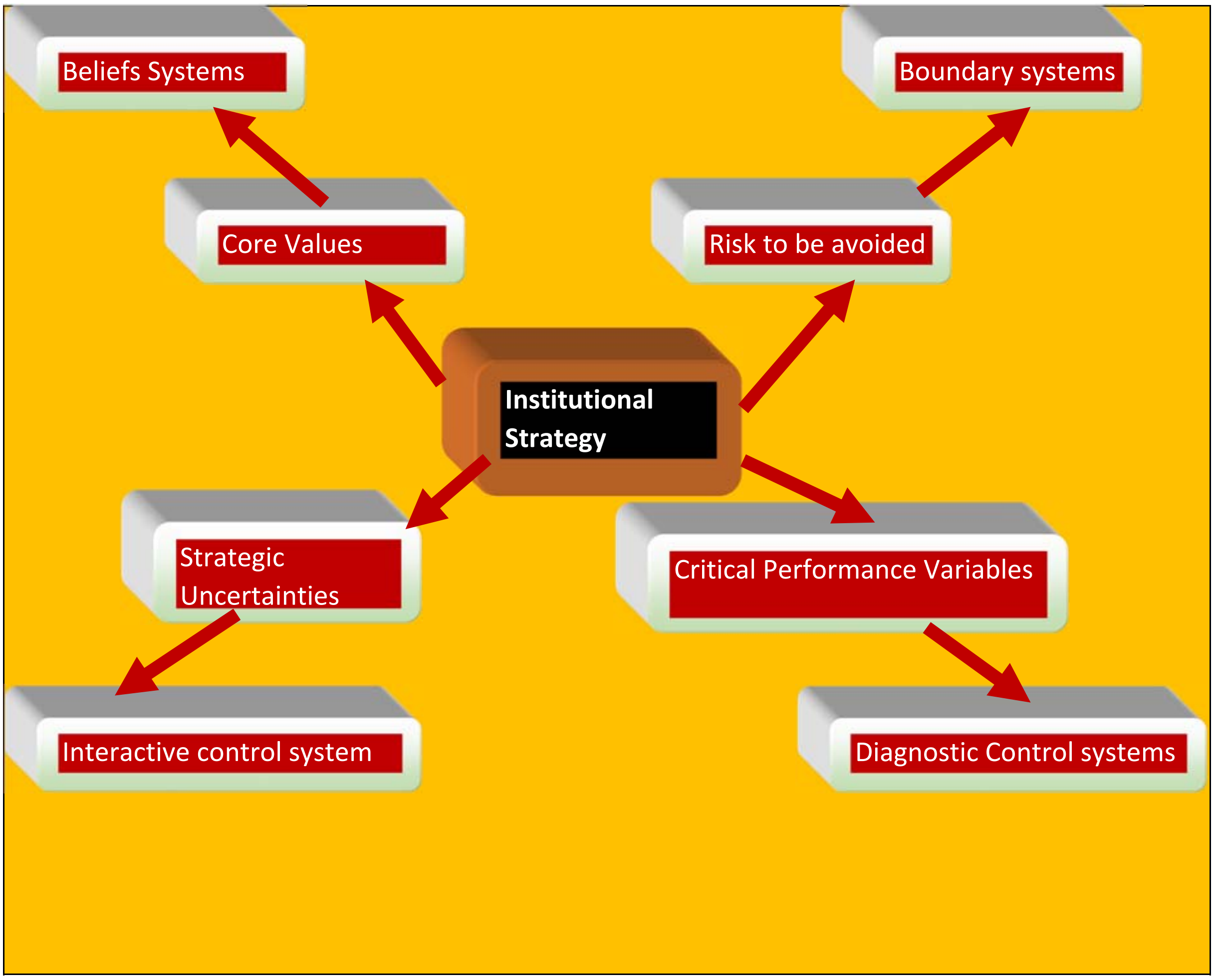


Figure 3.9- Control Lever- Adapted from Simon (1995)

Open University cited Simons (2010) where he advocates a comprehensive approach for establishing control systems in the institution faced with continuous change. He argues that in dynamic contexts, effective control mechanism is one that promotes strategic flexibility as well as innovative capabilities the institution needs to adapt and change.

He contends that *beliefs systems* as illustrated are explicit values of the business encapsulated in the institutions' mission statement. They are meant to inspire and guide the strategy process and provide framework for implementations decisions. The good example directly related to

DUT is pursuit of excellence which is one of the university slogans. They are meant to be concise and inspirational.

Boundary systems are meant to indicate the boundaries of the acceptable domain of activity and are somehow associated with the belief system of the organization. The cited examples are code of conduct and ethical principles.

Interactive control systems stimulate learning, by permitting new strategies to develop throughout the organization. It should include these features-: (1) It keeps strategic information up to date for management; (2) The information is organized and is accessible to managers at all levels in the organization;(3) It encourages strategic decision making in a process of a dialogue between superior, subordinates and peers; It encourages strategic decision making in a process of dialogue between superiors, subordinates and peers; (4)It serves as a catalyst for on-going debate and critical thinking about the underlying data, assumptions and action plans

Diagnostic control Systems where managers measure output and compare them with expected standard of performance. Feedback from this exercise enables managers to adjust and modify inputs and processes for future outputs to closely match goals.

Open University (2010) further argues that even if the management has tools for managing knowledge and change, there are pressures for change that supersede evaluated risks since consequence for change is always difficult to describe or estimate change because of the internal as well as external changes**.** Challenges facing institutions is the risk of strategic drift where managers do not act upon discrepancies as they think they are too small. The national culture facing most of the countries when it comes to entrepreneurial culture and entrepreneurial activity is that Countries with a lot of small companies are often stagnant. People start their own businesses because there are no other opportunities. Those businesses stay small because they are doing exactly what other small businesses do. The same is true of industries. In America industries that produce more entrepreneur billionaires tend to have a lower share of employees working in firms with less than 20 employees. This makes sense as successful innovative entrepreneurs inevitably replace their smaller rivals as they take their companies to scale. Whenever this happens the divergence grows wider until organization has drifted from its environment and so is the strategic thinking of the managers (Woodside et al, 2015). That is when turnaround strategy is required as illustrated by Open University 2010 as follows-

3.11. Strategy and Cultural Web Constituency

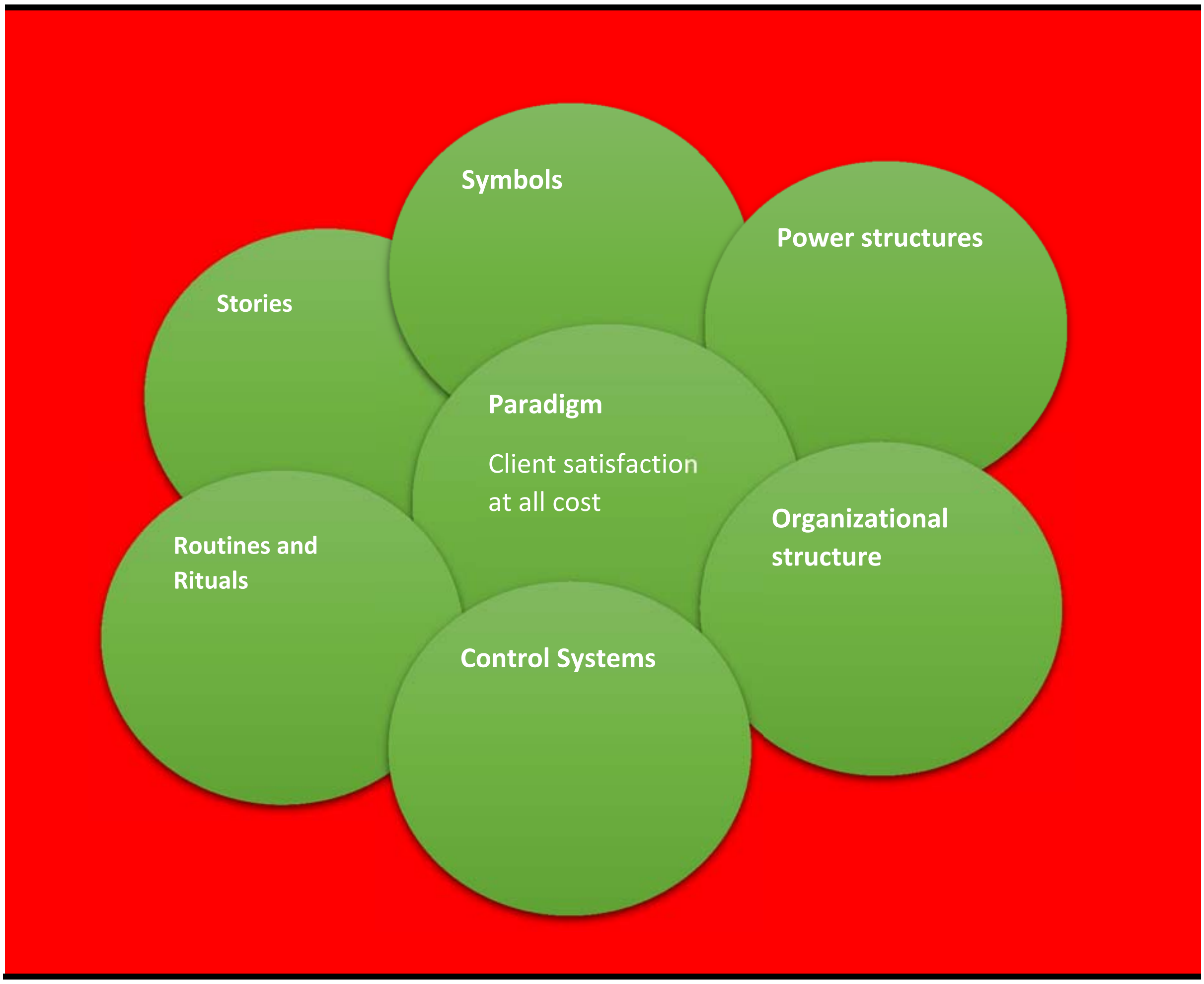


Figure 3.10- Cultural web of consultancy – Source: Adapted from-Gumede (2014)

The challenge that also hinders institutions with managing knowledge and skills, as cited by Open University (2010: 24) is that what is fashionable in the management and business literature stem from the possibility that people want to appear fashionable. This further poses a challenge of wanting to follow the crowd instead of making logical sense on what is fashionable. Being fashionable propels one to be a copycat other than allowing exploration of the possible knowledge extracted from within. The challenge with fashion is that it changes all the time. Information as a tool of knowing therefore becomes the best weapon (Open University, 2010).

3.12. DUT cultural web

This institutional web illustrates symbols, values, success stories, rituals, motto, power base, strategic plan as well as synopsis on organizational behaviour. DUT cultural web features a new paradigm that acknowledges Teaching and Learning, Applied Research and Community engagement as illustrated below-

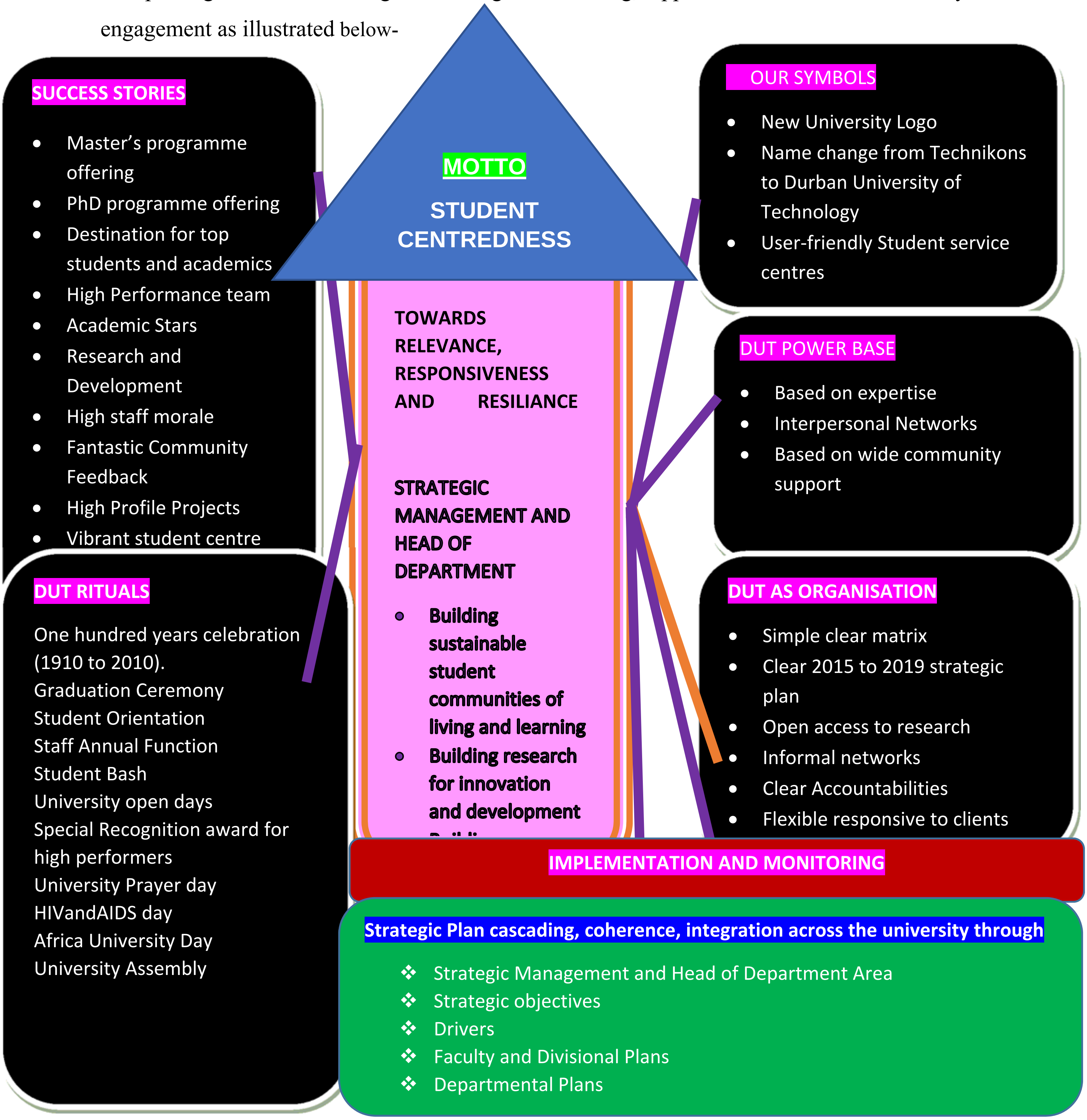


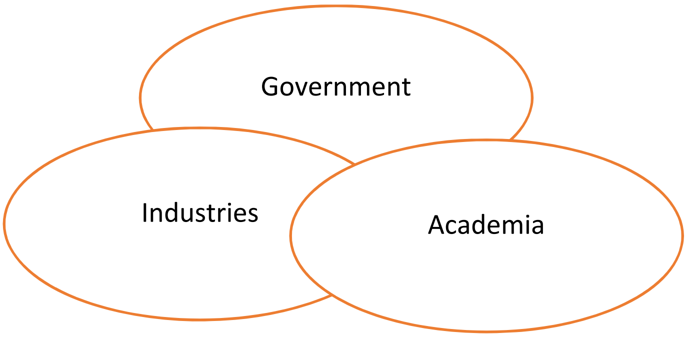
Figure 3.11 DUT Cultural Web- Source: Researcher (2017)

3.13. Application of the Model

Nieman et al (2012) argue that entrepreneurship is because of the theory of creativity that emanate from brain driven actions though creativity role in entrepreneurship is still debated. Creativity is associated with entrepreneurship because creativity is derived from Latin word, *creare* which means producing/ creates something new. They cite an accepted creativity model that elucidates a simplistic model of four Ps, serves as the basis of entrepreneurial creativity as which are person, process, product and Press (Environment). The Most important variable according to this model is *Person* which in this case will be an entrepreneur with his learned or acquired skill. Through three components of creativity which are Expertise, motivation and creative thinking skills. The second variable is the *process* of creative problem solving linked to development of innovation that indicates how the integrated with its four steps which are *Generating ideas* through discovery- *Developing ideas* through invention- *Turning ideas to products/service* through innovation-and *protecting results* through patent/copyright (Nieman et al, 2012).

One cannot deny the impediments that are barriers to creativity which are classified as follows (1) *Environmental barriers* in the context of social, economic, and physical environment such as lack of understanding and support for new ideas in the community; Prohibition of risk taking, autocratic decision-making structures; No growth prospect prospects in the economy, no rewards for new ideas; climatic conditions such as lack of energy, routine life; *(2) Cultural barriers* such as having to go to school and thereafter find employment; Being practical and think economically before generating ideas; Where asking questions is taboo; Stereotyping where assumptions are made about certain issues without proper knowledge; Staying in line with organizational policies and structures; (3) *Perceptual barriers* such as using a narrow mind set to analyse problems; For instilling entrepreneurial culture, it is vital to ensure that the stages of creative techniques below are embedded as integral part of the process-:(a) Awareness and interest shown through curiosity; (b) Preparation that requires openness to experience, tolerance of ambiguity as well as willingness to redefine concepts and explore other possibilities; (c) Incubation that requires imagination, Absorption, independence and psychological freedom; (d) Illumination or Insight that requires one to switch from intuitive to analytical patterns of thinking; (e) Verification that requires critical guide analytical ability and testing (Nieman et al, 2012).

The application of that model is an extension of the Triple helix model that incorporates integration and collaboration of Government Industries and Academia as illustrated below.



The researcher's model is an expansion of the Triple Helix Model and the philosophy of Doctor John Langalibalele Dube of Triple H (Head Heart and Hands). The expansion of this model integrates premise that it for it to be successful, the maximal usage of head which includes sober mind, the heart together with the soul and hands should play an integral part
Of entrepreneurial activity success as illustrated in the triangle which the researcher terms it as Triple H: head, heart and hands (HHH) diagram below.

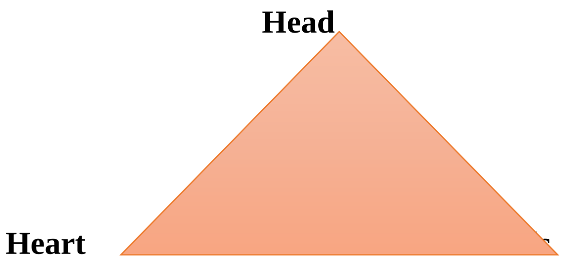


Figure 3.12- Triple H Model Source: Researcher (2017)

3.13.1Entrepreneurial University and its socio-economic impact

In the knowledge-based society, entrepreneurial universities, as a key component in the Triple Helix model, have been playing an increasingly important role for socio-economic innovation and development (Etzkowitz, 2008). Although the original entrepreneurial university literature mainly refers to strong research universities and with empirical cases of in, for example, engineering and business disciplines (Clark, 1998; Etzkowitz, 2004), growing conception is that entrepreneurial universities can be all type and apply to all disciplines (Etzkowitz, 2014). With such a notion, a growing volume of studies have addressed socio-economic impact of entrepreneurial university mainly in the following aspects, such as technology transfer, cultivating labour force, enhancing the attractiveness of business environment, promoting social mobility, and changing local institutional contexts (Gibb, Haskins and Robertson, 2013).

While any contributions for improving our understandings of entrepreneurial university and exploring the impact of entrepreneurial university on social and economic development in the track are welcomed, we are also expecting critical views and especially looking for those bring new theoretical and empirical insights on these issues. Some example questions are: How to perceive and measure the entrepreneurial university in different concepts? How to conceptualize and theorize entrepreneurial university for both research and application oriented higher education institutions with a special consideration of the local context? What are the dangers of misuse of the entrepreneurial university concept in university reforms? What the role of entrepreneurial university should be, beyond its contribution to technology transfer and for regional economic development. The challenges or unintended consequences in the process of developing entrepreneurial university; and if there are alternative ways to resolve the problems that the entrepreneurial university is used to address (Stephan, Uhlaner and Stride, 2015).

3.13.2. Measuring social and economic impact of science and technology

Although Science and Technology Parks (STPs) are spreading worldwide because of innovation and competitiveness policies by both established and emerging economies, there are few studies able to certify the success of these organizations. A sense of urgency to find effective methods to measure these innovative environments and their complexity has been motivating many researchers. There is need for data analytics, metrics and indicator's not only to accountability purposes, given that almost all STPs are funded by public resources, but also because studies of these sort may reveal ways and strategies to increase the efficiency of these environments and to direct public programs that focuses on spreading STPs. The results of Science Park's progress measurement carried out so far show no consensus, which may be explained by differences between those science parks studied. However, some of them have highlighted some positive results such as affirmative impact on regional economic development, patenting performance improvement by companies within the park, R and D diversity enlargement and others. This track calls for theory, research, and practice in empirical and analytical approaches that intend to develop metrics to measure the performance of STPs. Theoretical and empirical perspectives are invited from different areas, and focus on research and case studies addressing questions such as: how the impact of innovative ecosystems can be measured; which are organized as real estate enterprises where the so-called triple helix elements which are academia, private sector and state, work synergistically developing activities based on science, technology and innovation.

3.13.3. Innovation Cluster and initiatives as practical implementation of Triple helix collaboration

The Triple Helix (university-industry-government relationships) is an already established theoretical model. One of the practical instruments of the model is innovation clusters. An innovation cluster is a complex dynamic system of co-located regional actors, which has different modes of creation, financing, and operation, depending upon the country and the given region. Such clusters may be viewed as a special type of innovation ecosystems and a special class of joint economic projects called cluster initiatives. Cluster initiatives are realized through the networking and collaborative efforts of a specialized cluster organization that establishes a triple-helix-based cluster governance team and a cluster management group. If successfully organized and implemented, cluster initiatives lead to the emergence of strong competitive clusters (Pospelova, 2014).

A key part of cluster research examines practical ways of how to deepen collaboration between government, business and academia, and hence, how to further develop cluster initiatives and strengthen clusters' innovation synergy effects. Researchers are invited to postulate their different views to clusters such as: (1) Government regulations, cluster-supportive polices and their effects; (2) The role of cluster organizations in implementing cluster initiatives; (3) The role of universities in a cluster development; (4) University -business collaboration; (5) Cluster Innovation infrastructure. Researches topics are invited to address one of the following questions: (a) What is a future of cluster development and how Triple Helix drives implementation of cluster initiatives; (b) Do we find a way of creating effective clusters through Triple Helix interactions and what is the difference; (c) How to create an effective partnership between universities and corporate entities in a cluster; (c) What are examples of best practice in cluster governance and cluster management; (d) Who should manage cluster development and who should lead regional triple helix constellations.

3.13.4. Business led Triple Helix and the new role of government

The Triple Helix model of university-industry-government interactions to explicate structural developments in knowledge-based economies has led to the emergence of a rich body of theoretical and empirical research discoursing new methods for knowledge creation. Many academics, administrators and entrepreneurs have since endeavoured to extend/operationalize the model in various contexts, including in emerging market settings where entrepreneurial universities may be missing. While significant research attention has been given to understanding the role of universities in business incubation, much is left to be explored in relation to the role of enterprises as incubators of universities. Understanding the role of both Industry and Government in this context proves pertinent as the University would depend on a different kind of platform to enable its independent participation in the technological innovation and economic development of the country as it transitions from a catch -up paradigm mode to an innovation-paradigm mode (Rauch and Hulsink, 2015).

3.13.5. The impact of global information flow on triple helix interactions (university industry interactions

The common thread of Triple Helix is the quality and utilization of information across the helices. The growth of multiple information infrastructures both encourages and discourages the ability of cooperation between academic, governmental and business institutions. New issues of governmental limitations upon access to the internet, growth of security classification systems and the rapidly changing technology of sharing alter the ability for Triple Helix expansion. This track will both analyse and encourage the research and sharing of information on the role and impact of information systems upon entrepreneurial culture. Research issues will also include communication systems. It will also factor systems of education in both academic and private sectors, expanding governmental control patterns, methods of constraint, impacts of cyber security, the forms of communication, the and how information is defined and utilized. Researchers are invited to examine issues around-: (i) The changes in governmental definitions of Freedom of Information; (ii) Existing successful strategies for the expansion of information among Triple Helix partners; (iii) Progress and limitations of open flows of information and data; (iv) New triple helix alliances created because of information flows; (v) How to create a common understanding of language and messaging in the development of Triple Helix model, as information platform; (vi) The impact of information overload on analysis and implementation for Triple Helix; (vii)Who are and will become the information brokers of the future(Rauch et al, 2015).

3.13.6. Measuring the strength of triple helix

Debate on the strength of relationship between the three actors of TH has gone beyond subjectivism and landed into the objectivist domain where one must develop such instruments through which we can measure the strength of the relationship between the three actors. The world has started taking the Triple Helix model as a valid new economic growth model which encompasses strong linkages between the three actors of the helix. The expectations from TH are higher than ever and therefore it compels users to devise instruments, which can objectively measure the relationship strengths between the three actors. To create objectivity and meaningfulness in the TH idea one must talk rigorously on the development of such matrices and tools, which can measure the strength of the relationships between the three actors. Once we can measure the strength of relationship among the three actors, it will help to objectively associate the strength of the relationship with the apparent economic development of the country as well. Researchers are invited to further investigate (a) What is the level of communication between the helices; (b) What is the level of dependency between the helices; (c) How can we measure the level of dependency between the three actors of helix; (d) Measuring the outcomes of interactions between the helices; (e) Devising instruments for measuring the strength between the three actors; (f) Validation of these instruments across the globe (Stam, 2015).

3.13.7. Triple Helix and entrepreneurship ecosystems in the light of complexity and evolutionary ecology

From an evolutionary perspective, the Triple Helix concept describes universities, industry, and government as co- evolving actors in a socio-economic system. Entrepreneurship (or sometimes called entrepreneurial) ecosystems take a similar perspective on a heterogeneous population of agents, such as universities, companies, and support institutions, among others, that interact, co-evolve, and foster entrepreneurship. However, the term entrepreneurship ecosystem has mostly been used metaphorically and is sometimes even misunderstood. Using the analogy to biological ecosystems and viewing entrepreneurial ecosystems as complex adaptive systems, we can go beyond the metaphorical meaning. This way, the concept can provide novel insights, especially by including characteristics that have been neglected in research for the most part so far: self- organization, the absence of a controlling entity, and such is aimed at sharing the light around -: Present case studies and new research that view university-industry-government interactions within the ecosystem framework (Stam, 2015).

Develop new insights into how ecosystems work, what role institutions and individuals of the Triple Helix play, and how they are interacting and co-evolve. Since ecosystems lack a controlling entity and are usually not created or built, how do policies and strategies have to be designed to make successful interventions? Individuals and organizations work strategically towards goals (that might contradict the wellbeing of the ecosystem or Triple Helix). How does self-organization work in the context of university-industry-government interactions? How do the dynamics at the ecosystem level emerge? By taking a complexity science perspective, the question is posed on whether ecosystems as a form of complex adaptive systems help expand our understanding of the dynamics of the triple and even quintuple helix provide a solution framework to complexity of entrepreneurship spectrum (Stam, 2015).

3.14. Conclusion

Entrepreneurial success greatly relies on the combination of the categories discussed above which are psychological factors, personal factors, opportunity factors as well as socio cultural factors. Such factors are a clear indication that one cannot always change the world, but the best practice sometimes is to revisit the way of reaction towards situation and react accordingly.

Culture of corporate entrepreneurship affords the opportunity of rapid growth of sophisticated competitors through the exodus of collective intellectuals coming together for entrepreneurial ideas.

CHAPTER 4

RESEARCH METHODOLOGY

4.1. Introduction

This chapter postulates the method and study design employed by the researcher. It indicates the population and sample as well as how the population and sample is drawn. It covers data collection, data analysis as well as reliability and validity of the method and design. It also covers biasness, ethical considerations and application of the proposed mode. The sample size will also be explained in this chapter.

4.2. Method

The researcher employed Mixed Method where qualitative and quantitative were given equal (QUANT-QUANT) approach, converged and merged. The reason for employing mixed method was to offset the weakness of both qualitative and quantitative method when used in isolation. Mixed Method combines both quantitative and qualitative method to resolve inconsistent findings. It also enhances interpretation and understanding. This is premised from the fact that neither qualitative nor quantitative is sufficient by itself (Hong, Pluye, Bujold and Wassef, 2017).

4.3 Design

Research study, the nature of the study and the research objectives serve to guide the type and amount of data to be collected. Typically, in such studies, sample sizes will be smaller or even case studies may be used. The research design is measuring, evaluation as well as arriving to the explanation of the research problem. A mixed method design was employed where *Quantitative* was used for numerical data purposes where it was easy to determine magnitude and frequency of relationship. The researcher opted for descriptive and analytical option for quantitative (Hair, Celsi, Money, Samouel, and Page, 2011). *Qualitative* was utilized for developing the complex and holistic picture about the view of the participants or interviewees (Sekeran and Bougie, 2013). The three most important aspects that needed attention was (i) which method could be given *priority*? (ii) How would implementation take place in terms of sequence and chronological stages e.g. will they run concurrently or parallel or one after the other? (iii) How would both methods be integrated? Quantitative approach would assist on the overview of internal and external contributing factors to the extent of existence in entrepreneurial culture. Qualitative would further analyse statistical results by providing an in-depth analysis (Greenhalgh, Wong, Westhorp and Pawson, 2011).

4.4. Response type Appraisal

The formula for calculating whether the response rate is good or bad is portrayed below-:

. $\frac{\#\ of\ completed\ Surveys}{\#\ of\ people\ contacted}\ X100\ = Response\ rate$ 269/divided by 286X100 = 94.06%

Response Type	**Description**	**Percentage**
Mail	Adequate Good Very Good	50% 60% 70% and above
Email	Average Good Very Good	40% 50% 60% and above
Phone	Good	80%
Online	Average	30%

Table 4.1 Response Type appraisal: Source Researcher (2018)

The researcher has highlighted Email and Face to face in green because that is what she employed for her study. The researcher started by visiting the faculty officers and then sent emails through faculty officers which only yielded average results. The researcher then decided to target the registration dates for the relevant faculties and that resulted to 100 % response to students. The target population for students was 270 and the Head of departments and Management were 16 and only six responded. This gives total response of 269 out of 286 and a total percentage of 94.06%. According to this table, is more than very good and warrants the researcher to continue research with confidence. The secretaries for some Head of Departments and Management reported their Superiors as very busy, which deprived researcher of achieving 100%. Such rate is deemed highly acceptable because the data collection included emails and face to face. According to the Survey Monkey Website (2010), the interpretation of response appraisal is illustrated as follows-:

4.5. Mixed method appraisal

The table below postulates the employment of mixed method with the special reference to study design component and criterion related to each study design component.

Study Design Component	**Criteria**
Mixed Method component of a Mixed Method study	Mixed Method design relevant to answer the research questions Integration of QUAL and QUAN data and/or results Consideration of limitations associated with this integration
QUAL study or QUAL component of an MM study	Sources of data relevant to answer the research question Data analysis relevant to answer the question Context considered in data analysis Reflexivity of researchers (their influence on findings)
Descriptive QUAN study (no comparison group) or component of an MM study	Sampling appropriate to answer the research question Sample representative of the population Appropriate measurement (validated or standard) Complete data and high response rate
QUAN nonrandomized study (comparison group) or component of an MM study	Recruitment minimizing bias Appropriate measurement (validated or standard) Similar participants in groups (or differences analysed)

	Complete data, high response rate, and appropriate follow-up
QUAN randomized controlled trial or component of an MM study	Appropriate randomization (or sequence generation) Concealment allocation (or blinding) Complete outcome data Low dropout rate

Table 4.2 -Study Design component and criteria: Creswell (2008).

(a) Using only qualitative or quantitative approach may be insufficient by itself; (b) It is argued that the more evidence produced, the better the argument since combined qualitative and quantitative produce more evidence; (c) Multiple angles of argument when employing mixed approach provides broader different picture as opposed to employing one approach; (d) Mixed method approach is regarded as intuitive as it is normally a mirror image of real life; (e) To augment an experiment with qualitative data; (f) To compare results from qualitative and quantitative findings; (g) In a scholarly approach community of practice, mixed approach may be the most preferred approach; (h) To use qualitative research to help explain quantitative research; (i) It is termed by some scholars as an eager to learn argument or approach (Creswell, 2008; Hong et al, 2017).

4.5.1. Systematic review

The researcher views systematic review as an integral and imperative part of research and sees it as a review of the literature according to an explicit, rigorous, and transparent methodology. Systematic review is regarded as fundamental scientific activity. The rationale behind systematic review is grounded firmly in premises such as reducing large quantities of information into palatable and digestible pieces of information. The diagram below illustrates how the stages of systematic review took place in this study with special integration of design. State one reveals the formulation of review; stage two postulates the definition of eligible criteria; stage three reveals application of an extensive search; stage five reveals selection of relevant studies; stage six entails appraisal of the quality included in the study; stage seven postulates the synthesis process whilst incorporating relevant designs.

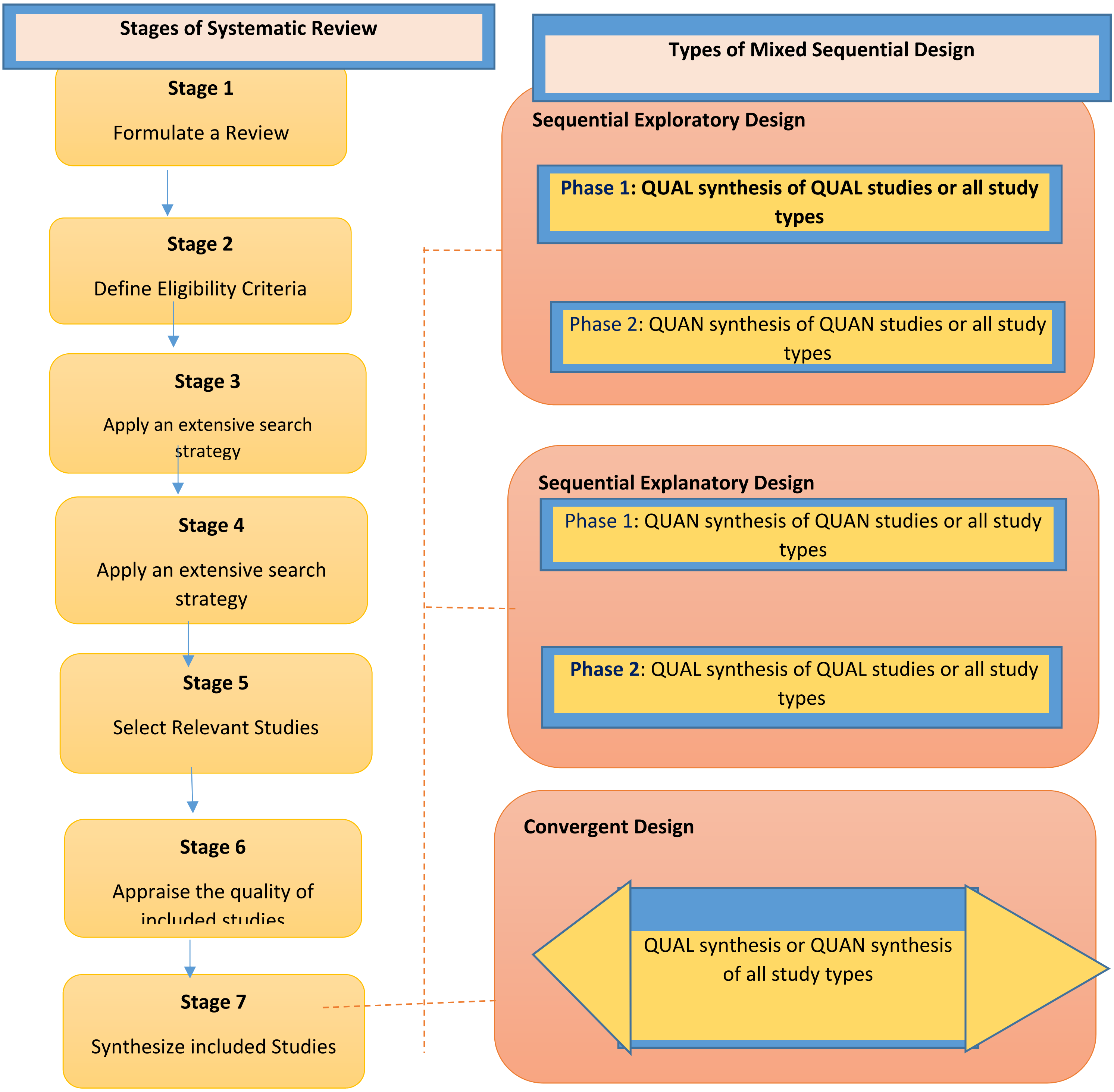


Figure 4.1- Stages of systematic review and types of mixed studies synthesis designs. "QUAL synthesis" usually refers to the synthesis of studies into categories (e.g., using thematic analysis). QUAN synthesis usually refers to the synthesis of studies into variables and values (e.g., using content analysis). "All study types" refers to qualitative, quantitative, and mixed methods studies

4.5.2. Synthesis Appraisal

Synthesis refers to the combination of different elements or components to form the whole phenomenon. In this study synthesis method was considered quantitative when the main results on specific variables across included studies were summarized or combined. Quantitative output is based on numerical values of variables, which are typically produced using validated and reliable checklists and scales and are used to produce numerical data and summaries (such as frequency, mean, confidence interval, and standard error) and conduct statistical analyses. Conversely, a synthesis method was considered qualitative when it summarized or interpreted data to generate outputs such as themes, concepts, frameworks. The objective of this synthesis exercise in the research was to gather the literature review findings, combine them and conclusion from those literature review findings. The researcher has opted to appraise the different types of synthesis to come up with an informed decision for the reason of employing the specific type of synthesis. The appraisal resumes with the Sequential Exploratory Synthesis as seen below (Hong, Pluye, Bujold, and Wassef, 2017).

4.5.2.1. Quantitative Synthesis

	Synthesis Method	**Aim**	**Description**
1.	Quantitative content	To transform qualitative data into few variables (numerical value) for statistical analysis	Categorizes data and provides statistical description of the categories
2.	Meta-analysis	To obtain a single summarized “effect size.	Uses statistical methods for combining results of studies into a weighted average of point estimates.
3.	Bayesian synthesis	To measure the likelihood of different values for parameters of interest	Incorporates prior distributions of unknown parameter values that are then updated by deriving posterior probability distributions generated through statistical analysis of the estimates

4.	Vote counting	To calculate the frequencies of categories of results across included studies.	The included studies are sorted into three categories (negative significant, positive significant, and statistically insignificant), and the number of studies for each category is calculated. The category with the most studies is the "winner."
5.	Meta-regression	To relate the size of effect to one or more characteristics of the included studies (to explore sources of heterogeneity across included studies).	Uses a combination of meta-analytic and regression principles.
6.	Cross-design synthesis	To combine results from quantitative studies with complementary designs	Involves an in-depth assessment of key biases of each study, an adjustment of each study's results based on the identified biases and the development of a model for combining the results within and across designs
7.	Meta-summary	To quantitatively aggregate qualitative findings.	Consists of extraction, grouping, abstraction, and formatting of findings and the calculation of frequency and intensity effect sizes
8.	Configurationally comparative method	To build or test theories and assumptions by identifying configurations of causal conditions, i.e., combination of conditions (independent variables) that are necessary	Consists in a comparative case-oriented research approach that uses Boolean algebra to generate configurations between conditions and outcomes across cases.

		and/or sufficient for a given outcome (dependent variable).	
9.	Case survey	To identify and statistically test patterns across individual case studies	Converts qualitative cases into quantitative variables by extracting data using a same set of closed-ended questions. The answers to these questions are then aggregated to establish frequency of occurrence (that can be further statistically analyzed, as appropriate).

Table 4.3 Quantitative Synthesis- Source: Edited from Hong et al (2017)

It is argued that most meta-analyses summarize data from randomized trials, but other applications, such as the evaluation of diagnostic test performance and observational studies, have also been developed. The statistical methods of meta-analysis aim at evaluating the diversity heterogeneity among the results of different studies, exploring and explaining observed heterogeneity, and estimating a common pooled effect with increased precision. Fixed-effects models assume that an intervention has a single true effect, whereas random-effects models assume that an effect may vary across studies. Meta-regression analyses, by using each study rather than each patient as a unit of observation, can help to evaluate the effect of individual variables on the magnitude of an observed effect and thus may sometimes explain why study results differ. It is also important to assess the robustness of conclusions through sensitivity analyses and a formal evaluation of potential sources of bias, including publication bias and the effect of the quality of the studies (Hong et al, 2017).

4.5.2.2. Qualitative Synthesis Methods

It should be noted that qualitative research in the domain of entrepreneurship is characterized by a host of different approaches that are based on different assumptions about reality, the nature of knowledge, and the extent to which they aim to apply scientific insights to a broader and more general context. This translates to inquiry suitable for a synthesis of qualitative research affect our understanding of how knowledge should be synthesized. The Integrative synthesis synthesizes evidence by combining different data collection methods, for instance qualitative and quantitative research, allowing researchers to overcome the weaknesses inherent in individual methods. The table below therefore postulates qualitative synthesis methods in a broader spectrum with their aims and descriptions.

	Synthesis Method,	**Aim**	**Description**
1.	Qualitative content analysis	To understand a phenomenon of interest by focusing on the manifest (patent) content or contextual meaning of text.	Uses an analytical coding process to organize content of textual data into fewer content categories.
2.	Thematic synthesis	To identify and develop themes across included studies	Uses line-by-line coding, develops descriptive themes, and generates analytical themes. This might lead to propose a conceptual framework
3.	Meta-ethnography	To build a theory from the synthesis of qualitative studies.	Uses three main strategies: translating the concepts from studies into one another (reciprocal translational analysis), exploring and explaining contradictions between studies (reputational synthesis), and linking constructs and building a picture of the whole from studies (lines-of-argument synthesis).
4.	Realist synthesis	To unpack how interventions, work in particular contexts through theoretical explanation (middle-range theory)	Uses theory-driven context-mechanism-outcome configurations, demi-regularities, and abduction (hunches)
5.	Textual narrative synthesis	To describe included studies	Arranges studies into homogeneous groups and compares similarities and differences across studies

6.	Textual description	To describe included studies	Provides a descriptive paragraph of each study
7.	Narrative synthesis	To summarize and explain the findings of included studies	Adopts a textual approach to the process of synthesis and follows four elements: develop a theory of how the intervention works, why, and for whom; develop a preliminary synthesis; explore relationships within and between studies; and assess the robustness of the synthesis.
8.	Meta-narrative synthesis	To make sense of complex and conflicting findings by unfolding the storyline of research traditions	Maps research traditions and consider how they have been conceptualized, theorized, and empirically studied over time
9.	Critical interpretive synthesis	To build a theory from the synthesis of a diverse body of evidence.	Adapted the strategies of meta-ethnography (reciprocal translational analysis, lines-of-argument synthesis, and reputational syntheses) for qualitative and quantitative evidence
10.	Grouping and clustering	To describe included studies	Summarizes and organizes included studies into groups (categories)

Table 4.4 Qualitative Synthesis Methods- Source: Edited from Hong et al (2017)

4.5.3 Synthesis Designs

4.5.3.1 Sequential Exploratory Synthesis

For this type of synthesis design, (*i*) the QUAL synthesis informs, the QUAN synthesis; and (*ii*) the QUAN synthesis generalizes or tests findings of the QUAL synthesis. These two phases are consecutive: Phase-one QUAL is necessary for interpreting results of phase-two QUAN. In phase-one QUAL, results of QUAL, QUAN, and MM studies are transformed into QUAL findings (e.g., a taxonomy of study results) using QUAL thematic analysis, for instance. In phase-two QUAN, results of QUAN studies and QUAN results of MM studies are tabulated and compared when there is a common variable across studies (e.g., a common type of study results). Then, the interpretation of phase-one and phase-two results suggests new hypotheses and reveals knowledge gaps. For instance, the purpose of a sequential exploratory synthesis can be to develop a typology (phase-one QUAL) and to measure available indicators for each type (Pluye, 2015).

4.5.3.2 Sequential Explanatory Synthesis

For this type of synthesis design, (*a*) the QUAN synthesis is followed by, and informs, the QUAL synthesis; and (*b*) the QUAL synthesis helps to explain some results of the QUAN synthesis. These two phases are consecutive: Phase-one QUAN is necessary for interpreting results of phase-two QUAL. In phase-one QUAN, results of QUAN studies and QUAN results of mixed methods studies are pooled in evidence tables for instance, and the presence and importance of differences in effects may be measured (e.g., using a meta-analysis technique when appropriate). In phase-two QUAL, findings of QUAL studies and QUAL findings of MM studies are integrated using QUAL thematic analysis, for instance. Interpretation of phase-one and phase-two results uncovers new explanations and reveals knowledge gaps. For example, the purpose of a sequential explanatory synthesis can be to measure effects of public health programs (phase-one QUAN) and to explain differences in effects (phase-two QUAL).
It involves a two-phase approach where the data collection and analysis of one type of evidence occur after and are informed by the collection and analysis of the other type. This design usually addressed one overall review question with sub questions and both syntheses complemented each other. It is aimed at identifying the obstacles to treatment adherence; the qualitative synthesis provides a list of barriers and the quantitative synthesis.

4.5.3.3 Convergent Synthesis

In convergent synthesis designs, results of included studies are integrated using data transformation techniques: QUAL or QUAN transformation. In convergent QUAL synthesis design, results from studies that included QUAL, QUAN, and MM are transformed into QUAL findings. In convergent QUAN synthesis design, they are transformed into variables. In this design Convergent synthesis design: In this design, the quantitative and qualitative evidence is collected and analysed during the same phase of the research process in a parallel or a complementary manner. According to Hong et al (2017), three subtypes were identified which were-: (a*) Data-based convergent synthesis design or convergent.* In this design included studies are analysed using the same synthesis method and results are presented together. Since only one synthesis method is used for all evidence, data transformation is involved (e.g., qualitative data transformed into numerical values or quantitative data are transformed into categories/themes). Data based o Convergent or QUAL syntheses address research questions such as what, how, and why. The data-based convergent design was more frequently used probably because it is easier to perform, especially for a descriptive purpose.

To address these questions, results from studies that included QUAL, QUAN and Mixed Methods that are transformed into QUAL findings such as themes, configurations, theories, concepts, and patterns. The most common data transformation technique is QUAL thematic synthesis. This design usually addressed one review question. Three main objectives were found. The first category sought to describe the findings of the included studies, and the synthesis methods ranged from summarizing each study to grouping main findings. The review questions were generally broad like a scoping review such as what is known about a specific topic. The second category consisted sought to identify and define main concepts or themes using a synthesis method such as qualitative content analysis or thematic synthesis. The review questions were generally more specific such as identifying the main barriers and facilitators to the implementation of a program or types of impact. The third category was aimed at establishing relationships between the concepts and themes identified from the included studies or to provide a framework or theory (Pluye, 2015).
(b) Results-based convergent synthesis design. In this design, the qualitative and quantitative evidence is analysed and presented separately but integrated using another synthesis method. The integration could consist of comparing or juxtaposing the findings of qualitative and quantitative evidence using tables and matrices or reanalysing evidence in light of the results of both syntheses. Trials and a qualitative synthesis of studies of people’s views (e.g., thematic synthesis). Then, the results of both syntheses are combined in a third synthesis. This type of design usually addresses an overall review question with sub questions. It envisages prevalence of a problem or a risk factor and the likelihood and significance of the association between factors and outcomes. To address such questions, results of included QUAL, QUAN, and MM studies are transformed into variables. The most common data transformation technique is content analysis that allows further statistical analyses. Other types of data transformation include the configurationally comparative method. *(c)*Parallel-results convergent design. In

this design, qualitative and quantitative evidence is analysed and presented separately. The integration occurs during the interpretation of results in the discussion section. The evidence of each dimension is reviewed separately and brought together in the discussion and recommendations (Hong et al, 2017).

4.5.3.4 Researcher's option after appraisal

The researcher opted for convergent synthesis because it was able to integrate both QUA, QUAN. Convergent QUAL syntheses helped the researcher to address research questions such as what, how, and why. To address these questions, results from studies that included QUAL, QUAN and MM are transformed into QUAL findings such as themes, concepts, and patterns. The most common data transformation technique is QUAL thematic synthesis. This helped researcher find patterns across study. First, thematic QUAL synthesis can address any QUAL review question: Theme was identified by reading and re-reading the included studies using what was essentially a comparative process, which allowed researcher to describe, organize, and interpret study results. Rigor in thematic synthesis or analysis was based on researcher's going back and forth from textual data to themes (Crowe and Sheppard, 2011).

4.6 Questionnaire Design and Development

4.6.1 Questionnaire Design and Development-Quantitative Method

The questionnaire is made up of categorical variables such as gender which are either female or male as well as ordinal distribution as Likert scale is regarded as ordinal with (agree, strongly disagree, unsure, disagree and strongly agree. One would ask why it matters to explain this. First part of questionnaire represents demographic data questions which determine the gender and race, age and occupation of the respondent. This will assist in the analysis of effect of entrepreneurial culture whilst observing the influence posed by cultural background, norms and values of the respondent. It is specifically targeted at specific groupings of people, and allow for deeper analysis of the core primary data in respect of these demographic criteria. These questions are all presented as nominal data choices. The second part confirms that the respondent forms part of this for this study, by checking that they are members of the institution, they are in the designated faculty. Third part of the questionnaire is aimed at answering the four research questions as well as four objectives of the study.

4.6.2 Questionnaire Design and Development for Qualitative Method

A semi structured interview questionnaire was designed with open ended questions for gathering qualitative data. The key objective of the open-ended questionnaire was to collect data from a convenience sample of six senior staff members. The questions were developed from the literature study and aligned to the main research questions. The main research questions comprised of fourteen series of open ended questions. The questions were of an exploratory nature. The questions were purposefully geared to gather the perceptions and the behaviours of the sample population from the senior staff members. Respondents were given the opportunity to interpret the questions in their own way and that would draw upon their feeling, attitudes, opinions, experiences and beliefs that would not have been practical in the collection of other. The questionnaire was developed through considering the following steps.-: (a) Preliminary considerations where the researcher made sure that the nature of the research problem and objectives were clear; Developed questions were able to address research questions; The study population and sampling frames were clearly defined to ascertain prospective respondents; The sampling magnitude and anticipated response rate was clear; The decision on primary method on data gathering was clear.; (b) Clarifying of concepts where the researcher ensured that the researcher clearly concepts; proper selection of variables to signify the concepts; (c) Decision on the type of questions and their chronological order where the researcher considered phrasing, wording as well as coding where applicable; Decision on the length of questionnaire and categorising as well as grouping of questions.; (c)Pretesting of the questionnaire where the researcher had to decide on the nature of pretesting the questionnaire; (d) Administration of questionnaire where the researcher had to ascertain the best useful; the cut-off date as well as the follow up procedure methods Leiserowitz, Maibach, Roser-Renouf, Rosenthal and Cutler, 2017).

The open-ended questionnaire was designed for the gathering of primary qualitative data. The key objective of the face to face interviews was to collate exploratory data from a convenience sample of seven sixteen senior staff members though only six responded. The questions were developed from the literature study and aligned to the main research questions. The main research questions were made up of fourteen open ended questions. The questions were of an exploratory nature. Respondents were given the opportunity to interpret the questions in their own way and the interviewer probed for further information to draw upon the respondent’s feelings, attitudes, opinions, experiences and beliefs that would not be feasible in the collection of other methods. The area of interest was centred on the main research question and key thematic areas arising out of the literature review listed as follows-:

4.6.3 Steps followed

Step 1 Questions and eliciting responses

The first aim of the open-ended narratives was to identify relevant responses and their codes that answer specific question and the summary above provides those responses for open ended questions.

Step 2: Identifying Response Codes

Each code from A to F is encoded to each Participant as the ID number or ID case for the participant where it has been made easier to identify how respondent or participant A has responded to each question. This allows for interactive labelling and identification. For this study the participant's code is prefixed by **MCG-TR-01-15** and suffixed by alphabet from **A to F** as well as the colouring indicating which participant is responding. IVI is the code for the Researcher for the NVIVO template. MCG-TR-01-15 is the code number given to questionnaire to the NVIVO.

Step 3 Creating Thematic Categories

This stage is for creating thematic categories and naming them. A heuristic goat in creating thematic categories is to create strong thematic categories where strong thematic categories should contain at least 20% of total number of responses thus accounting for a remarkable explanatory of the percentage of variance. The principal aim is to obtain optimal solution that captures all relevant themes as expressed by participants. The researcher observes that there may be issues in involving the weak thematic categories as they contain few response codes and skewed thematic variables.

Step 4 Dimentionalization of scale coding

The rationale for dimensionalization of scale coding is that it adds to the dimensions of frequency of response or intensity of emphasis to thematic category. It also allows the encoding of nuances or shades of emphasis. It is important to firstly understand all types of scale codes so one knows why he/she is using scale. The task of scale coding is that given a question it may generate from three to 12 thematic categories. (i) *Frequency scale* coding in this regard is cited as more rudimentary form of scale though it yields higher level of inter-rater agreement and is coded in case themes. (ii)*Intensity scale* (iii) *Creating exemplar codes* that best describe three levels of intensity scale codes and (iv) *inter-coder reliabilities* where one can calculate an inter-rater reliability coefficient.

Step 5 Overview of data analytic approaches

Within this stage, it is where a descriptive and correlation are conducted to examine associations among qualitatively constructed thematic and quantitatively based variables. In this stage, types of data analyses incorporate preliminary data analysis that entails frequency analysis to examine distributional data analysis. In this regard thematic variables will be remarkable s skewed if they have value of 2.0 or greater and kurtosis. The researcher may also conduct an exploratory factor analysis that measures a factorally complex analysis through providing confirmatory evidence in support of content validity.

Step 6 Full Circle, creating story and re-contextualization

The researcher employs contextualization to give the meaning to the obtained results with reference to the context of the study. Re-contextualization refers to a real power of qualitative research since it entails development of emerging theory. This stage also entails contrasting story lines by level of satisfaction which allows the researcher to learn as much as possible about the outliers.

4.7 Pretesting of the Questionnaire

The objective of pre-testing the questionnaire is to get thinking behind the answers as to assess if questions have been filled out properly; whether they were understood by respondents and whether the question asks what the researcher thinks she is asking. It allows the respondent to test solutions to the problems. For the research methodology to have any integrity, there is a need for the data quality to have the characteristics of validity and reliability. The Cronbach's Alpha has been calculated for the questions that have the same scales. The purpose was to measure the consistency of how closely related set of items are. It is considered to measure scale reliability. The reliability of an instrument does not depend on its validity.[2] It is possible to objectively measure the reliability of an instrument and in this paper we explain the meaning of Cronbach's alpha, the most widely used objective measure of reliability. Improper use of alpha can lead to situations in which either a test or scale is wrongly discarded or the test is criticised for not generating trustworthy results. To avoid this situation an understanding of the associated concepts of internal consistency, homogeneity or unidimensionality can help to improve the use of alpha. Normally, a scale of $\propto\geq$ 09 is considered excellent while 0.6 $>\propto\geq$

0.5 is considered poor. For this study, $0.8 > \propto \geq 0.7$ was deemed acceptable. The reason is that a value of 0.7 or higher is deemed to conclude a good internal consistency and reliability amongst the questions as illustrated below-

4.8 Internal consistency and reliability for Questions

Cronbach's alpha	Internal Consistency
$\propto \geq 0.9$	Excellent
$0.9 > \propto \geq 0.8$	Good
$0.8 > \propto \geq \mathbf{0.7}$	**Acceptable**
$0.7 > \propto \geq 0.6$	Questionable
$0.6 > \propto \geq 0.5$	Poor

Table 4.5 Internal consistency for reliability of questions

The researcher is taking cognisance that it is possible that the respondent, particularly those with secretaries may delegate the task, or that an employee may undertake to do so, on behalf of a disinterested owner, hence it is necessary to validate. The researcher ensured that the questionnaire is reliable in such a way that even when same question has been expressed differently, the respondent provides consistent results**.** The questionnaire was pre-tested amongst academics who lectured business studies and entrepreneurship. Some suggestions, mainly in terms of layout and format were provided to improve the questionnaire which was considered, and the required changes made where it was required. Thereafter, the questionnaire was pilot tested amongst a sample of students. Focus was placed on whether the questions were understood, and the time taken to complete the questionnaire. Initially 20 minutes were thought to be sufficient in completing the questionnaire, but after the pilot test, it was decided to adjust the duration to 30 minutes for the convenience of participants. The questionnaire was also evaluated against the literature and similar questions used in other studies to measure the same or related constructs, which helped in addressing issues such as terminology, question wording and layout.

4.9 Research Paradigm

Paradigms are a set of universally accepted thinking habits of researchers. These paradigms guide the process. The researcher began by appraising the paradigms and later took an informed decision for the opted paradigm. The world view analysis was appraised as follows-: This section postulates the different world view analysis and the researcher later decides which she opts to employ premised from the following aspects (Mouton, 2011)

4.9.1 Post positivism

The *ontological* perspective contends that enquiry should be objective. *Epistemologically,* the researcher contends that she has eliminated bias; she has tried to remain emotionally detached and uninvolved. *Methodologically,* the researcher ensures time and context free generalizations and that reliability and validity prevails through quantitative and qualitative methods. *Rhetorically,* the researcher has ensured neutrality involving formal writing style, technical terminology in which observing social laws have been the major focus. *Nature of knowledge wise,* the researcher contends that the knowledge and information has been none falsified. *Knowledge accumulation wise,* the researcher has observed external replication and external statistical generalization.

4.9.2 Constructivism

Ontologically, the researcher observes multiple contradictory but equally valid accounts of the same phenomenon representing multiple realities. *Epistemologically,* the researcher observes that subjective knower and known are not separable as well as co-created findings and meanings. *Methodologically,* the researcher observes the importance of hermeneutical, dialectical and inductive reasoning is neither desirable nor possible. *Rhetorically*, the researcher observes detailed, rich and thick yet empathetic description. *Nature of knowledge wise,* the researcher observes individual or collective reconstruction that may unite around consensus. *Knowledge accumulation wise,* the researcher elaborates on reconstructions, vicarious experience analytical and naturalistic generalization where applicable.

4.9.3 Participatory/ Advocacy

Ontologically-, the researcher observes subjective-objective reality co-created by mind and world given order. *Epistemologically-* the researcher observes experiential, propositional and practical co-created findings. *Methodologically-* the researcher observes the influence of political participation in collaborative action research with emphasis on practical aspects. *Rhetorically-* the researcher observes the use of language based on experiential context. *Nature of knowledge wise-* the researcher observes entrenched epistemological emphasis on practical knowing and critical subjectivity. *Knowledge accumulation wise-* the researcher observes in community of enquiry contained in community of practice.

4.9.4 Pragmatism

Ontologically- the researcher observes multiple realities such as subjective, objective, inter-objective, yet rejects traditional dualism such as subjectivism versus objectivism, facts versus values whilst taking high regard of reality and inner world of human experience in action as well as truth, meaning and knowledge are tentative and ever changing. *Epistemologically*- The researcher observes that knowledge is both constructed and based on the reality of the world one experiences and lives in, where justification comes in with warranted acceptability. *Methodologically*- The researcher observes thoughtful, dialectical, eclecticism and pluralism of methods and perspectives, determines what can work and can social problems. *Rhetorically*- The researcher observes the use of impersonal passive voice and terminology as well as thick yet empathetic description. *Nature of knowledge*- The researcher observes inter-subjectivity emic and etic viewpoints as well as respect for entomological and ideographic knowledge. *Knowledge accumulation wise*- The researcher observes homeostatic process of belief, where the researcher tries to improve on the past understanding in a way that fits in the world in which the researcher operates.

4.9.5 Critical Theory

Ontologically the researcher observes the virtual reality influenced by social, political, ethnic, racial, gender, values and economic perspective that evolves with time. *Epistemologically*-the researcher observes transactional, subjective value mediated findings. *Methodologically*- the researcher observes dialectical dialogic perspective. *Rhetorically*- The researcher observes critical discourse. *Nature of knowledge wise*- the researcher observes historical as well as structural insights. *Knowledge accumulation wise*- The researcher observes historical revisionism, generalization by similarity, internal statistical generalization, analytical generalization, case-to-case transfer as well as naturalistic generalization. The table below provides the synopsis of different types of paradigms and below the table, the researcher justifies on her reason to opt for a particular research paradigm.

Post Positivism	Constructivism
▪ Determination ▪ Reductionism ▪ Empirical observation and measurement ▪ Theory verification	▪ Understanding ▪ Multiple participant meaning ▪ Social and historical construction ▪ Theory generation
Advocacy/participatory	**Pragmatism**
▪ Political? ▪ Empowerment issue oriented ▪ Collaborative? ▪ Change oriented	▪ Consequences of action ▪ Problem centered ▪ Pluralistic ▪ Real world practice oriented
Critical Theory	
▪ Reflective ▪ Assessments ▪ Critique of society and culture ▪ Applying knowledge from social sciences and humanities	

Table 4.6 Critical Theory- Source: Edited from Tong, Flemming, McInnes, Oliver and Craig (2012).

4.9.6 Researcher's opted world view analysis

The researcher has opted for Post positivism because it can be tested. It encourages the researcher to think more critically on epistemological knowledge. It depends on the scientific method. The reason for researcher's option is it is understood that the answers to the research questions can be objectively measured and discovered through scientific methods of precision and accuracy. Therefore, the study would demonstrate purposiveness, rigor, testability, replicability and statistical precision (Sekaran and Bougie, 2013).

4.10. Research Setting

The research was conducted at Durban University of Technology. The population comprised of a total number of 1102 population with random distribution in three faculties of only second year students for quantitative approach through five-point Likert scale questionnaire. The sample for qualitative approach comprised of six participants incorporating Senior Management, Deans and Head of Departments through an open-ended questionnaire. Email mode was used for sending questionnaires through faculty officers and Secretaries.

4.11. Research Strategy

The research design adopted for this study is an exploratory sequential mixed method. The data was collected over two distinct phases firstly through emails between September and December 2016. The researcher also visited institution during registration dates for each faculty with the intention of ensuring she received the most number of respondents' feedback between January and February 2017.

4.12. Target population

The target population which is also known as theoretical population is known to be having varying characteristics hence it is imperative for the researcher to understand the target populations that will help him or her draw relevant conclusion. The researcher's population for this study was second year within South African higher education institution students**.** The rationale behind targeting second year student was the fact that for most if not all institution, to be able to be retained, the student must meet certain requirements. Some of the requirements may be passing at least two modules at first. The researcher regarded second year as more focused as opposed to first year students who would either have hype of being in the tertiary institution or have tension, hence there is probability of great number that might not come back and that was going to interfere with the results of the study.

4.13. Sampling Strategy and sample size

The survey of the entire population of 1102 personal was impractical due to budgetary and time restriction (Saunders, 2011). There are essentially two broad sampling methods: "probability and non-probability (Lamb, Hair, and McDaniel, 2013). In probability sampling, each population member has a known probability of selection into the sample. In addition, due to its scientific nature, probability samples are deemed to be more representative of the populations from which they are drawn. On the other hand, with non-probability samples, the chances of a member of a population being selected are not known or cannot be statistically determined. Based on the compromise between the accuracy of the findings and the financial and time constraints a probability sampling technique was selected for this study. Probability sampling is a procedure in which every unit in the population has a chance (non-zero probability) of being chosen in the sample. Probability sampling methods include, simple random sampling, stratified sampling, cluster sampling, and systematic random sampling. Non-Probability sampling methods include, inter alia, convenience sampling, judgemental (purposive) sampling, quota sampling, and snowball sampling. For a population size of 1102, the sample size should be 286. For this study, over 350 questionnaires were collected but considering spoilt questionnaires, the researcher removed spoilt questionnaires and focused on the required 286 in total (Sekeran and Bougie, 2010; Lamb et.al, 2013).

4.13.1. Stratified Sampling

Stratified sampling is the sampling method where the researcher divides the population into separate groups called strata. The objective for the researcher employment of stratified sampling was to obtain a sample population that best represents the entire population being studied. The researcher noted one of its main advantages that it minimizes sample selection bias and ensures segments of the population are not overrepresented or under represented. For this study, the population sample frame was stratified into three faculties which are Management Sciences, Engineering and Natural Sciences whilst forming a homogeneous and non-overlapping subgroup or strata. A simple random sample was drawn from this stratum. The researcher employed stratified sampling because representatively sample even the smallest and most inaccessible subgroups in the population. It afforded her to sample the rare extremes of the given population. This technique, portrays the benefit of having a higher statistical precision thus allowing small sample which saves a lot of time, money and effort compared to simple random sampling. This is because the variability within the subgroups is lower compared to the variations when dealing with the entire population.

Strata	Faculty	Population	Percentage Representation	Sampling
1	Management Sciences	558	50.64 %	145
2	Engineering	351	31.85%	91
3	Natural Sciences	193	17.51%	50
		1102	**100%**	**286**

Table 4.7 Stratified Sampling

The total population is 1102 with the following strata-: Management faculty has a population of indicates 50.64% of the total population with the population of 558. Engineering indicates 31.85% 0f the total population with the population of 351. Natural Science indicates 17.51% of the total population with the population of 193. The formula employed was 1102/286= 3.85 where 1102 is for total population and 286 sample calculated through sample calculator. Each population total per faculty was then divided by 3.85 as follows-: 558/3.85 = 145; 351/3.85 = 91; 193/3.85 =50.

4.14 Data collection

The qualitative data was collected through the interviews from the open-ended questionnaire which was distributed to participants with the help of secretaries and faculty officers. The researcher allowed participants time to fill in the open-ended questionnaire sent through emails because of participant's busy schedule. When the researcher went for collection she asked the very same questions from participants with the aim of establishing if the response was still the same and to establish if the participants had not probable requested the secretary to fill in the form because of his/ her busy schedule. The quantitative data was collected through a closed questionnaire and for Qualitative data an open-ended questionnaire was distributed. This section presents the development of interview instrument as well as the survey instrument. The table below illustrate the sources on data collection which are students for Quantitative sources of data collection and Senior Management, Deans and Head of Departments as Qualitative sources of data.

Quantitative Sources of Data	Qualitative Sources of Data
Students	Senior Management, Deans and Head of Departments

Table 4.8- Data Collection -Sources of Data: Source: Researcher (2017)

The researcher had a self-designed questionnaire that required self-completion on the side of participants. The questions therefore needed to be clear with instructions easy to follow, fewer open-ended questions, and fewer questions with the aim of reducing reduce respondent fatigue (Bryman, 2012).

4.14.1 Data Collection tools

(a)Quantitative Data Collection

The five-point Likert scale closed question format was instrument was deployed electronically to the target population group via an email from the researcher as an electronic tool with the purpose of collecting quantitative data. The email contained a high-level brief of the background to the study and assurance was provided that the responses would be confidential and anonymous. The invitation to the questionnaire and the consent form was also attached as part of the email. A reminder email was sent twice a week to the target population to encourage participation in the survey. The researcher also visited the institution during registration days to encourage response. The researcher also targeted the registration dates to ensure receiving back of responses.

(b)Qualitative Data Collection

The open-ended questionnaire instrument was deployed electronically via emails through faculty officers for getting data for qualitative approach purpose. The researcher later made appointments for face to face interview with the participants to establish if the response reflecting on the open-ended questionnaire is still the same as what was written as response. This was done to avoid a situation where the responded could request the secretary to fill in the questionnaire for the sake of compliance. The researcher made several follow ups to the secretaries and faculty officers. The researcher also visited the institution for maximum number of feedback from respondents as per arrangements with secretaries. The researcher would like to comment that it was not easy to get hold of the respondents for qualitative data.

4.15. Data Analysis

The table below postulates the approach that was employed by the research for data analysis in both quantitative analysis and qualitative analysis.

Quantitative Analysis	Qualitative Analysis
Statistical Analysis for description	Text and images for coding

Table 4.9: Approach to data analysis review: Source: Researcher (2017)

The researcher employed statistical analysis for quantitative analysis and employed text as well as images for coding in qualitative analysis.

The statistical analysis was employed for *quantitative* because it gives credibility to research methodology and conclusion.

The researcher employed text and images for coding in qualitative research analysis because it easily assists the researcher in finding themes and assists in ability to read large number of transcripts thus looking for similarities and differences. It also reduces sophistication thus making process relatively easier.

4.15.1 Data analysis tool

The description given to the data analysis tool is that it is regarded as a statistical analysis that designed to provide to provide the meaning to the meaningless numbers as well as breathing life to the lifeless data. This section will postulate the both the quantitative statistical analysis.

(a) Quantitative Data Analysis tool

The researcher has followed the following steps in the process of analysing data. For *Quantitative analysis*, the researcher employed SPSS and followed the following steps after having collected data-: (i) The researcher loaded the excel data file using the correct and relevant tabular forms. (ii)The researcher imported data into SPSS. (iii)The researcher applied specific commands. (iv)The researcher retrieved the results (v) She analysed graphs and charts (vi) She postulated conclusions based on her analysis.

The researcher collected data and it was analysed using descriptive statistical techniques. Sekaran and Bougie (2013) Contends that the researcher must obtain a visual summary and check the central tendency for the dispersion of variables before detailed analysis can commence. The mode, median, mean, standard deviation and variance provided a gut feel on how the respondents of the survey have reacted to the questions in the survey instrument. Frequencies indicated the number of time various subcategories of a certain phenomenon have occurred. After this preliminary analysis of the data, a detailed analysis was undertaken to establish the goodness of the data. The nonparametric counterparts which suggest non-involvement of any assumptions to the form of parameters of frequency distribution of these tests are the Mann Whitney U test and the Kruskal Wallis test. If the researcher needs to test for significant relationships between variables she can use either the Pearson correlation or the Spearman's rank correlation test, depending on the nature of the data. A normality test is normality used to determine whether sample data has been drawn from a normally distributed population (Sekaran et al, 2013).

(b) Qualitative Data Analysis Tool

For *Qualitative analysis* the researcher employed Nvivo in managing and analysing data. The reason that made researcher employ Nvivo was that it plays a great role in organising data and helped the researcher make sense of it during the process of analysis. Data was then analysed with the purpose of finding match from exact to similar, using the query option whilst ensuring that generated nodes represent data whilst addressing research question. The next option was to organize cases and characteristics to import information such as demographic information. The next step was to visualize findings using cluster analysis tab. This assisted the researcher to develop categories and themes. The last step was to export cluster analysis findings following the correct tabs. The researcher employed the Nested method as it allows different methods like in this the Head of Departments and Deans receive one method of closed questions when the Senior Management receives the method of open ended questions (Greenhalgh, Wong, Westhorp and Pawson, 2011).

4.16. Eliminating bias

Bias has been taken into consideration that bias can occur at any stage of research, during planning, implementation or during data analysis or publication. This has been taken care of, by formulating the standard questionnaire for all participants for this study. Bias normally occurs when systematic error is introduced into sampling or testing thereby encouraging or selecting once outcome or answers over others. It can occur at any stage, be it study design, data analysis as well as during publication. It is also possible for bias to interfere with the outcome and distort the results of the study. The researcher has limited and or eliminated the concerns of research bias in the study. Unknown confounders will be controlled with randomization where research participants are assigned by chance as opposed to by choice but give consent to participate. The following presents an account on how research bias has been taken care of in the study (Penwarden, 2013).

4.16.1 Design Bias

Design bias occurs when the researcher does not factor and account for the inherent biases of the research into the study. Whilst some biases in the study are unavoidable, the researcher ensured certainty in understanding all the phenomena and concepts that could be associated with biasness and tried to the best of her ability to lessen the impact and to factor it in the analysis and statistical calculation. Another type of design bias that could occur is when the researcher does not report his mistakes and or errors of the study. In this regard, all incidents were adequately put into perspective and were reported (Podsakoff, Mackenzie and Podsakoff, 2012).

4.16.2 Selection Sampling Bias

Sampling bias is an inherent bias that occurs during the selection and or the omission of selected sample for the study. Sample selection bias is normally happening when choosing non-random data for statistical analysis. Such bias tends to exist where a subset of data is systematically excluded due to an attribute. If individuals or instances are not likely to be equally distributed, that needs to be accounted for because if this is not accounted for, results can be erroneously distributed to the phenomenon that is under study. Certain sample groups can be included or excluded, and this could distort the results of the survey. The researcher was aware of this potential problem and incorporated and accounted for this bias in the experimental design and noted that the results could not be extrapolating to fit the entire population.

4.19.3 Procedural Bias

Procedural bias occurs when the respondents are rushed and pressurised to provide an answer during an interview process or given limited amount of time to answer a questionnaire. This was managed by the researcher by ensuring that all participants were given adequate time to answer questions and surveys. The researcher also obtained permission from the organisation for individuals to participate in the survey and interview process, thereby not imposing any time restriction pressure on the individuals.

4.16.4 Measurement Bias

Measurement bias refers to errors that occur in the process of measuring during the data collect process. A defective measuring scale in the survey questionnaire can invalidate the entire study. The researcher has ensured that the research instrument is properly worded to prevent any measurement bias. A pilot run of the instrument was undertaken to eliminate any potential problem. In some cases, participants were reluctant to give socially unacceptable answers because of being judged or victimised. In this situation the researcher reassured the participants on the ethical stance of the study in terms of maintaining confidentially and anonymity of all collected data.

4.16.5 Researcher's Bias

Researcher biases generally occur in qualitative type research. It occurs when the interviewer either consciously or subconsciously give leading clues in facial or body expressions, that can influence the participant to give a distorted response towards the interviewer's preference. In this study the researcher was mindful of this challenge and maintained composure and did not give any biased expression during the communication process with participants that could lead to researcher's bias and impede on the outcome.

4.16.6 Response Bias

Response bias occurs when the participants of an interview either consciously or subconsciously provider the researcher with answers that they believe the interviewer wants to hear. Participants feel that they understand the extent of the research and want to adapt responses to suit. In this study the researcher restricted the amount of information shared with the participants to prevent any form of interview response bias.

4.16.7 Reporting Bias

Reporting bias occurs when the favourable outcomes of the study is reported more and find itself in literature more often than the negative outcomes of the study. In some case the negative outcomes are not revealed or publicized. In this study the researcher was mindful of this form of bias and has ensured that both positive and negative outcomes of the study are given equal reporting opportunity. It has been taken into consideration that bias can occur at any stage of research, during planning, implementation or during data analysis or publication. This has been taken care of, by formulating the standard questionnaire for all participants for this study. Unknown confounders will be controlled with randomization where research participants are assigned by chance as opposed to by choice but give consent to participate (Podsakoff et al, 2012).

4.17. Reliability

Reliability refers to the extent to which scores or occasions of data collection are consistent. The questionnaire for interviews and surveys are designed under the pretence that scores have two components, *true universe* score and *error* score. To ascertain reliability, standardized test/questions have been prepared. The research entails the test *retest reliability* type where the consistency of response on test especially on responses is observed. The same questionnaire was sent via emails and the face to face interview will take place to participants using the same questions on the questionnaire yet observing the respondent. Face to face will assisted assist in not only sending a questionnaire and later discover that the participant may not have responded because he is blind. On the other side the electronic or email sent questionnaire were meant to also cover the special needs such as deaf participants.

4.18. Ethical Considerations

The basic ethical consideration that was considered was that for all participants, the researcher obtained consent form. The purpose was to ensure privacy for participants and participants were protected from any possible harm. The first stage was approval of topic by eligible institution. The researcher requested for permission to conduct research which was scrutinized by the research committee within a South African higher education institution. The researcher followed internal university processes to obtain ethical clearance that was scrutinized by the researcher's supervisor and the institutions concerned. The researcher informed participants regarding the knowledge that they had a right of choosing either to participate or not to participate in the research. Ethical considerations incorporated the normal ethics review policy and process which are data management, gatekeepers and way findings would be disseminated.

4.19. Tests Employed for Results

This section postulates the types of test that took place for getting reliable inferential statistics. Inferential statistics is beyond collection data because it is used to infer what population might think and that is used to make sound judgement about the probability on whether an observation is dependable or happened by chance in the study. Each type is described below to understand what each means.

4.19.1 Kruskal Wallis test

The Kruskal Wallis test is a non-parametric test that compares more than two unrelated or independent samples and is the non-parametric equivalent to the parametric one-way analysis of variance (ANOVA) test. It (the Kruskal Wallis test) tries to ascertain if the median values between two or more groups are different ((Foreman and Corder, 2013).

4.19.2 Mann Whitney test

The Mann-Whitney U test is a non-parametric equivalent" to "the independent samples t-test, which compares the means of two independent samples with the data being at least ordinal in nature (Black, 2012). The Mann-Whitney U test is used to test the hypothesis that two population distributions are identical. The basic procedure in the Mann-Whitney U test entails the mixture of all scores in both groups and then ranking them and if there no difference exists between the two groups the scores from both groups will be intermixed within the entire rank order and the "null hypothesis that there is no difference between the two groups is accepted.

4.19.3 Spearman's correlation Coefficient

Spearman's correlation coefficient is regarded as a nonparametric measure of rank correlation which is statistical dependence between rankings of two variables. It is named after Charles Spearman and is normally denoted as (rho).

4.19.4 Pearson Product Moment Correlation coefficient

This is a correlation coefficient that measures the strength of linear relationship between two variables. It normally has a value between +1 and -1 where +1 is total positive linear correlation, 0 or zero is no linear correlation and -1 is negative linear correlation. It was named after Karl Pearson.

4.19.5 ANOVA

ANOVA is a statistical method which is an analysis of variance which is a statistical model used to analyse the differences among the group means as well as their associated procedures. In this method the variation in set of observations is divided into distinct components.

4.19.6 Kolmogorov Smirnov test

Kolmogorov Smirnov refers to nonparametric test that can be used to compare sample with a reference probability distribution. It is useful because it is sensitive to differences in both location and shape of the empirical cumulative distribution functions of the two samples. In the case of normality of distribution samples are standardised and compared with standard normal distribution.

4.19.7 Cronbach's alpha

Cronbach's alpha refers to a measure of internal consistency regarding how closely the related set of terms is. It is meant to measure the inter-correlation amongst items. It should be noted that all constructs were subject to reliability analysis and those items whose scores were very low were deleted for ensuring reliability.

4.19.8 Shapiro Wilk test

Shapiro Wilk test is one of the tests that test for normality and is designed to detect all departures from normality. It is comparable to another test. It is noted that the test rejects the hypothesis of normality when the P value is less than or equal to 0.05. P value is regarded as the level of marginal significance within statistical hypothesis test that represents the probability of the occurrence in any given event.

4.20. Conclusion

The method, design and appraisals that took place in this chapter assisted the researcher to make informed decision on research strategy. That incorporated the scientifically calculated sample from the target population. The importance of systematic review and the relevant stages revealed research transparency. The researcher took precautions of eliminating cited types of bias in the chapter and in the study. The researcher knew exactly which tests to employ as they were all introduced in this chapter. The table below provides a better conclusion of how this chapter looks like. The researcher adhered to all ethical considerations by ensuring pricy to participant and ensuring that participants were protected from any possible harm. The researcher ensured reliability by first sending questionnaires via emails and also requested the appointments for the face to face interview. The purpose of the face to face interview was to ensure that participants response was the same as the responses on the questionnaire. It was also to avoid the possibility of requesting secretaries to respond for the sake of being compliant to the questionnaire. The table below summarises the synopsis of the technical details for the research.

Technical Details of Research	
Geographic Location	South Africa, KwaZulu Natal, Durban
Methodology	Open Ended Questions and closed Questionnaire (Likert Scale)
Sampling Procedure	Stratified Sampling
Study population	1102
Sample Size	286
Sampling Technique	Probability Sampling for equal opportunity to participate
Sampling Method	Non-probability sampling method as the researcher did not know which individual from the population would be selected as a sample
Response Rate	96.05%
Non-Response	4.95%
Level of Confidence	95%
Significance level	5%
Data Collection Period	December 2016 to February 2017
Data Analysis procedure	QUANT +QUAL
Statistical Analysis	SPSS and NVIVO
Measurement in Instruments	Likert Scale and open-ended questionnaire

Table 4.10 Technical details of research. Source: Researcher (2017)

CHAPTER 5

RESULTS

5.1. Introduction

This chapter reports on the results that transpired from the methodology on the above chapter. Since the study was mixed method, the point of departure will be to postulate quantitative results and later in the chapter postulate qualitative results. A total of 263 participants completed the questionnaire for quantitative approach and six participants responded for qualitative approach. The overall scores were calculated by adding all the scores for the all the statements in each of the constructs. Normality test has been performed to determine if a data set is well-modelled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed. Results showed that the overall scores were not normally distributed ($p<0.05$). Therefore, non-parametric tests were performed for comparative analysis.

The point of departure postulated the reliability of scores.

Cronbach's alpha	**Internal Consistency**
$\propto \geq 0.9$	Excellent
$0.9 > \propto \geq 0.8$	Good
$0.8 > \propto \geq \mathbf{0.7}$	**Acceptable**
$0.7 > \propto \geq 0.6$	Questionable
$0.6 > \propto \geq 0.5$	Poor

Table 5.1-Cronbach's Alpha and Internal consistency:

Normally, a scale of $\propto \geq 09$ is considered excellent while $0.6 > \propto \geq 0.5$ is considered poor. For this study, $0.8 > \propto \geq 0.7$ was deemed acceptable as in between 0.7 and 0.8 which falls under acceptable according to the table above.

The comparison between The Kolmogorov Smirnov and Shapiro Wilk to test if the data had come from a Normal distribution or not. This test was important as it was going to assist the researcher in determining the type of statistical tests that are permitted to analyse the data.

Objective	Kolmogorov Smirnov	Shapiro Wilk
Objective 1	0.112	0.985
Objective 2	0.073	0.991
Objective 3	0.091	0.984
Objective 4.	0.059	0.992

Table 5.2: Comparison between Kolmogorov Smirnov and Shapiro Wilk

5.2 Reliabilities of scores

The table below illustrates the testing of the reliability of scores

	Constructs and Variables	Cronbach's Alpha	Number of 1tems	Objective in the questionnaire
Personality traits	Risk Taking	.926	2	-
	Innovation	.707	2	
	6.1Enthusiasm	.825	2	Objective 3
	Industrious	.773	3	Objective 3
	Entitlement	.822	3	
External Factors	Information Technology	.728	2	Objective 3
	Infrastructure	.705	1	
	Economic Policies	.924	2	Objective 3
	Finance	.821	2	Objective 2
	Technical	.703	3	Objective 1
	Education System	.821	5	objective 4
Capacity Factors	Learning	.928	4	Objective 4
	Culture	.921	4	Objective 3
	Socio Economic Culture	.704	3	Objective 3
Main Dependant Variable	Overall Entrepreneurial Intention	.741		Objective 1,2 3 and 4

Table 5.3: Cronbach's Alpha and reliability of scores

For the research methodology to have any integrity, there is a need for the data quality to have the characteristics of validity and reliability. The Cronbach's Alpha has been calculated for the questions that have the same scales. The purpose was to measure the consistency of how closely related set of items are. It is considered to measure scale reliability. The standard acceptable and non-acceptable scale is illustrated below-:

5.2.1 Standard Deviation and Standard Normal Distribution

The P value indicates the probability that the researcher may have falsely rejected the null hypothesis. Z scores on the other side are measures of standard deviation. The most common aspects with this statistic is that they are both associated with the standard normal distribution as illustrated below

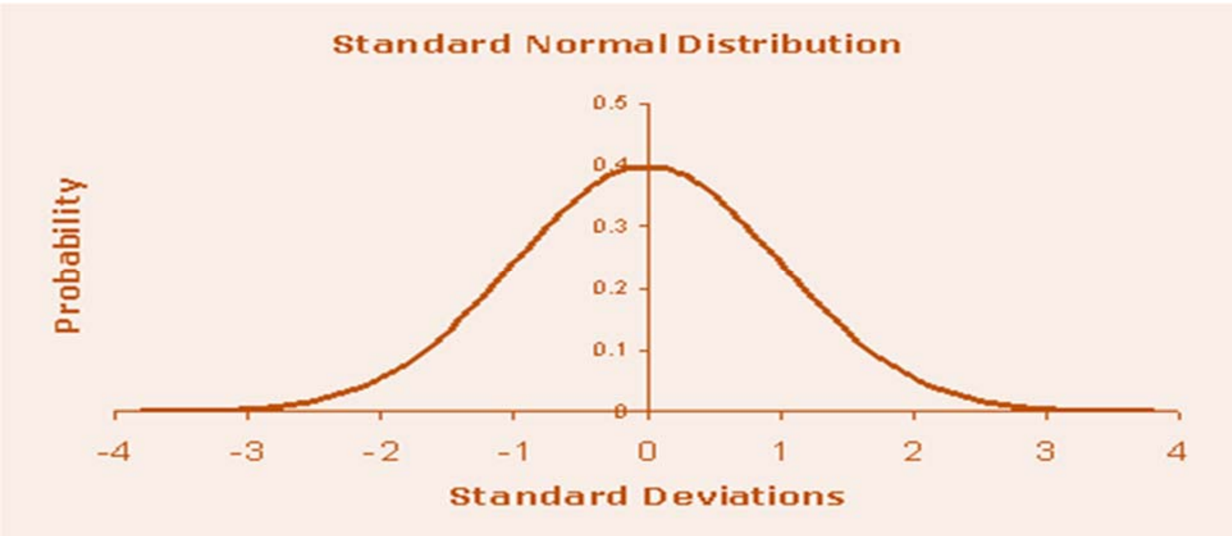


Figure 5.1 P Value- Source: edited from: www.google.com *(2017)*

The illustration above indicates that very high or very low scores are found in the tails of the normal distribution. From the graph above, the probabilities in the tails of the distribution are very low. When the researcher performs a feature pattern analysis and it yields either a very high or a very low score, this indicates it is highly unlikely that the observed pattern is some version of the theoretical spatial pattern represented by the researcher's null hypothesis.

To reject or accept the null hypothesis, the researcher needs to make a subjective judgment regarding the degree of risk she is willing to accept what is being not right. This degree of risk is often given in terms of critical values and/or confidence level.

5.3 Presentation of Quantitative results

Quantitative results emphasise the measurements n statistical, mathematical as well as numerical presentation and analysis. The limitation of quantitative results on this study will be based on five-point Likert scale questionnaire through relevant employed statistical techniques. The results will be presented using numbers, pie charts, bar graph and tables where applicable. The first presentation of results begins with the initially expected participants that are presented in pie chart. The purpose of presenting these initially expected results is to furnish the reader with the changes that took place during the process of the study.

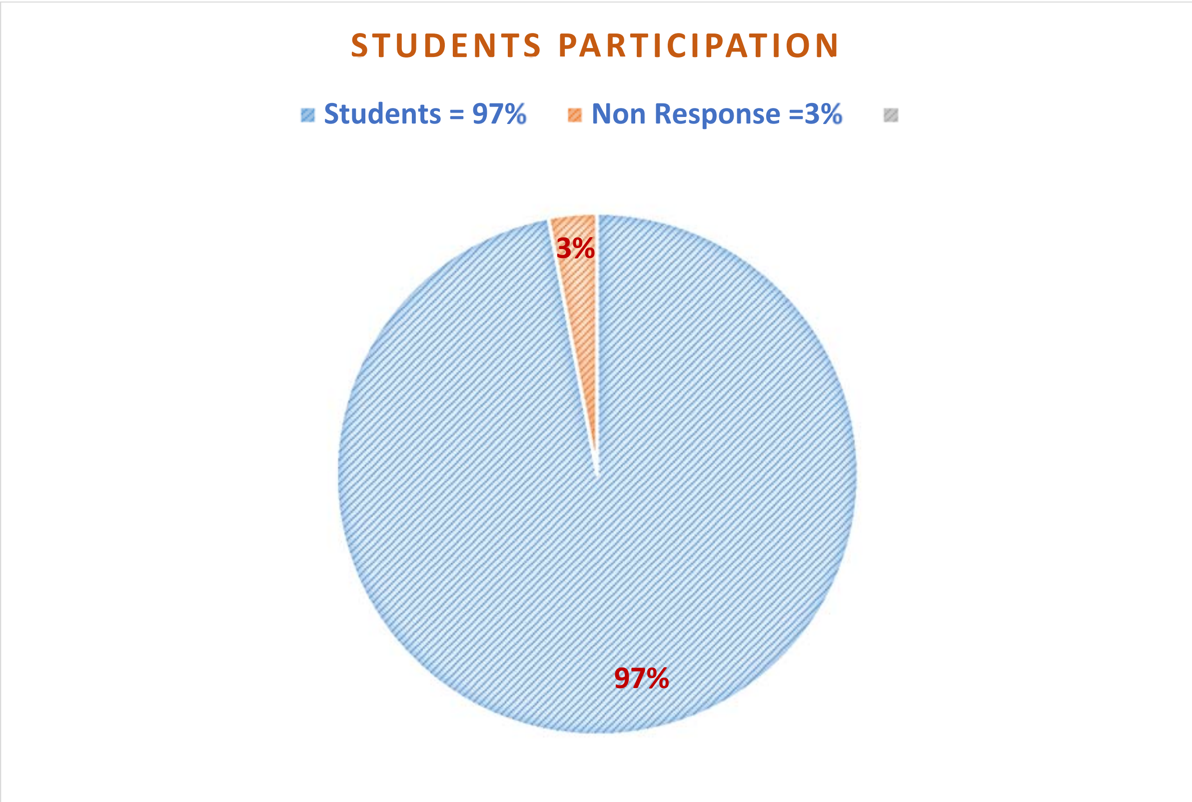


Figure 5.2 Student's participation Graph

The pie chart illustrated above postulates that there were 270 expected participants. The results reveal that 263 out 270 responded. According to the results and calculation the total percentage of respondents were 97% of expected total respondents. The pie chart below illustrates the total number of respondents that ended up having responded in the study.

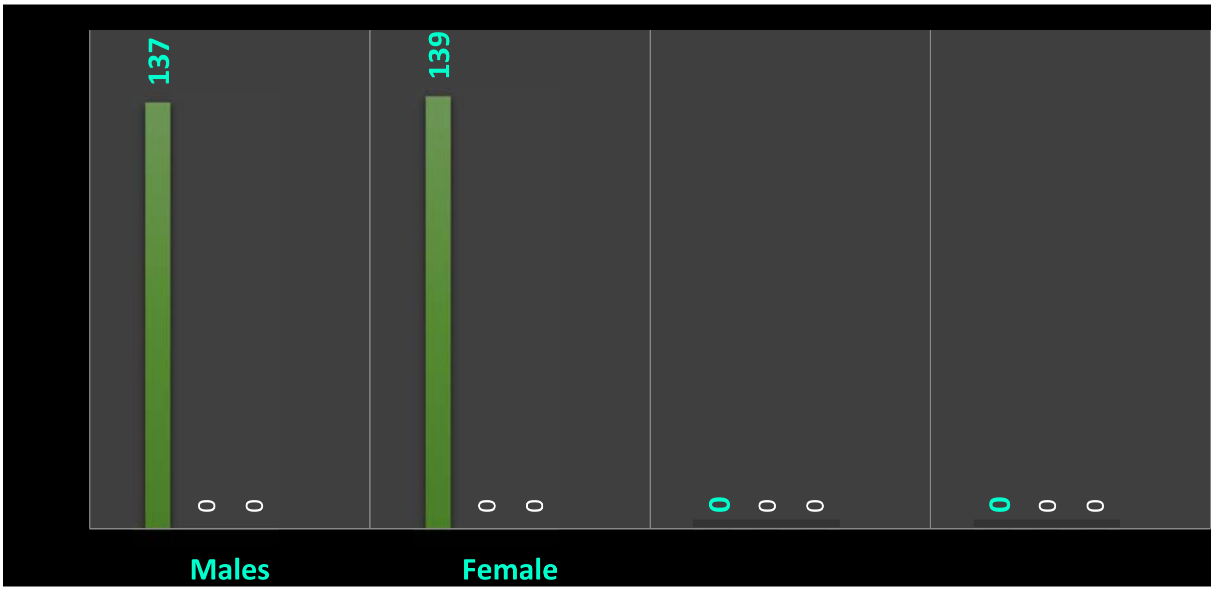


Figure 5.3 Students-Gender Participation

The graph illustrated above indicates the total number of respondents where total males presented a total number of 137 and total females presented a total number of 139.

5.4. Frequency Distribution

This section reflects a statistical table that displays frequency of various outcomes in sample. It reflects the number of instances in which the variable takes each of possible values. The point of departure will be presenting age group and gender.

Age Group	Frequency	%
15-20	64	24.33
21-25	178	67.68
26-30	11	4.19
31-35	4	1.52
36-40	3	1.14
41+	3	1.14
	263	**100.00**

Table 5.4 Age group Frequency distribution

The above illustrated table presents the frequency distribution per age group where the group that is between 21-25 presents the total of 178 with the percentage of 67.68%. Age 15-20 presents the total of 64 with the total percentage of 24.33%. Age category between 26 and 30 presents the total number of 11 with the percentage of 4.19%. Age that fall between the ages of 31-35 presents the total number of 4 with the percentage of 1.52%. Age between 36 and 40 with percentage of 1.14 and age 41+ both present the total number of 3 per category with the percentage of 1.14% per category. The table illustrated above presents the age category representation where the highest representation is age between 21-25 with the highest total number of 178 as well as the age category 36-40 and 41+ that both indicates the lowest representation of the total of 3 per category. Age 15-20 presented the total number of 64. Age 26-30 presented a total number 11. Age group from 31-35 reflected a total number of 4 participants.

Race	**Frequency**	**%**
Black	185	70.34
Colored	3	1.14
White	4	1.52
Indians	71	27.00
	263	**100.00**

Table-5.5- Race group respondents

The above illustrated table presents the frequency distribution of race respondents where the black race is the most represented in terms of distribution. They present the percentage of 70.34% with the total number of 185 and the coloured presents the lowest percentage with the total number of 3 and percentage of 1.14. Whites had a total number of 4 with a total percentage of 1.52% out of total respondents. The table illustrated above presents the race illustrated in graphical presentation where total number of black race is 185 as highlighted in red in the bar graph. The coloured race indicates the total number of 3 as highlighted yellow in the bar graph. The white indicates the total number of 4 as highlighted in grey in the above table. The Indian race indicates the total number of 71 as highlighted in the above table.

Faculty	**Frequency**	**%**
Engineering	50	19.01
Management	122	46.39
Natural Sciences	91	34.60
	263	**100.00**

Table 5.6 Faculty group Frequency distribution

The table illustrated above postulates frequency faculty representation where the engineering faculty depicts the total number of 50 with the percentage of 19.01%. Management sciences represent the total number of 122 with the percentage of 46.39%. The Natural Sciences presents indicates the total number of 91 with the percentage of 34.60%. The last column on the extreme right reflects the cumulative percentage. The above illustrated table shows the illustration of faculty representation. Management sciences represent the higher total number of 145 as highlighted in orange on the bar graph. The Natural Sciences faculty depicts the total number of 91 as highlighted in maroon on the bar graph. The engineering faculty depicts the total number of 50 and which is the lowest in the bar graph as highlighted with red on the above table.

Occupation	**Frequency**	**%**
Students	263	100
	263	**100.00**

Table: 5.7 Occupation Frequency distribution

The table illustrated above indicates the frequency of the occupation for participants who responded. The total number of 270 students responded and represented the percentage of 97.83% of the total respondents. The Management which are Senior Management, Deans, and Head of Departments depicted the total number of 6 which is a total of 2.17% representation. They have been included to be part of qualitative approach. The table illustrated above depicts the graphical representation of total respondents per occupation. The students indicate the total numbers of 263 as the five-point Likert scale were only given to students.

5.5 Mean Ratings

The illustration below indicates the findings that transpired from the results on the above chapter that are related to mean ratings. The mean findings are graphically illustrated to be able to rate it numerically and visually. The mean ratings that are undertaken and unfolded in this chapter are-: mean ratings for gender mean ratings for race and mean rating for faculties. The point of departure will be mean ratings for gender as unfolded below-:

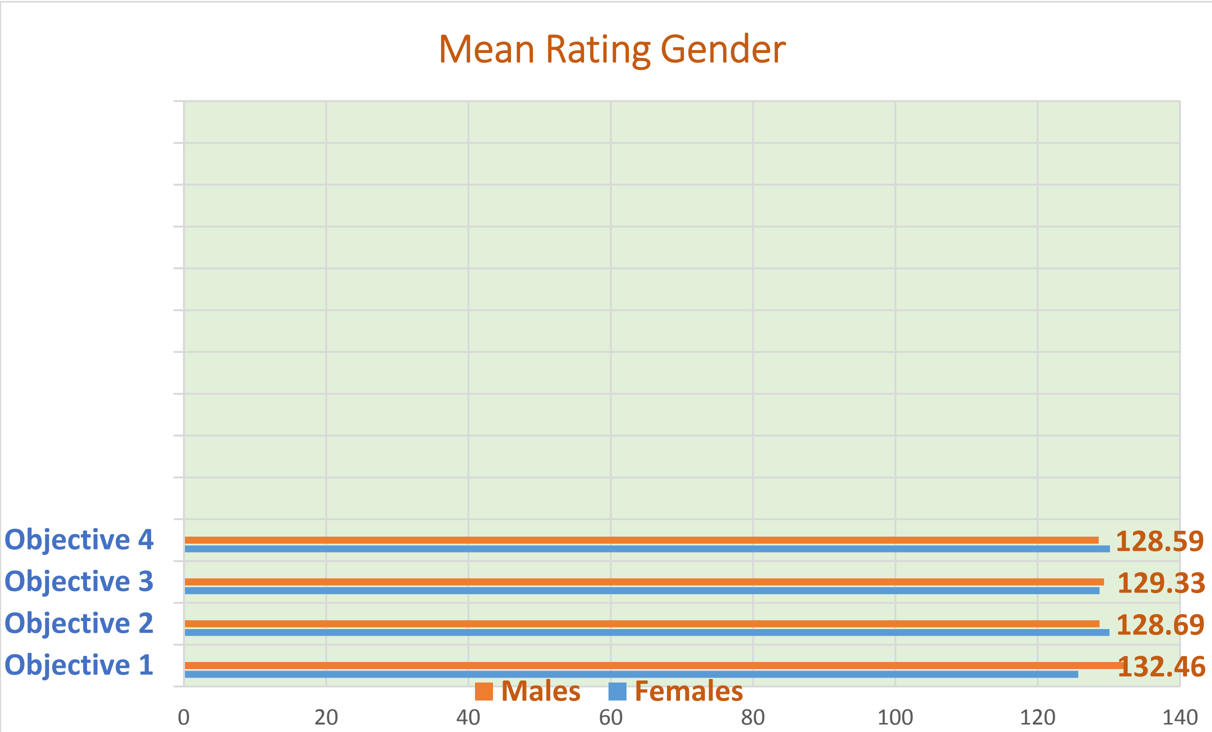


Figure 5.5 Gender- Mean rating

The descriptive analysis indicated that with regards to construct one, coloured had the highest mean rank followed by the Black. For construct two, three and four, the highest mean ranks were received by White, Coloured, and White respectively. Kruskal-Wallis Test found that there was significant difference in mean ranking for construct one and three ($p<0.05$).

Objective one presented the bigger sum of ranks for females which is 18855.00 when compared to the sum of ranks for males with the sum of 14041.00. When looking at the results presented above it is clear that the females had a bigger sum ranks in all four objectives.

For easier interpretation the bar graph reflects the mean rating for males and the one highlighted in blue depicts rating for females. According to this illustration, males reflect the highest mean of 132, 46 for objective one

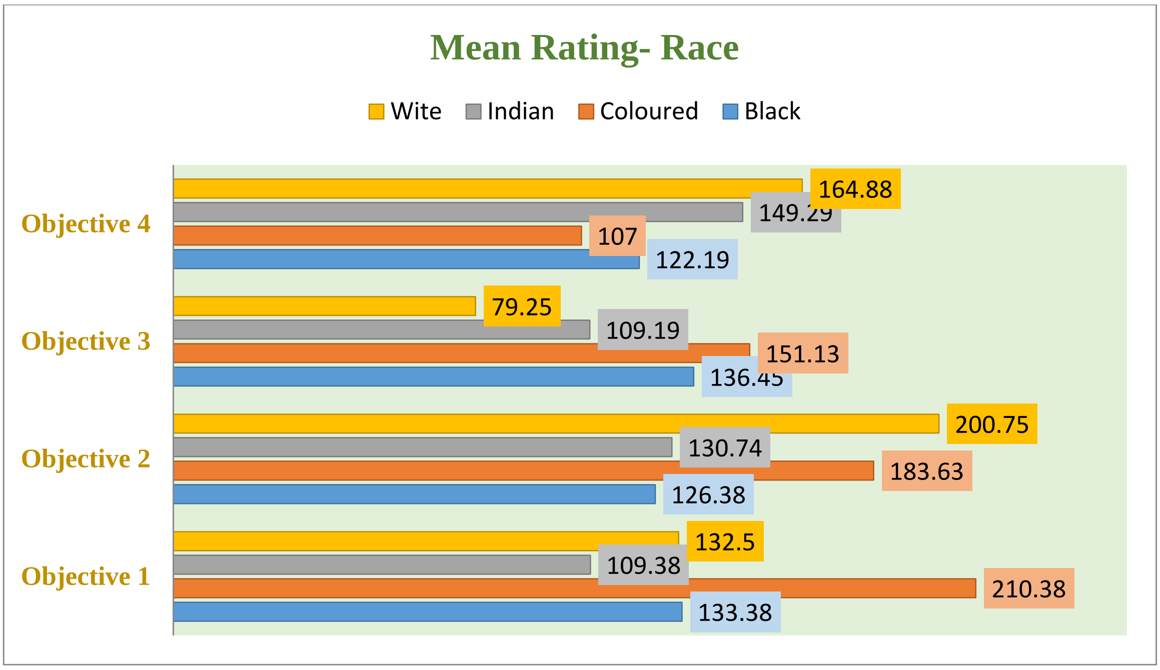
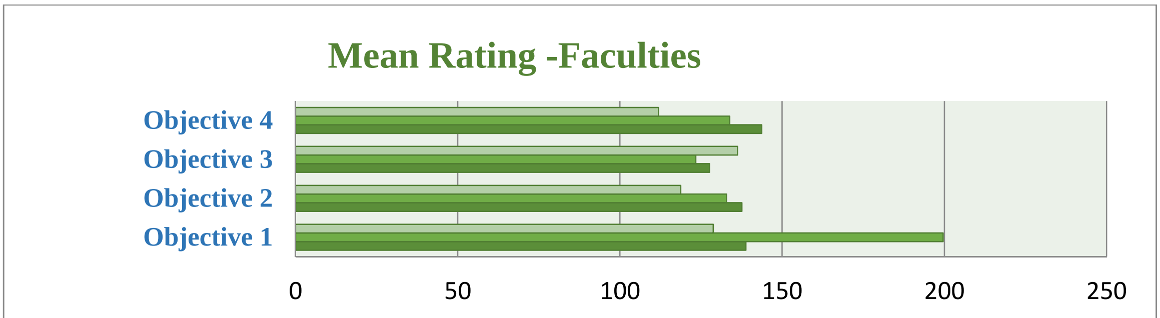


Figure 5.6 Race- Mean rating

The graph illustrated above indicates the Mean rating for race. According to this bar graph, the highest mean rating is for coloured which is 210.38 in objective one.



	Objective 1	Objective 2	Objective 3	Objective 4
Natural Sciences	128.74	118.74	136.24	111.88
Management	199.63	132.85	123.39	133.85
Engineering	138.81	137.57	127.6	143.69

Figure 5.7 Faculties- Mean Rating

The results presented in the above chapter indicated that engineering students mean rank was higher for three out of the four constructs when descriptive analysis was conducted. Kruskal Wallis Test found that only the mean rank for the construct four was significantly different when compared with the participants with regards to their faculty (p<0.05). The highest mean rating was for Management in objective one with 199.63

5.6 Five Point Likert scale response

This section postulates the graphical illustration of responses thus unpacking the overview of respondents per closed question of the five-point Likert scale. The purpose of employing Likert scale is to allow respondents to specify their level of agreement or disagreement towards the item. It helps the researcher to capture the intensity of respondent's feelings towards related item. It should be noted that the numerical value assigned by the researcher to the Likert scale item has no objective numerical basis. The score and analysis are solely based on the above mentions responses. The respondents were asked to evaluate the quantitative value on the given dimensions. The Likert scale response were demarcated according to objectives of the study from objective one up to objective four. The strength of responses is linked to responses such as agree, strongly agree, disagree, strongly disagree and unsure. The response is postulated according to objectives of the study.

The presentation is illustrated graphical according to objectives. This is in line with how the questionnaire was designed as it was also designed with alignment to the objectives of the study. Each specific question or item can have its response analysed separately, or have it summed with other related items to create a score for a group of statements. This is also why Likert scales are sometimes called summative scales. For our example we will evaluate the results using descriptive statistics, and also the specific results for question. Individual responses are normally treated as ordinal data because although the response levels do have relative position since one cannot presume that participants perceive the difference between adjacent levels to be equal. The reason for employing Likert scale was that it is simple to construct; It is likely to produce a highly reliable scale and; it is easy to read and complete for participants. The graphical illustration per objective is will be illustrated through four graph sections hence per objective as illustrated below.

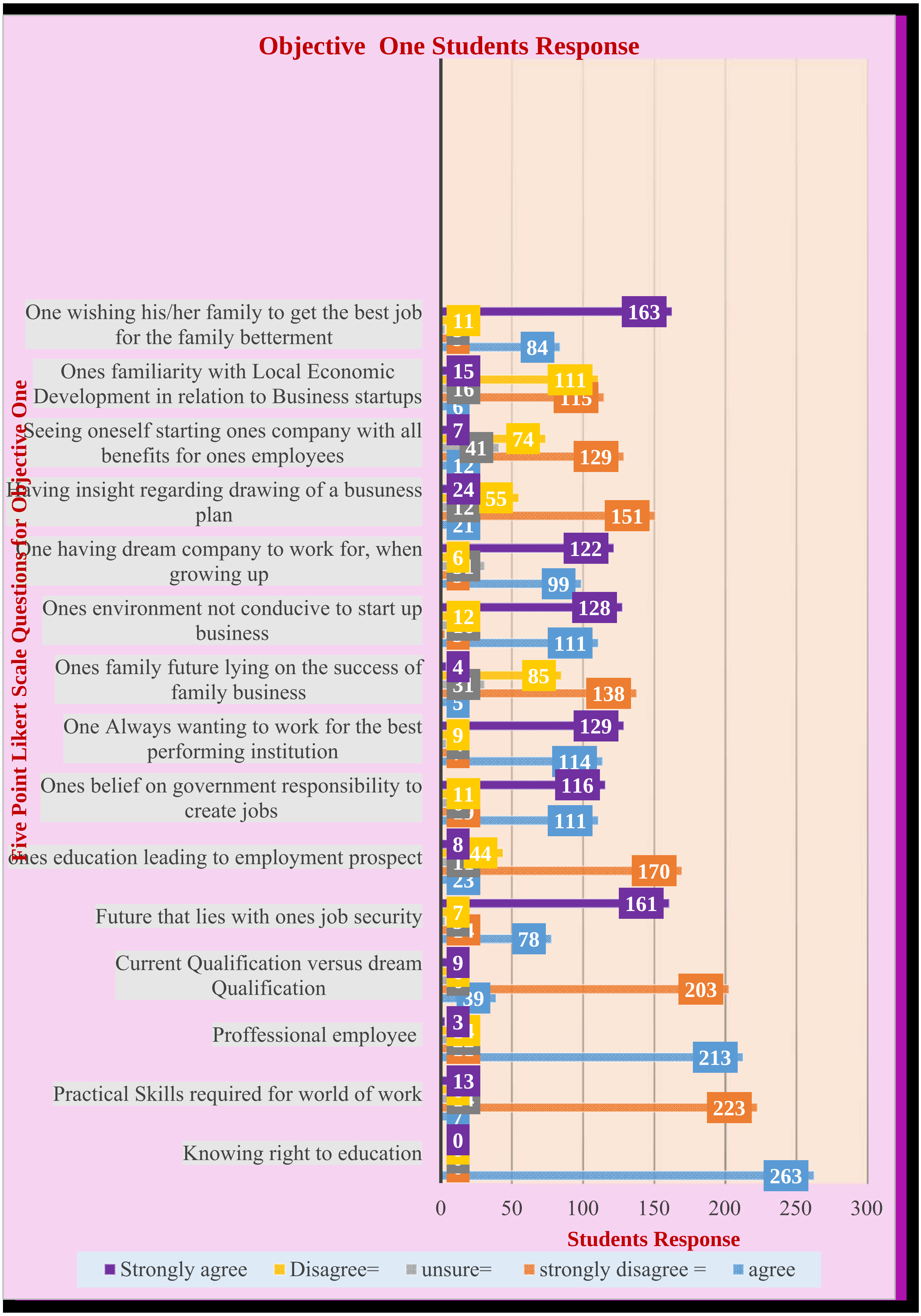


Figure 5.8.1-Graphical Summary of Respondents for objective one- Source: Researcher (2017)

The five-point Likert scale responses are interpreted in strongly agree that is highlighted in blue, disagree that is highlighted in orange, unsure that is highlighted in grey, strongly disagree that is highlighted yellow and agree that is highlighted in red. The first part portrays the responses for seven out of fifteen questions for objective one. The first question of objective one that appears on top of the graph expected the respondents to state their level of agreement or disagreement on wishing their families to get the best job for their betterment. The bar graph reflects that a highest total number of 163 strongly agree that their families must get the best job for their betterment as highlighted in purple and the lowest total number of 8 participants who agree. The next question expected the participants to respond if they are familiar with local economic development in relation to business start-ups. A total highest number of 115 participants responded that they strongly disagree, followed by the second highest number with the total of 111 participants who responded that they disagree. That was a reflection that both these two big numbers were unfamiliar with the opportunities of business start-ups from local government. One of the questions, which is second from the bottom of the graph, was expecting participants to voice their level of response on whether education systems tertiary institutions prepare them with practical skills for the world of work. They highest number of 223 participants responded by strongly disagree.

The fourth question from the bottom of the graph required participants to voice their response on whether their dream qualification, which they had initially planned to do, was still the same as the qualification, which they were doing during time of research response. The highest total number of 203 indicated that they strongly disagreed which indicated the total score of 77% who were not doing the qualification, which they had initially dreamt about. The seventh question from top of the graph required participants to respond on whether family future lies on the success of the family business. A total number of 138 participants voiced their opinions that they strongly disagree. That reflected a total percentage of 52% participants followed by a total number of 85 participants who indicated that they disagree with the total score of 32%. The sixth question from the bottom required participants to respond on the level of certainty on whether their qualifications guarantees them employment. A total number of 170 participants indicated that they strongly disagree and equated to a total score of 64%. A total number of 44 participants also responded that they disagree as highlighted in yellow.

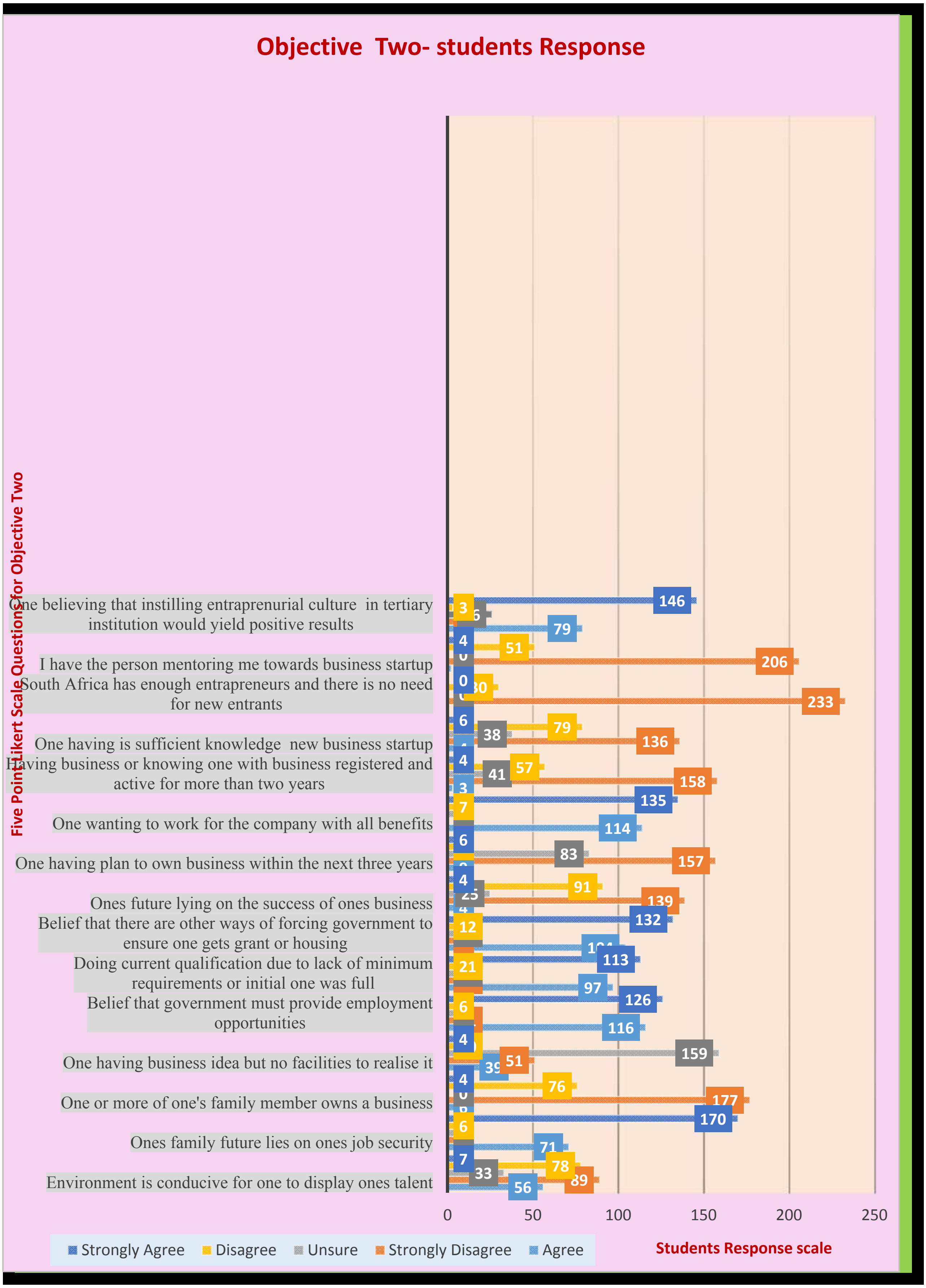


Figure 5.8.2-Summary of Respondents for objective two- Source: Researcher (2017)

The last question from the bottom of objective two graph required participants to echo their opinion through five-point Likert scale on whether environment is conducive for one to display one's talent. The highest total number of 89 participants that makes a total score of 33% as highlighted in orange voiced out that they strongly disagree that the environment is conducive for them to display their talents as highlighted in orange. In the bar graph. That score was superseded by the second highest total number of 78 participants who also disagree and that make a total score of 30% as highlighted in yellow. The third question-required participant if there is one or more who owns business within the family. A total number of 177 participants responded that they strongly disagree and that gives the total score of 67% as highlighted in orange. The lowest score came from the total number of 4 participants who responded by saying they strongly agree which gives the score of 2%. The second question required participants to echo their response level on whether the future of their family lies on their job security. A total number of 170 participants responded that they strongly agree as highlighted in royal blue followed by a total number of 85 who said they agree as highlighted in light blue; followed by a total number of 5 participants who said they strongly disagree as highlighted in orange. A total number of 170 participants reflects a score of 65% who strongly disagree and a total number of 32 participants reflects a score of 32% who disagree.

Question four objective of one required participants to respond whether participants had business ideas, with the challenge of no facilities to realise it. A total number of 159 participants responded by stating that they were unsure as highlighted in grey; followed by the total number of 51 participants who strongly disagreed as highlighted in orange. A total number of 159 participants gives the score of 60% and total number of 51 participants reveals the score of 19%. Question 7 required the participants to respond on their level of belief that the government must provide employment opportunities. Question twelve of objective two required participants to respond if they have any registered business or if they know of any one with the registered business that has been active for more than two years. A total number of 158 participants indicated that they strong disagree, followed by the total number of 57 participants responded by saying they disagree. A total number of 158 provides a score of 60% as highlighted in orange and the total number of 57 participant presents the score of 22%. Question fifteen of objective one required participants to respond if they have the person mentoring them towards business start-up. A total number of 206 participants strongly disagreed which gave the percentage of 78% and a total number of 4 participants strongly agreed which indicated a score of 2%.

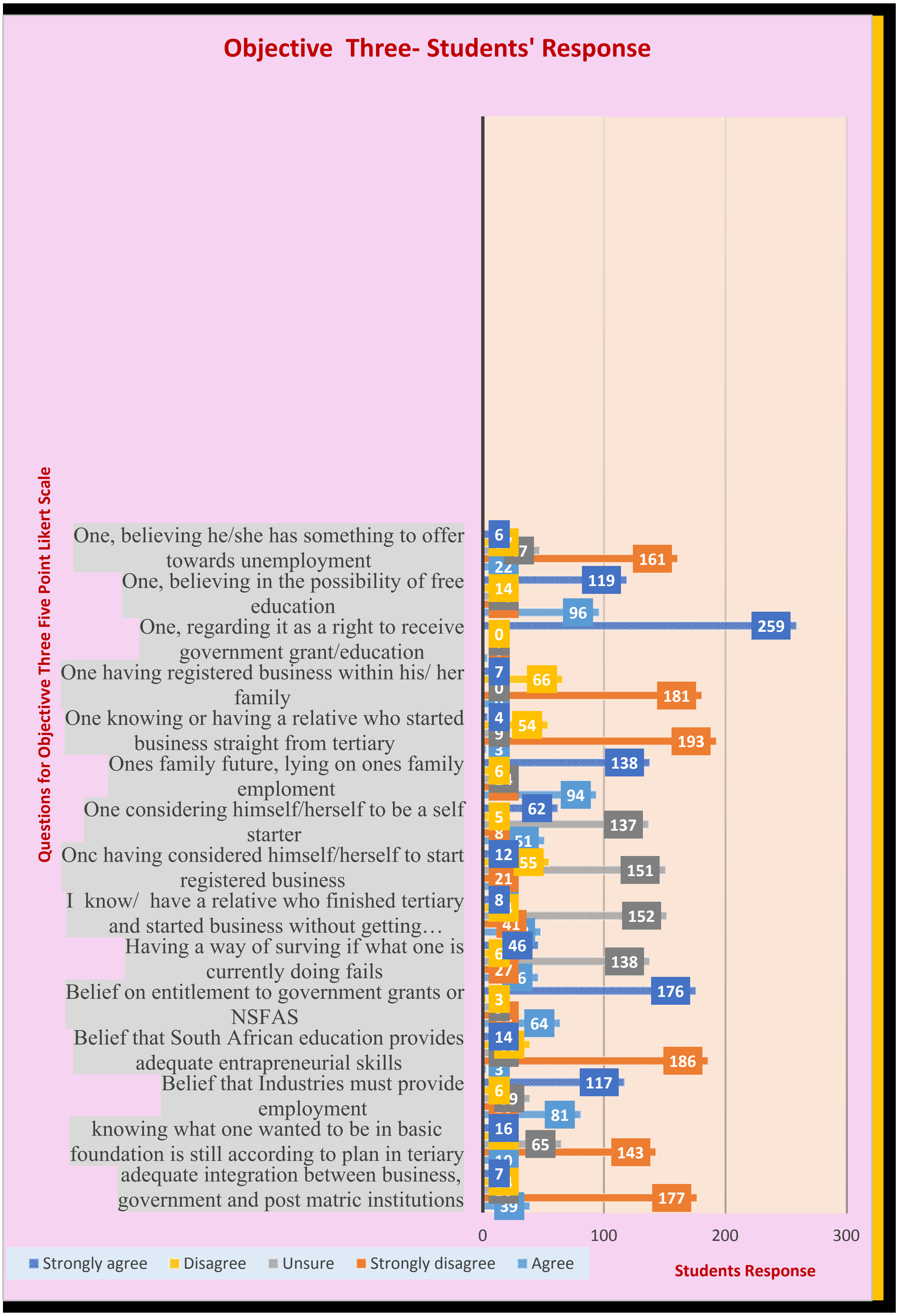


Figure 5.8.3-Summary of Respondents for objective three- Source: Researcher (2017

The graph illustrated above postulates students' scores for objective three. The first question of objective two required respondents to share their level of response on the belief that there is adequate integration between business, government and post matric institutions. The total number of 177 participants out of 263 responded that they strongly disagreed, which total number of 39 participants who agreed followed. The lowest score was the total number of 7 participants who strongly agreed. A total number of 177 participants equates to the score of 67% and the total number of 7 equates to the score of 3%. Question four of objective three required participants to respond according to their level of belief that South African education provides adequate entrepreneurial skills. A total number of 186 participants indicated that they strongly disagreed, followed by a total number of 39 participants who disagreed. A total number of 14 participants strongly agreed followed by a total number of 3 who agreed. It should be noted that 186 participants equate to 71% when converted to percentage and 3 equates to 1% when converted to percentage. Question six of objective three required participants to respond on the level of their belief towards entitlement of government grants or NSFAS. A total number of 176 responded that they strongly agreed and that was equal to 67% when it was converted into percentage. The total number of 64 indicated that they agreed and the lowest number was 3 participants who disagreed with 11participants who strongly disagreed.

Question seven of objective required participants to share their level of understanding on whether they know of anyone, or have a relative who finished tertiary and started business without being employed first. A total number of 152 participants indicated that they were unsure as highlighted in grey in the bar graph, followed by a total number of 48 who agreed. A total number of 14 disagreed and a total number of 8 strongly agreed. A total number of 152 is 58% of the total 263 participants and the total number of 8 participants who strongly agreed is 3% of the total of 263 participants. Question thirteen of objective three questions required participants to respond if there is one having business in the family. A total number of 181 participants out of 263 indicated that they strongly disagree as highlighted in orange. A total number of 181 participants makes equates to 70% when converted to percentage. The total number of 7 participants indicated that they strongly agreed, which equates to 3% when converted to percentages. Question fifteen of objective three required participants to echo their level of response on whether they believed in the possibility of free education. A total number of 119 participants responded that they strongly agreed as indicated in royal blue which indicated the total score of 45%. That score was followed by a total number of 96 participants who agree and that equates to 36% when converted to percentages.

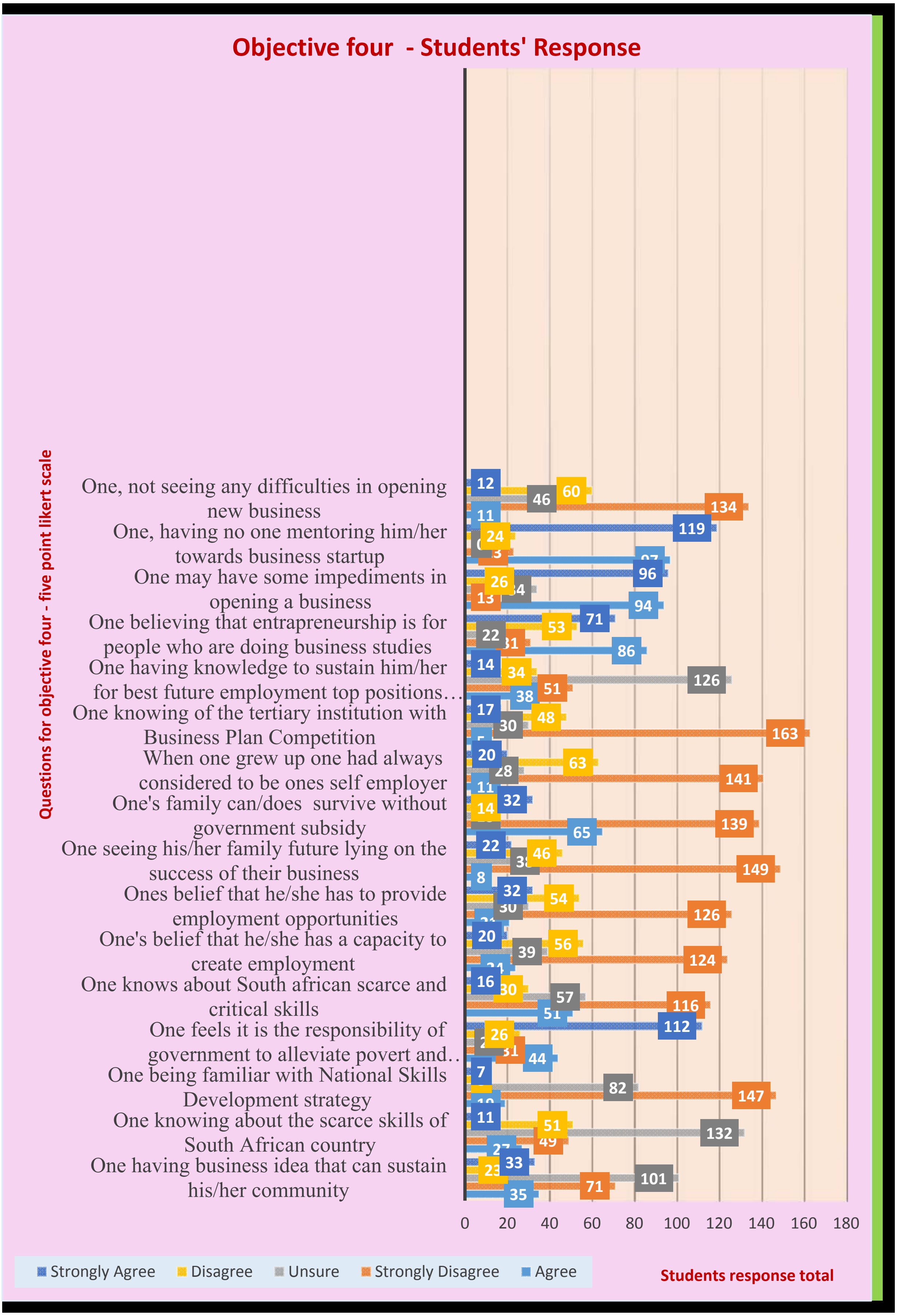


Figure 5.8.4-Summary of Respondents for objective four- Source: Researcher (2017)

The above bar graph illustrates the responses of students' questions related to objective on objective four. Question one of objective four required students to echo their responses through five-point Likert scale on whether they had businesses idea that could sustain their families together with their communities. A total number of 101 participants responded that they were unsure as highlighted in grey in the bar graph and that portrayed a score of 38% when converted to percentages. That score was followed by a total number of 71 participants who strongly disagreed and that indicated a score of 27% when converted to percentages. A total number of 33 participants strongly agreed as highlighted in royal blue and 35 participants agreed as highlighted in light blue. A total of 33 participants out of 263 participants indicated the score of 13% when converted into percentage and 35 participants indicated 13% when converted into percentage. The total number of 23 participants who disagreed indicated a score of 9% when converted into percentage value. The second question of objective four required participants to respond if they knew about the scarce skill of South African country. A total number of 132 participants indicated that they were unsure as highlighted in grey in the bar graph which made a score of 50% in percentage. This was followed by a total number of 51 participants who disagreed as highlighted in yellow with a total score of 19%. The total number of 49 participants strongly disagreed with the total score of 19%. The lowest number of 11 participants strongly agreed with the score of 4% as highlighted in light blue and the total number of 27 participants with the score of 10%.

The third question of objective four required participants if they are familiar with National Skills Development strategy. A total number of 147 participants strongly disagreed as highlighted in orange of the graph bar with a score of 56%. That score was superseded by a total number of 82 participants who were unsure with a score of 31%. Nineteen participants agreed as highlighted in light blue with a score of 7% and 7 participants strongly agreed with a score of 3%. Question ten of objective four required participants to respond on whether they had considered to be self-employers when they grew up. A total number of 141 participants indicated that they strongly disagreed as highlighted in orange in the bar graph and that gave the score of 54%. The next score was total number of 63 participants who disagreed as highlighted in royal blue with the score of 24%. The lowest score of 4% came from eleven participants who agreed. A total number of 20 participants indicated that they strongly agreed, reflecting a score of 8%. Question fourteen required participants to voice their belief on whether they believed that entrepreneurship is for people who are doing business studies and 86 participants agreed with highest score of 33% followed by 27% that strongly agreed.

Below are constructs and related questions that were identified and extracted from questionnaire as an exercise to identify the main dependant variable which is Entrepreneurial intention.

5.7. Inferential Statistics

Inferential statistics assisted the researcher towards making inferences about population through employment of data drawn from DUT population. Instead of using the entire population, the researcher collected sample and made inferences about the entire population using samples. The overall scores were then tested for normality using Kolmogorov-Smirnov test. Results showed that the overall scores were not normally distributed ($p<0.05$). Therefore, non-parametric tests were performed for comparative analysis. The researcher has employed Kolmogorov-Simonov in order determine if datasets differ significantly or not. The researcher also employed Shapiro Wilk test to determine whether a random sample comes from a normal distribution. The overall scores were then tested for normality using Kolmogorov-Smirnov test as postulated below-:

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
objective1	0.112	263	0.000	0.985	263	0.008
objective2	0.073	263	0.002	0.991	263	0.097
objective3	0.091	263	0.000	0.984	263	0.005
objective4	0.059	263	0.025	0.992	263	0.147
a. Lilliefors Significance Correction						

Table 5.8: Test of Normality

The descriptive results showed that female had higher mean rank for construct two and three. But the comparative analysis (Mann-Whitney Test) indicated that the mean rank between male and female were similar ($p>0.05$).

5.7.2 Mann Whitney Test

Mann-Whitney Test output to compare the mean rank for the entire construct with regards to gender.

Ranks				
Gender		N	Mean Rank	Sum of Ranks
objective1	Female	150	125.70	18855.00
	Male	106	132.46	14041.00
	Total	256		
objective2	Female	150	130.09	19513.00
	Male	108	128.69	13898.00
	Total	258		
objective3	Female	150	128.77	19315.00
	Male	107	129.33	13838.00
	Total	257		
objective4	Female	150	130.15	19523.00
	Male	108	128.59	13888.00
	Total	258		
Test Statistics				
	objective1	objective2	objective3	objective4
Mann-Whitney U	7530.000	8012.000	7990.000	8002.000
Asymp. Sig. (2-tailed)	0.470	0.881	0.952	0.868
a. Grouping Variable: Gender				

Table 5.9 Mann- Whitney

The descriptive analysis indicated that with regards to construct one, coloured had the highest mean rank followed by the Black. For construct two, three and four, the highest mean ranks were received by White, Coloured, and White respectively.

5.7.3 Kruskal Wallis Test

Kruskal-Wallis Test found that there was significant difference in mean ranking for construct one and three (p<0.05). Kruskal-Wallis Test output to compare mean rank for the entire construct with regards to race of the participants

Race		N	Mean Rank	Chi-Square	p-value
objective1	Black	183	133.38	10.081	0.018
	Coloured	4	210.38		
	Indian	65	109.48		
	White	4	132.50		
objective2	Black	186	126.38	6.148	0.105
	Coloured	4	183.63		
	Indian	64	130.74		
	White	4	200.75		
objective3	Black	185	136.45	8.626	0.035
	Coloured	4	151.13		
	Indian	64	109.19		
	White	4	79.25		
objective4	Black	186	122.19	7.563	0.056
	Coloured	3	107.00		
	Indian	65	149.29		
	White	4	164.88		

Table 5.10 Kruskal Wallis

The descriptive analysis highlighted that engineering students mean rank was higher for three out of the four constructs. Kruskal-Wallis Test found that only the mean rank for the construct four was significantly different when compared with the participants with regards to their faculty (p<0.05).

Kruskal-Wallis Test output to compare mean rank for the entire construct with regards to participants' faculty

Faculty		N	Mean Rank	Chi-Square	p-value
objective1	Engineering	78	138.81	2.874	0.238
	Management	93	119.63		
	Natural Science	85	128.74		
objective2	Engineering	77	137.57	2.926	0.231
	Management	94	132.85		
	Natural Science	87	118.74		
objective3	Engineering	77	127.60	1.395	0.498
	Management	93	123.39		
	Natural Science	87	136.24		
objective4	Engineering	78	143.69	7.964	0.019
	Management	94	133.85		
	Natural Science	86	111.88		

Table 5.10.1 Kruskal Wallis continued Researcher (2017)

Kruskal-Wallis Test output to compare mean rank for the entire construct with regards to participants age. Kruskal–Wallis test is a rank–based one-way ANOVA. A generalization of the Kruskal-Wallis test, which extends Gehan's generalization of Wilcoxon's test, is proposed for testing the equality of K continuous distribution functions when observations are subject to arbitrary right censorship. The distribution of the censoring variables is allowed to differ for different populations. An alternative statistic is proposed for use when the censoring distributions may be assumed equal. These statistics have asymptotic chi-squared distributions under their respective null hypotheses, whether the censoring variables are regarded as random or as fixed numbers. It tests statistic is shown here to be a quadratic form among the Mann–Whitney or Kendall tau concordance measures between pairs of treatments. But the full set of such concordance measures has more degrees of freedom than the Kruskal–Wallis test uses, and the independent surplus is attributable to circularity, or non–transitive effects.

Age group		N	Mean Rank	Chi-Square	p-value
objective1	<=20 years	60	136.71	1.650	0.648
	21-25 years	186	125.50		
	26-30 years	7	124.00		
	31-35 years	3	160.67		
objective2	<=20 years	61	153.37	13.003	0.005
	21-25 years	187	123.57		
	26-30 years	7	66.71		
	31-35 years	3	160.33		
objective3	<=20 years	60	115.42	4.217	0.239
	21-25 years	187	134.60		
	26-30 years	7	100.00		
	31-35 years	3	119.33		
objective4	<=20 years	60	148.70	8.953	0.030
	21-25 years	188	121.40		
	26-30 years	7	158.79		
	31-35 years	3	184.83		

Table 5.10.2 Kruskal Wallis continued Researcher (2017)

5.7.4 Spearman's Correlation Test

Spearman's rho correlation analysis was conducted among the four constructs. The results showed that there was low positive significant correlation exists between construct 1 and construct 3 ($r=0.142$, $p=0.023$). There was also low negative significant correlation exist between construct 2 and construct 3 ($r=-.173$, $p=0.006$). The Bravais-Pearson correlation coefficient (ρBP) is a suitable measure of association when n couples of continuous data ((y_i , x_i) with $i=1,2,\ldots n$), collected on the same experimental unit, follow a bivariate normal distribution. In this case the only relationship that can be postulated is the linear one. Two different regression lines (see Fig. 1) can be defined: the first (l1) corresponding to the linear regression of y on x and the second (l2) corresponding to the linear regression of x on y.

Spearman's rho correlation analysis output

Correlations						
			objective 1	objective 2	objective3	objective4
Spearman's rho	objective1	Correlation Coefficient	1.000	-0.055	.142*	0.020
		Sig. (2-tailed)		0.384	0.023	0.756
		N	256	255	254	255
	objective2	Correlation Coefficient	-0.055	1.000	-.173**	0.121
		Sig. (2-tailed)	0.384		0.006	0.053
		N	255	258	256	257
	objective3	Correlation Coefficient	.142*	-.173**	1.000	-0.068
		Sig. (2-tailed)	0.023	0.006		0.277
		N	254	256	257	256
	objective4	Correlation Coefficient	0.020	0.121	-0.068	1.000
		Sig. (2-tailed)	0.756	0.053	0.277	
		N	255	257	256	258
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 5.11- Spearman's Correlation

Backward stepwise linear regression analysis was performed to determine the variables that had significant impact on entrepreneurial intention of the students. In this method, the entire variables were included in the initial stage. After that, one variable at a time gets removed from the model based on their insignificance impact. The Spearman correlation coefficient (ρS) is usually adopted when the assumption of the bivariate normal distribution is not tenable. It is known that ρS is computed as ρBP, changing the integer 1,2,…n to y1,y2,…yn according to their relative magnitude; the same procedure is performed for x1,x2,…xn. This transformation makes it possible to move from the scales in which the original data are collected towards the same scale that of ranks. The Spearman's contends that principles of scientific explanation should apply in common to the social and to the natural sciences. What differs is the mathematical setting and the substance, not the form of a good explanation

5.7.5 Pearson's correlation

Analysis showed that none of the construct were significantly related to each other (p>0.05).

Pearson's correlations analysis output

	Entitlement	**ES**	**Risk taking**	**EP**	**Innovation**	**Culture**	**Enthusiasm**	**Technical**	**Industrious**	**IT**	**Learning**	**SEC**
Entitlement	1.000	-.109	-.038	.043	-.051	.016	-.043	.018	.028	.016	.003	-.075
ES	-.109	1.000	-.049	-.037	-.156	.102	.065	-.149	-.173	.089	.030	.025
Risk-taking	-.038	-.049	1.000	.003	.049	-.003	.103	-.031	.002	.011	-.024	.073
EP	.043	-.037	.003	1.000	.032	.008	.053	-.041	.014	.020	.059	-.046
Innovation	-.051	-.156	.049	.032	1.000	-.118	-.046	-.018	.250	-.150	-.043	.109
Culture	.016	.102	-.003	.008	-.118	1.000	.066	.071	-.050	.102	.180	-.063
Enthusiasm	-.043	.065	.103	.053	-.046	.066	1.000	-.136	-.099	.013	.078	-.026
Technical	.018	-.149	-.031	-.041	-.018	.071	-.136	1.000	.223	-.020	-.102	-.165
Industrious	.028	-.173	.002	.014	.250	-.050	-.099	.223	1.000	-.057	-.170	-.106
IT	.016	.089	.011	.020	-.150	.102	.013	-.020	-.057	1.000	.226	.013
Learning	.003	.030	-.024	.059	-.043	.180	.078	-.102	-.170	.226	1.000	.068
SEC	-.075	.025	.073	-.046	.109	-.063	-.026	-.165	-.106	.013	.068	1.000

Table 5.11.1 Pearson's Correlation

This form of reliability is often assessed by some type of correlation coefficient, such as Pearson's correlation coefficient. Pearson's correlation, ρ, can be used to characterize how well a least squares regression line fits data, and it provides a test of the hypothesis that two measures are independent. However, many articles in statistical journals indicate that the usual estimate of ρ, *r*, is sensitive to at least six features of data, and that least squares regression and ρ are not robust in the sense reviewed in this article. In practical terms, *r* can be a highly unsatisfactory measure of the strength of an association, no matter how large the sample size might be. One specific problem is that it can miss strong associations that are detected by more modern techniques. The practical problems with *r* reflect fundamental concerns about a strict reliance on least squares regression. The below table shows the summary of the variables entered and removed from the model-:

Variables Entered/Removed			
Model	**Variables Entered**	**Variables Removed**	**Method**
1	SEC, IT, Enthusiasm, EP, Entitlement, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation	.	Enter
2	.	IT	Backward (criterion: Probability of F-to-remove >= .100).
3	.	EP	Backward (criterion: Probability of F-to-remove >= .100).
4	.	Entitlement	Backward (criterion: Probability of F-to-remove >= .100).
5	.	Enthusiasm	Backward (criterion: Probability of F-to-remove >= .100).
6	.	Technical	Backward (criterion: Probability of F-to-remove >= .100).
7	.	Risk-taking	Backward (criterion: Probability of F-to-remove >= .100).
8	.	Culture	Backward (criterion: Probability of F-to-remove >= .100).
9	.	Learning	Backward (criterion: Probability of F-to-remove >= .100).
10	.	SEC	Backward (criterion: Probability of F-to-remove >= .100).
11	.	Industrious	Backward (criterion: Probability of F-to-remove >= .100).
a. Dependent Variable: EI			
b. All requested variables entered.			

The model summary indicated that when all the variables were included the overall R value was 0.27 while removing 10 variables the R value was 0.203.

Model Summary

Model	R	R Square	Adjusted R Square
1	.274[a]	.075	.031
2	.273[b]	.075	.035
3	.273[c]	.075	.038
4	.270[d]	.073	.040
5	.266[e]	.071	.042
6	.261[f]	.068	.043
7	.255[g]	.065	.043
8	.242[h]	.059	.040
9	.231[i]	.053	.039
10	.219[j]	.048	.037
11	.203[k]	.041	.034

Table 5.12 Model Summary

5.7.6 The ANOVA

This table shows that the model being created is significant or not. It was found that when all the variables were included the model was not significant (p=0.067). After removing many variables, the model found to be significant (p=0.004). This meant that entrepreneurial intentions could be predicted by using only ES and innovation variables.

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	92.034	12	7.670	1.701	.067[b]
	Residual	1136.343	252	4.509		
	Total	1228.377	264			
2	Regression	91.879	11	8.353	1.859	.045[c]
	Residual	1136.498	253	4.492		
	Total	1228.377	264			
3	Regression	91.725	10	9.173	2.050	.029[d]

	Residual	1136.652	254	4.475		
	Total	1228.377	264			
4	Regression	89.783	9	9.976	2.234	.020[e]
	Residual	1138.595	255	4.465		
	Total	1228.377	264			
5	Regression	87.072	8	10.884	2.441	.015[f]
	Residual	1141.306	256	4.458		
	Total	1228.377	264			
6	Regression	83.849	7	11.978	2.690	.011[g]
	Residual	1144.528	257	4.453		
	Total	1228.377	264			
7	Regression	80.014	6	13.336	2.996	.008[h]
	Residual	1148.363	258	4.451		
	Total	1228.377	264			
8	Regression	72.007	5	14.401	3.226	.008[i]
	Residual	1156.370	259	4.465		
	Total	1228.377	264			
9	Regression	65.300	4	16.325	3.649	.007[j]
	Residual	1163.077	260	4.473		
	Total	1228.377	264			
10	Regression	58.929	3	19.643	4.384	.005[k]
	Residual	1169.448	261	4.481		
	Total	1228.377	264			
11	Regression	50.493	2	25.247	5.616	.004[l]
	Residual	1177.884	262	4.496		
	Total	1228.377	264			
a. Dependent Variable: EI						
b. Predictors: (Constant), SEC, IT, Enthusiasm, EP, Entitlement, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation						
c. Predictors: (Constant), SEC, Enthusiasm, EP, Entitlement, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation						

d. Predictors: (Constant), SEC, Enthusiasm, Entitlement, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation
e. Predictors: (Constant), SEC, Enthusiasm, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation
f. Predictors: (Constant), SEC, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation
g. Predictors: (Constant), SEC, Risk-taking, Culture, Industrious, ES, Learning, Innovation
h. Predictors: (Constant), SEC, Culture, Industrious, ES, Learning, Innovation
i. Predictors: (Constant), SEC, Industrious, ES, Learning, Innovation
j. Predictors: (Constant), SEC, Industrious, ES, Innovation
k. Predictors: (Constant), Industrious, ES, Innovation
l. Predictors: (Constant), ES, Innovation

Table 5.13 -ANOVA

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.027	2.266		3.101	.002
	Entitlement	-.056	.086	-.040	-.652	.515
	ES	.183	.080	.146	2.298	.022
	Risk-taking	.079	.095	.051	.829	.408
	EP	-.015	.079	-.011	-.187	.852
	Innovation	.257	.101	.165	2.539	.012
	Culture	.090	.076	.075	1.192	.234
	Enthusiasm	.070	.093	.047	.759	.448
	Technical	.062	.068	.058	.908	.365
	Industrious	-.115	.079	-.096	-1.455	.147
	IT	.014	.077	.012	.186	.853
	Learning	-.087	.064	-.088	-1.368	.172
	SEC	.122	.090	.084	1.346	.180
2	(Constant)	7.054	2.257		3.125	.002

	Entitlement	-.056	.085	-.040	-.650	.516
	ES	.184	.079	.147	2.319	.021
	Risk-taking	.079	.095	.051	.836	.404
	EP	-.015	.079	-.011	-.185	.853
	Innovation	.255	.100	.163	2.541	.012
	Culture	.091	.075	.075	1.204	.230
	Enthusiasm	.070	.093	.047	.758	.449
	Technical	.062	.068	.058	.910	.364
	Industrious	-.115	.079	-.096	-1.454	.147
	Learning	-.085	.062	-.086	-1.362	.174
	SEC	.122	.090	.085	1.352	.178
3	(Constant)	6.979	2.216		3.149	.002
	Entitlement	-.056	.085	-.040	-.659	.511
	ES	.184	.079	.147	2.331	.021
	Risk-taking	.079	.095	.051	.837	.403
	Innovation	.254	.100	.163	2.542	.012
	Culture	.091	.075	.075	1.206	.229
	Enthusiasm	.069	.092	.046	.752	.453
	Technical	.062	.068	.059	.921	.358
	Industrious	-.115	.079	-.096	-1.460	.146
	Learning	-.086	.062	-.086	-1.378	.169
	SEC	.123	.090	.085	1.366	.173
4	(Constant)	6.177	1.850		3.339	.001
	ES	.190	.078	.152	2.426	.016
	Risk-taking	.081	.094	.052	.860	.391
	Innovation	.258	.100	.165	2.591	.010
	Culture	.090	.075	.075	1.194	.233
	Enthusiasm	.072	.092	.048	.779	.437
	Technical	.063	.067	.060	.937	.350
	Industrious	-.116	.079	-.097	-1.474	.142
	Learning	-.086	.062	-.087	-1.385	.167
	SEC	.127	.090	.088	1.412	.159

5	(Constant)	6.659	1.742		3.823	.000
	ES	.192	.078	.153	2.455	.015
	Risk-taking	.089	.094	.058	.951	.342
	Innovation	.257	.100	.164	2.579	.010
	Culture	.093	.075	.077	1.239	.216
	Technical	.057	.067	.054	.850	.396
	Industrious	-.119	.078	-.099	-1.518	.130
	Learning	-.083	.062	-.084	-1.348	.179
	SEC	.123	.090	.085	1.370	.172
6	(Constant)	7.106	1.660		4.282	.000
	ES	.184	.078	.146	2.364	.019
	Risk-taking	.087	.094	.056	.928	.354
	Innovation	.251	.099	.161	2.530	.012
	Culture	.099	.075	.082	1.326	.186
	Industrious	-.106	.077	-.089	-1.383	.168
	Learning	-.088	.062	-.088	-1.420	.157
	SEC	.113	.089	.079	1.275	.203
7	(Constant)	7.597	1.573		4.829	.000
	ES	.180	.078	.144	2.324	.021
	Innovation	.255	.099	.163	2.566	.011
	Culture	.100	.075	.083	1.341	.181
	Industrious	-.107	.077	-.089	-1.395	.164
	Learning	-.089	.062	-.090	-1.449	.149
	SEC	.119	.089	.083	1.344	.180
8	(Constant)	8.481	1.430		5.928	.000
	ES	.189	.077	.151	2.445	.015
	Innovation	.243	.099	.155	2.452	.015
	Industrious	-.106	.077	-.088	-1.377	.170
	Learning	-.074	.061	-.075	-1.226	.221
	SEC	.111	.088	.077	1.256	.210
9	(Constant)	7.603	1.240		6.133	.000
	ES	.189	.077	.151	2.443	.015

	Innovation	.244	.099	.156	2.459	.015
	Industrious	-.091	.076	-.076	-1.201	.231
	SEC	.106	.088	.073	1.193	.234
10	(Constant)	8.311	1.089		7.630	.000
	ES	.191	.077	.153	2.471	.014
	Innovation	.261	.098	.167	2.655	.008
	Industrious	-.104	.076	-.086	-1.372	.171
11	(Constant)	7.418	.875		8.481	.000
	ES	.206	.077	.164	2.685	.008
	Innovation	.230	.096	.147	2.400	.017
a. Dependent Variable: EI						

Table 5.14- Coefficients

Excluded Variables[a]						
						Collinearity Statistics
Model		Beta In	T	Sig.	Partial Correlation	Tolerance
2	IT	.012[b]	.186	.853	.012	.922
3	IT	.012[c]	.183	.855	.012	.922
	EP	-.011[c]	-.185	.853	-.012	.985
4	IT	.011[d]	.173	.863	.011	.922
	EP	-.013[d]	-.210	.833	-.013	.987
	Entitlement	-.040[d]	-.659	.511	-.041	.975
5	IT	.010[e]	.160	.873	.010	.922
	EP	-.011[e]	-.175	.861	-.011	.989
	Entitlement	-.042[e]	-.690	.491	-.043	.977
	Enthusiasm	.048[e]	.779	.437	.049	.954
6	IT	.010[f]	.163	.871	.010	.922
	EP	-.013[f]	-.218	.827	-.014	.991
	Entitlement	-.043[f]	-.705	.482	-.044	.977
	Enthusiasm	.041[f]	.672	.502	.042	.968

	Technical	.054[f]	.850	.396	.053	.901
7	IT	.012[g]	.186	.852	.012	.923
	EP	-.013[g]	-.213	.831	-.013	.991
	Entitlement	-.045[g]	-.738	.461	-.046	.979
	Enthusiasm	.047[g]	.771	.441	.048	.980
	Technical	.052[g]	.824	.411	.051	.901
	Risk-taking	.056[g]	.928	.354	.058	.990
8	IT	.015[h]	.245	.806	.015	.925
	EP	-.013[h]	-.213	.832	-.013	.991
	Entitlement	-.044[h]	-.717	.474	-.045	.979
	Enthusiasm	.050[h]	.828	.408	.051	.982
	Technical	.060[h]	.945	.345	.059	.909
	Risk-taking	.057[h]	.947	.344	.059	.990
	Culture	.083[h]	1.341	.181	.083	.944
9	IT	-.002[i]	-.031	.975	-.002	.972
	EP	-.018[i]	-.292	.770	-.018	.996
	Entitlement	-.045[i]	-.729	.466	-.045	.979
	Enthusiasm	.045[i]	.747	.456	.046	.986
	Technical	.064[i]	1.018	.310	.063	.913
	Risk-taking	.059[i]	.980	.328	.061	.991
	Culture	.067[i]	1.096	.274	.068	.976
	Learning	-.075[i]	-1.226	.221	-.076	.969
10	IT	.000[j]	.000	1.000	.000	.973
	EP	-.021[j]	-.349	.727	-.022	.998
	Entitlement	-.049[j]	-.802	.423	-.050	.983
	Enthusiasm	.043[j]	.703	.482	.044	.988
	Technical	.053[j]	.847	.398	.052	.930
	Risk-taking	.064[j]	1.059	.291	.066	.996
	Culture	.063[j]	1.026	.306	.064	.979
	Learning	-.071[j]	-1.162	.246	-.072	.971
	SEC	.073[j]	1.193	.234	.074	.968
11	IT	.001[k]	.015	.988	.001	.973

	EP	-.021[k]	-.352	.725	-.022	.998
	Entitlement	-.051[k]	-.836	.404	-.052	.983
	Enthusiasm	.049[k]	.814	.417	.050	.994
	Technical	.032[k]	.526	.599	.033	.976
	Risk-taking	.065[k]	1.080	.281	.067	.996
	Culture	.063[k]	1.037	.301	.064	.979
	Learning	-.056[k]	-.920	.358	-.057	.998
	SEC	.083[k]	1.366	.173	.084	.986
	Industrious	-.086[k]	-1.372	.171	-.085	.919

a. Dependent Variable: EI

b. Predictors in the Model: (Constant), SEC, Enthusiasm, EP, Entitlement, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation

c. Predictors in the Model: (Constant), SEC, Enthusiasm, Entitlement, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation

d. Predictors in the Model: (Constant), SEC, Enthusiasm, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation

e. Predictors in the Model: (Constant), SEC, Risk-taking, Culture, Industrious, ES, Technical, Learning, Innovation

f. Predictors in the Model: (Constant), SEC, Risk-taking, Culture, Industrious, ES, Learning, Innovation

g. Predictors in the Model: (Constant), SEC, Culture, Industrious, ES, Learning, Innovation

h. Predictors in the Model: (Constant), SEC, Industrious, ES, Learning, Innovation

i. Predictors in the Model: (Constant), SEC, Industrious, ES, Innovation

j. Predictors in the Model: (Constant), Industrious, ES, Innovation

k. Predictors in the Model: (Constant), ES, Innovation

Table 5.15 Excluded Variables

The results illustrated above were meant to figure out the strength and effects for variable in in regression equation which helps researcher to be more appropriate for reporting. One of the tools employed was Beta that helped the researcher to measure the volatility.

5.8 Qualitative Results

The objective of presenting qualitative results is work together with the participant to develop the real sense of the participants understanding of the situation. This incorporates the *conceptual* perspective that has to do with understanding human behaviour from the informant perspective; as well as assumption of dynamic and reality. The *methodologica*l perspective reveals that data is collected through either participant observation or interviews. It uncovers trends, thoughts and opinions and gets into a deeper sense of the problem. The researcher selected the participants for qualitative open-ended response based on the following criteria-:

(a) Seniority within the organisation based on their roles they hold. The roles were Senior management, Deans and Head of Departments; (b) Capability to lead, direct and to oversee the wellbeing of students and institution.

The researcher portrayed qualitative presentation within a mixed method framework where she is employing three main aspects which are (i) *Data Reduction* where she is reducing the dimensionality of qualitative data through thematic analysis within a cluster analysis perspective. (ii)*Data Display* where the researcher pictorially portrays qualitative data through tables (iii) Data transformation where data is converted into codes. The researcher performs this through Evidence based practice (EBP). The researcher employed complementarity with the purpose of obtaining depth as well as breadth of understanding QUANT +QUANT (Swartout, 2014).

Qualitative data was gathered for the Management and Head of Department group and subsequent surveys sent out to participants within the Management and Head of Department group were analysed using thematic analysis. Thematic analysis is a widely used method for identifying analysing and reporting patterns, or themes, within data (Braun and Clarke, 2006). The researcher can organize and describe her data in rich detail. The Management and Head of Department group data was recorded using an open-ended questionnaire device and devices like emails, memory sticks, computers interviewer encouragement and questions. As the data collected from the survey was written there was no need to transcribe. The researcher conducted a thematic analysis of both data sets using Braun and Clarke’s (2006) model, the stages of which were as follows-:

5.8.1 Stages Followed

(i). *Familiarization of the data*

Transcriptions were checked against the open-ended questionnaire to ensure that no parts were missing. The researcher immersed herself within the data by reading and re-reading the printed transcriptions and survey data. Whilst reading, notes were made of any initial ideas or areas of interest from within the data.

(ii). *Generating initial codes*

When the researcher was familiar with the data sets, a process of generating initial codes began. Codes refer to features of the data that appear most interesting to the researcher (Braun and Clarke, 2006). Codes identified by the researcher were written onto post-it notes next to the relevant segment of data. For the Management and Head of Department group transcription these were then placed onto the word-processed document using the Comments tool to help with further stages of the analysis. The codes were then organized together into meaningful groups. This was a cyclical process and involved going back to the raw data to check the validity of the identified codes.

(iii). *Searching for themes*

Braun and Clarke (2006) define a theme as; *"something important about the data in relation to the research question, and represents some level of* patterned *response or meaning within the data set."*

Once all codes had been organized together, each group was labelled ready for stage 3 in the analysis. This stage helped in understanding Management and Head of Department the analysis at the broader level of themes rather than individual codes. A visual representation, or thematic map, helped to sort the groups of codes under initial overarching themes and possible subthemes. At this stage overarching themes and subthemes were preliminary and not yet fully defined.

(iv). *Reviewing the themes*

This phase involved checking if the candidate themes work in relation to the coded extracts and entire data set. This two-phase process ensures that where there is not enough data to support a theme or if the data within a theme is too diverse, the theme can be refined and adapted as such. Without clear guidelines on when to stop, there is the potential for the process of coding data and generating themes to continue indefinitely. Braun and Clarke (2006) suggest that when refinements and fine-tuning do not add anything substantial to the analysis the researcher may decide to stop. This process involved revisiting the thematic map and re-reading the data to ensure the different themes fit together and represented the overall data.

(v). *Defining and naming themes*

This final process involved refining the specifics of each theme by generating clear definitions and names. The aim therefore is to provide a clear description of what each theme represents illustrated by extracts from the data sets and a narrative as to the relevance of the theme. Thematic analyses were carried out on different data sets.

The purpose is to explore the extent to which participants' views developed depending on their experiences encountered in their roles in addition this method would provide the local research in the views of Management, Deans and Heads of departments potentially informing future delivery of research project.

5.8.2 Staff response

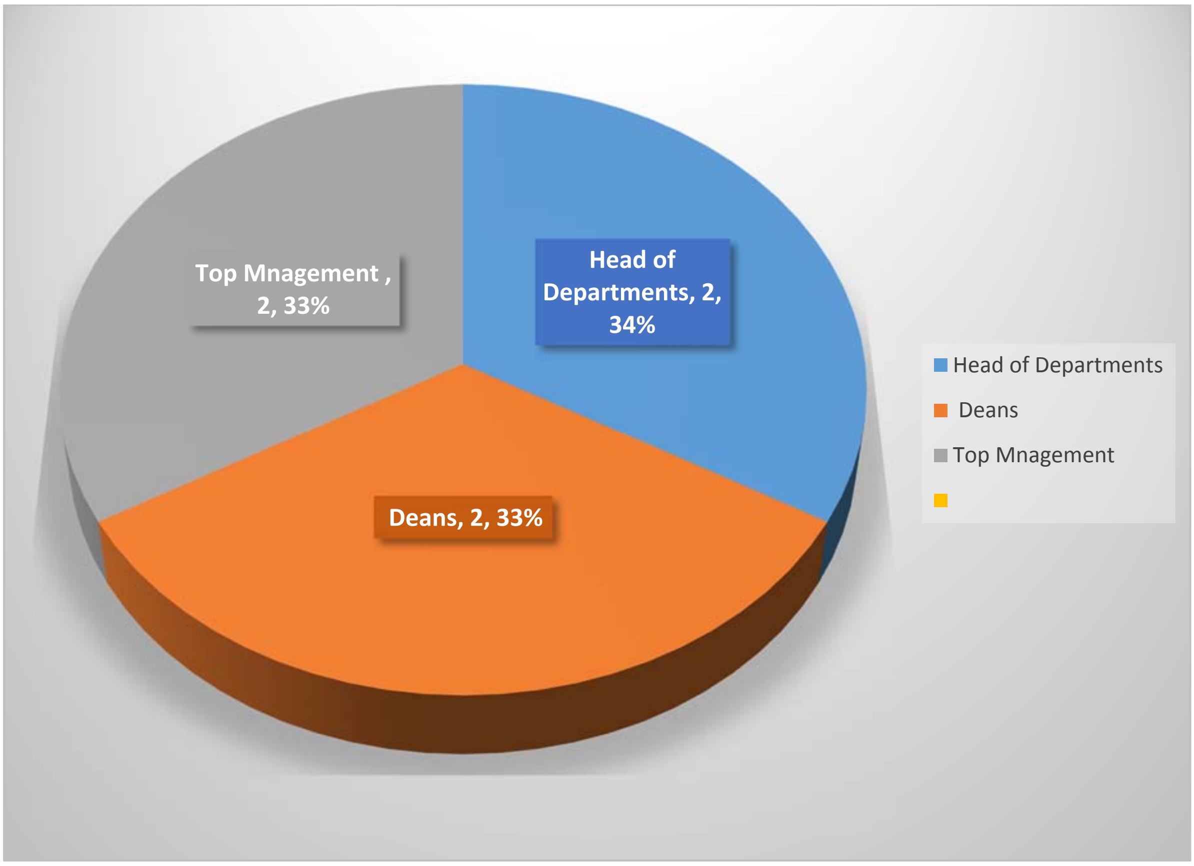


Figure 5.9- Departmental Participation: Source- Researcher (2017)

The pie chart illustrated above illustrates the total number of participants out of the targeted number. Targeted number was 16. A total number 2 from Deans and 2 from Heads of departments responded.

The researcher would like to cite that it was not easy to get feedback from Deans, Head of departments and top management due to their busy schedule.

Distribution of Top Management and Head of Departments Participants' Age group by Gender

Category	Age group	Female	Male	Total respondents	Total percentage
Top Management	**50-55**	1	1	**2**	**33.33%**
Deans and HODs	**50-55** **55-60**	1 1	1 1	**2** **2**	**33.33%** **33.33%**

Table 5.16- Staff age and gender distribution

The table represented above illustrates the actual number of respondents that are in the category of top management, Dean and Head of Department where the highest representation is age between 21-25 with the highest total number of 178 as well as the age category 36-40 and 41+ that both indicates the lowest representation of the total of 3 per category.

5.8.3 Thematic presentation

The Qualitative analysis also incorporated the thematic analysis with the themes that were critical success factor, resources, entrepreneurial intention, as well as processes illustrated below-:

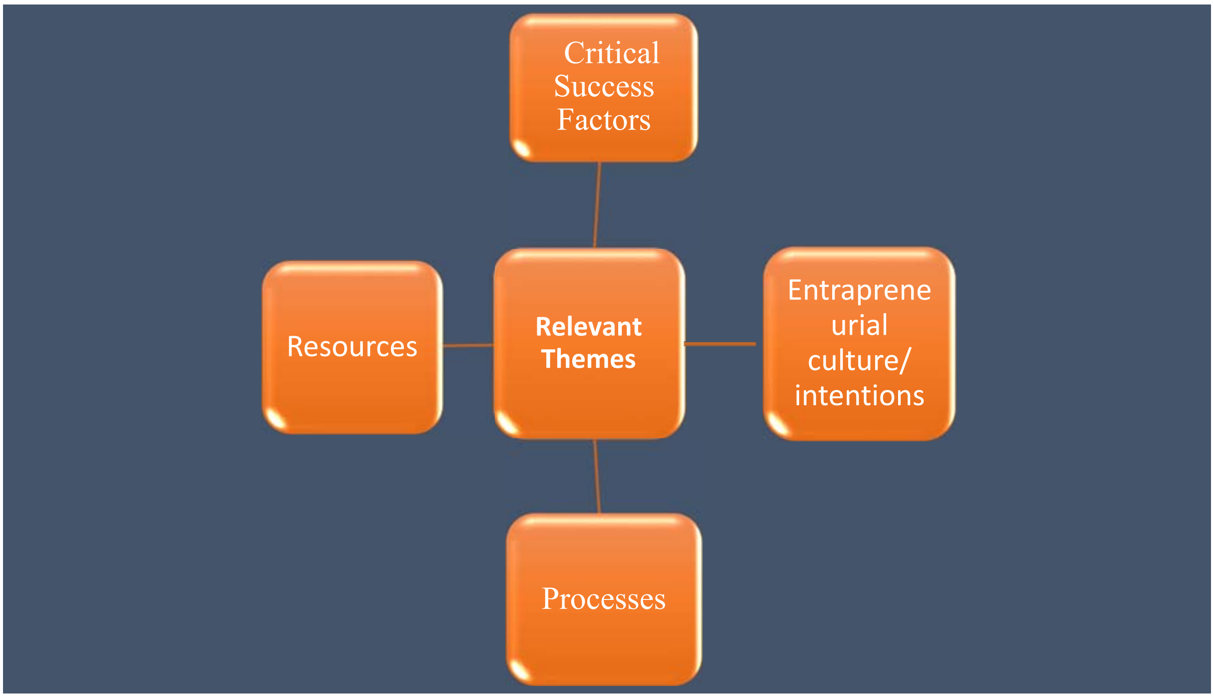


Figure 5.10-Thematic analysis- Source: Researcher (2017)

5.8.3.1 Theme one (Critical Success Factors)

Theme one which is *Critical Success Factors* according to the diagram provided possible responses on socio economic factors, political factors; psychological factors, cultural factors as well as personality factors. The sub-themes covered were level of understanding success factors, level of skills set, attention to detail as well as synergy and alignment of critical success factors. The theme of critical success factors was aimed at responding to fact that key aspects of entrepreneurship are normally neglected and the focus is profit oriented without attending to the conceptual issues and cumulative body of knowledge that constitute complete knowledge and application of entrepreneurial culture. In short the main focus is exerted on financial goals and the non-financial aspects tend to be neglected. The subthemes below are illustrated and later unpacked.

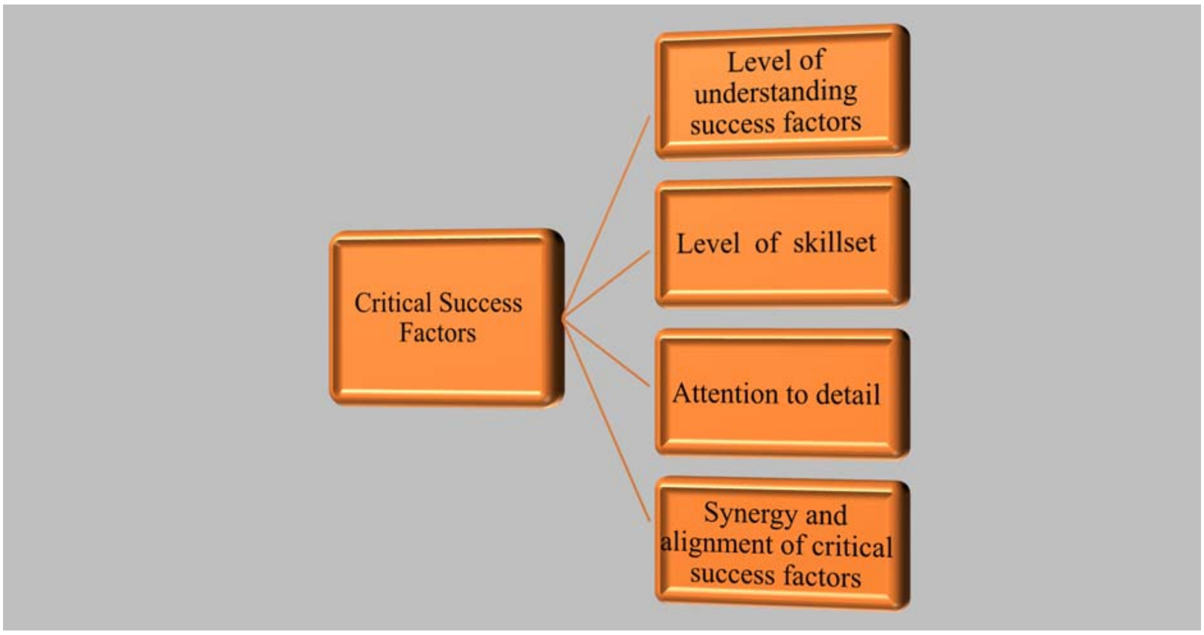


Figure 5.10.1-Unpacking Critical Success Factors: Source Researcher (2017)

5.8.3.2 Level of Understanding Success Factors

The level of understanding critical success factor has been mentioned because to it might not be practical to achieve positive entrepreneurial culture if the organisation or participants within the organisation do not understand the critical success factors which are socio economic factors, political factors psychological factors, cultural factures as well as personality factors as outlined above.

(i) Level of skills Set

Level of skills set in this study was limited to higher education through impact studies as well as patterns that connect specific impact measures through incorporated pedagogical methods. Pedagogical methods in Entrepreneurial Education in higher education are highly behaviourist. This is can be traced from lectures, homework, quizzes, and so forth, that focus on knowledge acquisition, rather than the deeply experiential approaches of the constructivist perspective. This issue of skills set is identified through three archetypical teaching models in higher education which are the supply model, the demand model, and the competence model combined with hybrid teaching models. The supply model focuses on pedagogical methods highlighting a behaviourist paradigm, in terms of the transmission and reproduction of knowledge and application of procedures. The reader is however warned that knowledge about entrepreneurship does not necessarily create entrepreneurial insight. It does however increases the level opportunity of noticing things that would not have been noticed without the knowledge of entrepreneurship and that in most often than not, entrepreneur's notices opportunities because they are new. This is regardless of whether entrepreneurial successes are spectacular or mundane (Neergaard, Tanggaard, Krueger and Robinson, 2012).

When the participants were asked this question *"Do **you have any business Idea that you plan to do in the Next three years? If yes, how will you ensure sustainability**? Four of them responded by saying "not now. Successful Business needs undivided attention so nothing so far and only to be considered after retirement. Sustainability to be considered during its existence"* One of them responded by saying "I *Currently have one but at an inception stage and so as sustainability concept. I hopefully believe that once it is fully blown I will ensure sustainability by staying current on what is happening in the industry and hoe I will enhance it for customers"*. The sixth one responded by saying *"It has never been considered as the whole focus and effort is exerted on my current employment. It might be considered for retirement perspective"*

(ii) Attention to Detail

Attention to detail reveals that although Entrepreneurial companies value innovation and encourage risk-taking, talent is in shorter supply than job opportunities are. Contrary, millennial generation grew up in a time of financial prosperity and rapid technological advancements and they regard Job stability job less important compared to the older generation. The participants reveal that pedagogical competency aspects play an integral part and needs an integrationist theoretical paradigm in terms of active problem solving of real life situations. This indicates that teaching and learning should be conceived as a strategic intervention to allow for and influence how students organize the resources at their disposal such as knowledge and abilities translated into competences that can be mobilized for action.

That demands a rigorous talent based culture on the pedagogic perspective that will rub off to students. This is emphasised to minimise the concept of attraction of talents by employers but to emphasise nurturing of talent for the benefit of students' self-sustainability through entrepreneurial culture. This calls for the importance of drilling self-awareness to students as well as assisting them towards understanding their personality-type perspective. It is also important to understand and note that those learners with preferences for intuition and perceived perseverance are significantly more likely to describe and perceive themselves as future successful entrepreneurs. This is traced from the fact that such learners or students paint in themselves big picture of being thinkers who rely on their intuition and go with what they think will work. This incorporates traits, intuition and perceiving. Nurturing of this personality should incorporate the understanding in learner that failure should not define them since it is evidenced that every great entrepreneur has failed numerous times before they succeeded, or had to battle against considerable odds (Okon et al, 2014).

In conclusion to this subheading, successful entrepreneurs are regarded as those that know how to pay attention to the little details. The attention to details that does not only focus on trends, sales, expenses and the best employee, but the little details of what separates the good business from the great business as well as what are the possible opportunities rather than focusing on what is going wrong in the business. Paying attention to details should mean that To be a successful entrepreneur, the learner must have ability pay attention to the little details in life and figure out what his or her business can do that no one else is doing and make sure that everyone knows about his or her immediate innovation. Attention to detail should also be cautious of gender stereotype where it is believed that there is business that can only be led by females or be led by males (Westhead and Solesvik, 2015).

(iii) Synergy and alignment of critical success factors

Five out of six respondents indicated the need for psychological readiness incorporated with the need for understanding norms and values under which the potential entrepreneur for the critical success factor for the entrepreneurial culture to succeed. Lack of synergy in alignment of political, social and individuals' innovation became key impediment towards success of instilling entrepreneurial culture.

5.8.4 Theme two (Resources)

Theme two which is *Resources* provided responses on whether there is a resource issue that can impede entrepreneurial culture or entrepreneurial intentions. The purpose of thee resource theme was to draw attention on the effect and impact of resources towards entrepreneurial activity. This theme looked at resources like finances; skills like leadership, management, interpersonal skills, infrastructure as well as entrepreneurial support, risk management, governance and compliance as illustrated in the diagram below.

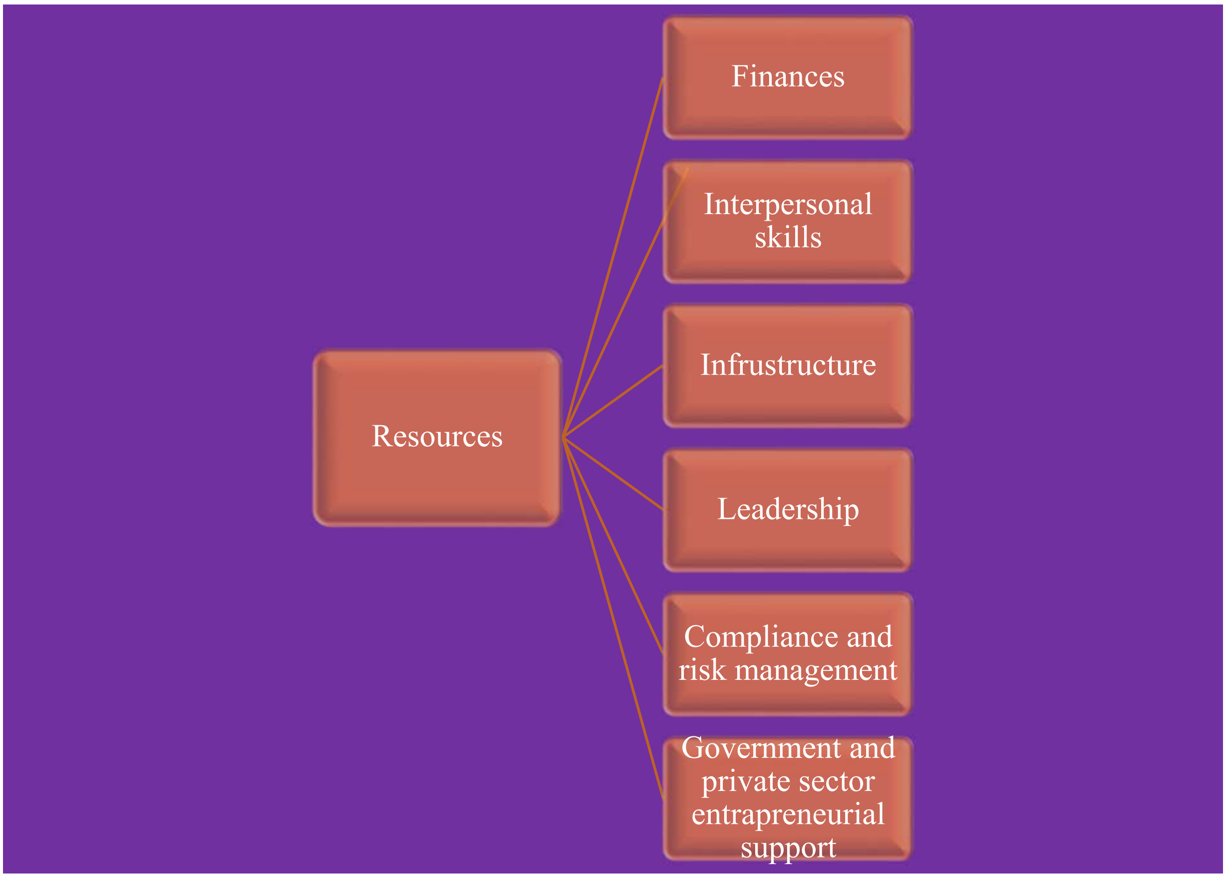


Figure 5.10.2 Resources theme Unpacked-Source: Researcher (2017)

One of the aspects cited under resources is finance. This helps to assess if financial issue will or will not become an impediment towards entrepreneurial culture in a South African tertiary institution. Interpersonal skills are also one of the resources that assist towards customer and stakeholder relationship management when working towards entrepreneurial culture. Infrastructure is also mentions as part of resources to assist towards entrepreneurial culture. Attainment of positive entrepreneurial culture which is the crux of this study will need a strong and visionary leadership which is why leadership is cited as one of the critical resources. Compliance and proactive risk management is regarded as one of the critical resources that positively contribute towards achieving positive entrepreneurial culture that might it return to the economy of the country. Six of the respondents indicated that the resources regardless of whether they are financial or non-financial have the negative effect on the success of entrepreneurial activity and thus need to be taken care of when instilling entrepreneurial culture.

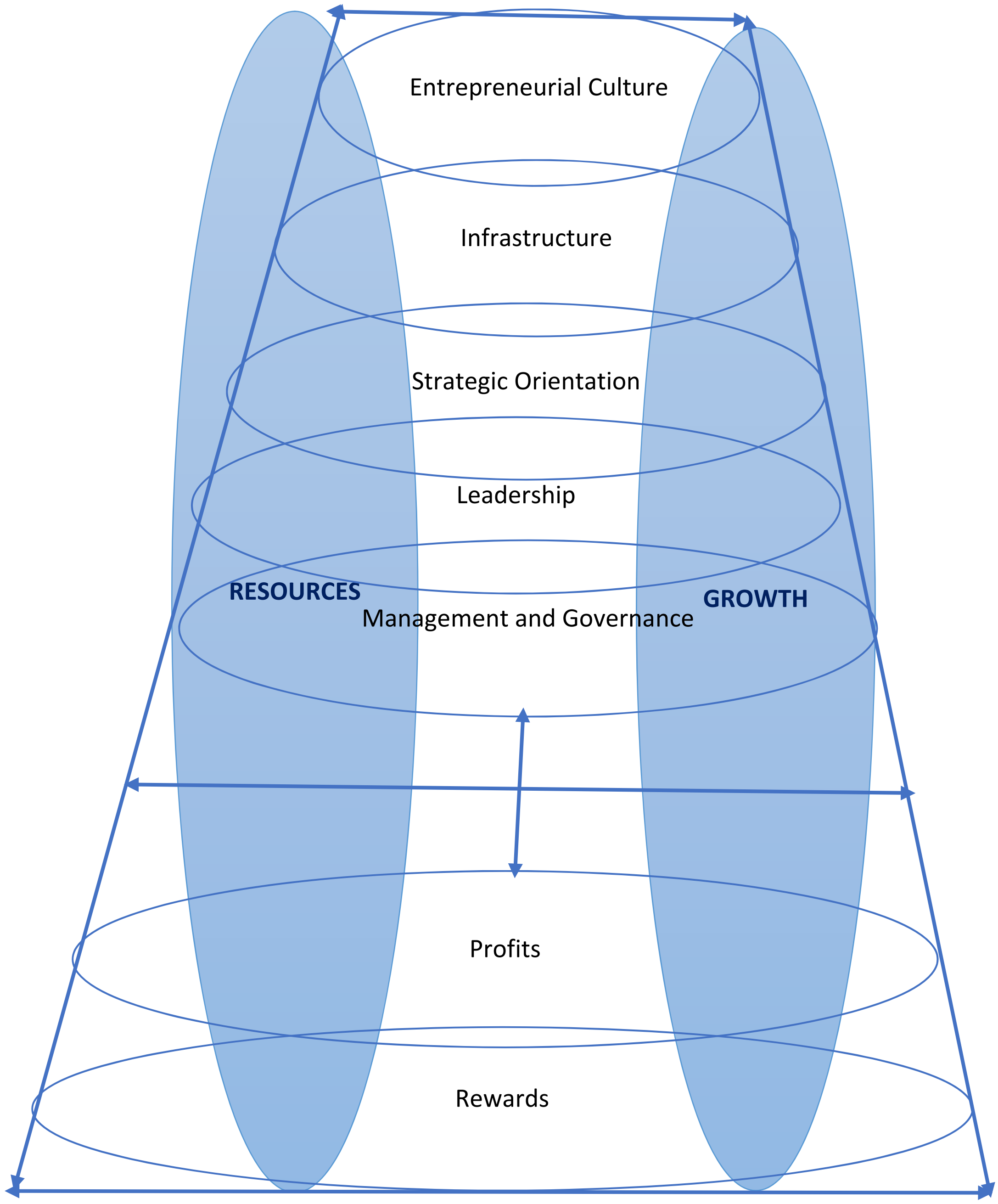


Figure 5.10.3-Entrepreneurship Resource Management Model- Source: Researcher (2017)

The above illustrated diagram indicates the importance of proper integration of resources in order of priority. The researcher argues the order of hierarchal structure that the entrepreneur needs to think of the possibility of and entrepreneurial culture and infrastructure as top of the list. The researcher does not see success of entrepreneurship without proper entrepreneurial culture. The research contends that once the entrepreneurial culture aspect is in place, phenomena like strategic orientation, leadership and management will automatically fit themselves into their respective places. The profit is the end results before the entrepreneur and his staff reward themselves as illustrated by the researcher in the above diagram. Such integration is resourceful to the management of scarce resources and fruitful entrepreneurial management practice.

(i) Finance as resource on entrepreneurial intention

The purpose of this finance as a sub-theme of resources was to draw attention of participants to the importance of multivocality concept which is defined as ability and possibility to get through to other stakeholders particularly of finance in this case for the success of entrepreneurial culture since they are not a financial institution. It was also to check the level of understanding on whether the participants knew that they needed multiple collective voices for the entrepreneurial culture to be successful (Montgomery, Dacin and Dacin, 2012). The participants were expected to understand that entrepreneurship collective identity affect the overall entrepreneurial success and that high level of commitment and positive usage of resources at the individual disposal is required bring return on investment so as to minimise denting of overall entrepreneurial success. Five out of six participants regarded finances is one of the key impediments for business start-up. When they responded on the question "***. Do you foresee any challenges to hinder you from starting your own business if yes what are they"?*** Five of them cited financial aspect as the main possible impediment that could hinder them from starting up their businesses.

(ii) Interpersonal Skills

The purpose of employing interpersonal skills was to establish the level of prospective entrepreneurs towards the possibility of operating in emerging markets. It is argued that the challenges encountered include the low levels of entrepreneurial skills that are seen as important elements in economic and entrepreneurship development (Adendorff, Emuze and Vilakazi, 2013).

(iii) Government and Private Sector entrepreneurial support

The purpose of employing this subtheme was to establish if participants know how institutional intermediaries support different types of entrepreneurs in obtaining public resources in emerging economies. It was also to check the level of awareness on participants related to fact of that Governments in emerging market economies often use institutional intermediaries to promote private-sector entrepreneurship and spur economic prosperity. It should be noted that merging economies are ones in which the capital markets. The researcher hopes assist participants to follow the correct route certification, accreditation where applicable as well as capability-building mechanisms to the benefits that are received by particular types of entrepreneurs (Estrin, Mickiewicz and Stephan, 2016).

Government is however warned not to attract business with money which is a temptation to any individual without connecting with the body of knowledge which are academic institution because that may lead to people chasing money without entrepreneurial culture skills acquired. If such activity of throwing money to public happens with the aim of increasing number of entrepreneurs only, the lifespan of entrepreneurs in South Africa will continue to be less than three years especially because there is currently no consequent management to people who get funding from government to start up business and do not account for return on investment (Heutel, 2014).

5.8.5 Theme three (Entrepreneurial Intentions)

Theme three which is *Entrepreneurial intentions* provided possible responses on the level of entrepreneurial intentions. The aim of this theme was to extrapolate the level of understanding the importance of entrepreneurial intentions towards instilling entrepreneurial culture. This theme unveiled the concepts of innovation, enthusiasm, knowledge, technical skills, risk taking as well as the concept of being industrious as sub-themes to entrepreneurial intentions as illustrated below-:

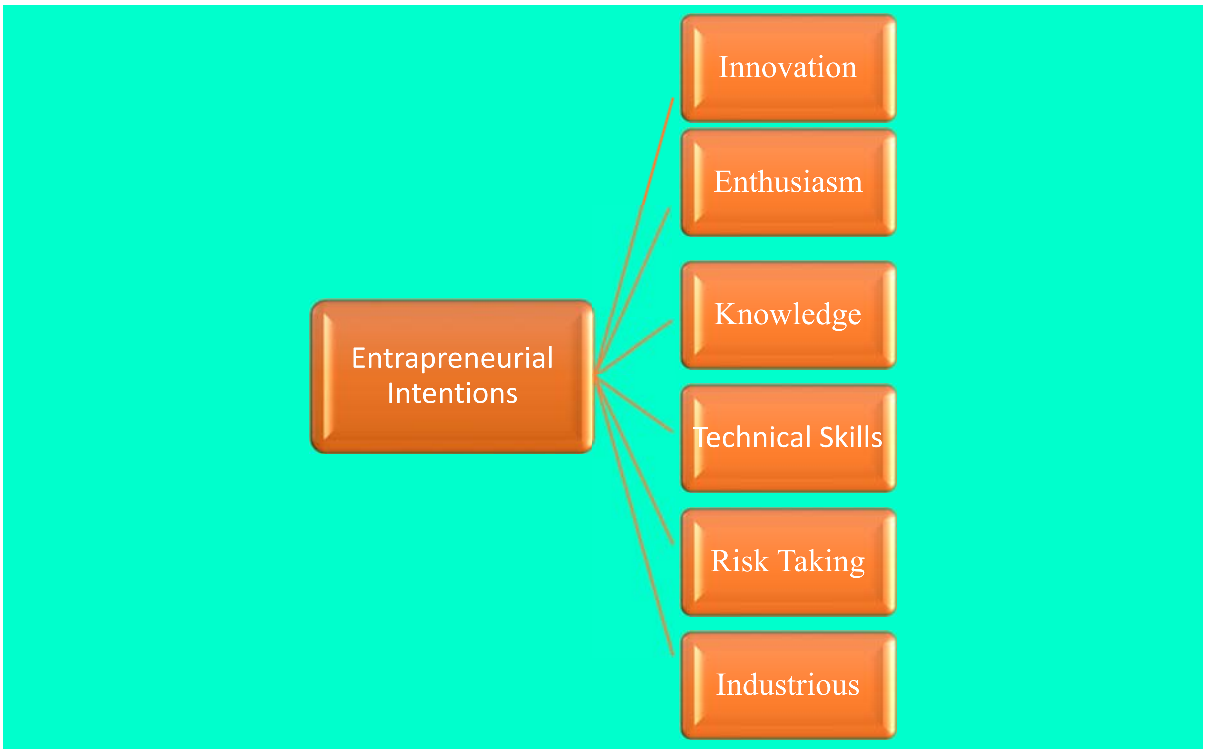


Figure 5.10.4Unpacking entrepreneurial Intention theme- Source: Researcher (2017)

Knowledge under this theme forms part of understanding whether the pool of knowledge within the institution incorporates the necessary experience, knowledge and technical skills that will assist towards achieving positive entrepreneurial intentions. It also assesses the level of enthusiasm, risk taking and the level of being industrious to the participants and organisation per se. The concept of being industrious unveiled the ability of operative functions that included handling of human capital, directing, controlling, compensation function, planning together with the ability to develop not only oneself but for the entrepreneur to develop his or her staff and himself as integrated aspects of entrepreneurial intention. Such integration was unpacked as is the process of accommodating the goals of the organization or business associations with those of its members. Integration involves employee counselling, motivating employees through various financial and non-financial inducements, worker's involvement in management, improving quality of work-life providing job gratification, handling employee grievances through formal grievance procedures, collective bargaining and contravene resolution as well as maintenance function. This was aimed at assisting the entrepreneur to achieve and maintain entrepreneurial significance as an enterprise as well as his or her personal significance in a South African Education institution and in the South African economy. What mattered most was whether the individual was a risk taker and whether he or she understood the industry of specialization as well as the possibility of entrepreneurship around his area of specialisation.

Five out of six participants agreed that the innovation focuses mainly on new products and that there is low level of new technological invention. Three out of six participants indicated that although there is aspiration to be a risk taker, they drew cognisance on the aspect of swimming into debts just because one aspires to be regarded as a risk taker. That was cited because sometimes an entrepreneur has a business idea but does not have financial muscles which required boldness into approaching the bank as part of being a risk taker whilst not knowing what the entrepreneurial concept has in store for him or her. When four of the Head of departments responded on this **question *"Which is more beneficial between self-employment and being employed? Why"*** their responses were that "*There is security in being employed compared owning a business. There is also paid leave when being employed and no paid leave when self-employed. There is stable salary when you are an employee and no stable salary when you are self-employed. You have lunch times and stipulated working hours when you are an employee, yet you sometimes get socially isolated when you are self-employed, trying to run away from social destructions"*

(i) Technical Skills

The aim of incorporating Technical skills was to incorporate an understanding of and proficiency in specific activities involving methods, processes and techniques in the prospective entrepreneurs' business's line of operation. The technical skills involve management of operations, quality-monitoring skills and industry-specific skills, product development.

(ii) Innovation

The purpose of having innovation as a subtheme was for the researcher to establish if the participants were able to integrate entrepreneurial intention and innovation. The question was establishing the ability to identify conceptualization of business idea, personal commitment, opportunity recognition, development, relationship building, organizing and strategy formation (Mamabolo, Kerrin and Kele, 2017).

5.8.6 Theme four (Processes)

Theme four which are *Processes* provided responses to issues like learning and development, skills development and education systems. Processes incorporated Education system, staff level of entrepreneurial exposure, governance benchmarking and best practice. Processes in theme four unpacked the following aspects illustrated below.

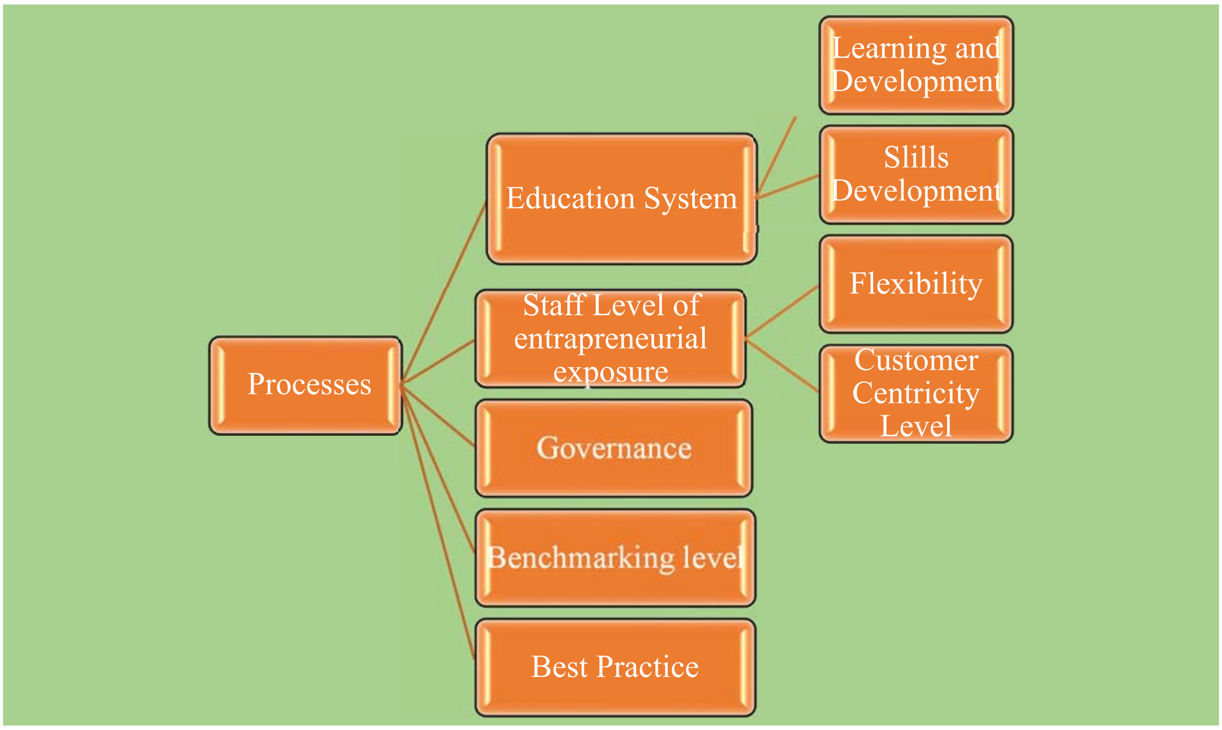


Figure 5.10.5-Unpacking Process theme- Source: Researcher (2017)

The main purpose of presenting the theme process was to improve and ensure efficiency, consistency as well as effective learning and development which the institution must follow and impact the South African economy. Customer Centricity has been mentioned because for the entrepreneurial culture to me effective, one of the core aspects is being acquainted to Treating Customer Fairly. Governance is also cited because it is important to the management control structure in terms pertaining execution of policies, procedures, responsibilities and accountabilities. Staff Entrepreneurial Exposure is noted because there might be possible impediments for staff to be expected to contribute towards entrepreneurial culture if they, themselves have never been exposed to entrepreneurial environment. Best Practice has been identified because Best practice is related to the way things are commonly done in industry according to accepted norms and standards.

Processes and education system towards entrepreneurial culture

When the participants were asked the question related to education and entrepreneurial culture which was "***What is your comment regarding South African education in relation to entrepreneurial culture?*** The responses evolved around the fact that concept for entrepreneurial culture is does exist although the results are not yet in existence. They believed the focus for most students is on which best company they will work for as soon as they come out of the tertiary institution. They also noted that South Africa still needs to work hard towards connecting itself to entrepreneurial culture. The economic aspect that presents slow growth sums it all towards impact of entrepreneurial culture on South African education. Entrepreneurial concept needs radical injection to talk to South African education. Most South African graduates study towards employability mentality which somehow diminishes the entrepreneurial mentality within South African graduates. The employability mentality starts at an early stage of basic education because when one asks his or her child on what he she wants to be when he/she grows up. One rarely finds response of the child wanting to own up a business, but normally a doctor, a soldier, a nurse etc. That reveals disconnection somehow between entrepreneurial culture and education.

5.9 Validating the data and the results

The researcher has considered the following nine types of validity in a mixed research to ensure the credibility of this research (Johnson and Christensen, 2015).

(a)Inside –Outside Validity- where the researcher has ensured accurate understanding as well as presentation of participants in an emic view point for the participant and etic view point for a researcher's perspective; (b) *Paradigmatic or philosophical* validity where their researcher has integrated philosophical and methodological beliefs; © *Weakness minimization validity* - where the researcher has combined qualitative and quantitative approach whilst ensuring non-overlapping weakness; (*d)Commensurability approximation philosophical validity* where the researcher has been able to ensure gestalt switches which is (an organized whole that is perceived as more than some of its parts) between quantitative and qualitative researcher. In this regard, the researcher has been able to integrate these two views in to a broader view point. (e) *Conversion validity* where the researcher as observed the degree to which qualitisizing and quantitisizing yield quality Meta inferences; (f) *Socio Political Validity* where the researcher has been able to consider values, interest and viewpoints of multiple participants and stakeholders.

(g) *Multiple Validities* where required, the researcher has considered pertinent validities for quantitative, qualitative and for mixed method and resolved them successfully.
(h) *Sample integration validity* where the researcher has been able to make mixed generalization about the mixed samples.
(i) *Sequential Validity* where the researcher has been able to address any effects occurring from the ordering of qualitative and quantitative phases.

5.10 Integration and Merging of Models

Integration of Models according to Creswell (2015) takes place in several ways which can be: (1) connecting; (2) building; (3) merging; and (4) embedding. In a single line of inquiry, integration may occur through one or more of these approaches. Integration through *connecting* occurs when one type of data links with the other through the sampling frame. For example, consider a study with a survey and qualitative interviews. The interview participants are selected from the population of participants who responded to the survey. Connecting can occur through sampling regardless of whether the design is explanatory sequential or convergent then the participants sampled based on findings from the analysis design is explanatory sequential. In contrast, the design is convergent if the data collection and analyses occur at the same time for the baseline survey and interviews of all or a subsample of the participants of the survey. A key defining factor in sequential or convergent is how the analysis occurs, either through building or merging, respectively (Hesser, Biber and Johnson, 2016). Integration through *building* occurs when results from one data collection procedure informs the data collection approach of the other procedure, the latter building on the former. Items for inclusion in a survey are built upon previously collected qualitative data that generate hypotheses or identify constructs or language used by research participants and baseline qualitative interviews identified new domains of importance such as gender relations. Integration through merging of data occurs when researchers bring the two databases together for analysis and for comparison. Ideally, at the design phase, researchers develop a plan for collecting both forms of data in a way that will be conducive to merging the databases. For example, if quantitative data are collected with an instrument with a series of scales, qualitative data can be collected using parallel or similar questions. Merging typically occurs after the statistical analysis of the numerical data and qualitative analysis of the textual data. Merging typically occurs after the statistical analysis of the numerical data and qualitative analysis of the textual data. For example, in a multistage mixed methods study (Creswell, 2015). The Approach and Methods are summarised in a tabular form below-:

Approach	Methods
Connecting	Where one data base links to the other through sampling
Building	Where one data base informs the data collection approach of the other
Merging	Where the two data bases are brought together for analysis
Embedding	Where Data Collection and analysis link at multiple points

Table 5.17 Summarised Merging Approaches and Methods

5.10. 1 Merging both methods

The researcher employed convergent sometimes called parallel or concurrent method. The researcher collected both quantitative and qualitative data. Out of the three concurrent mixed methods designs which are (a) Concurrent nested, (b) Concurrent transformative and (c) concurrent triangulation, the researcher opts for the last one which is concurrent triangulation. The reason for employing concurrent triangulation is that it can use both qualitative and quantitative more accurately. The researcher employed the triangulation Design Model which has been employed for the purpose of facilitating validation of data through cross verification from two or more sources. In particular, it refers to the application and combination of several research methods in the study of the same phenomenon.as illustrated below-:

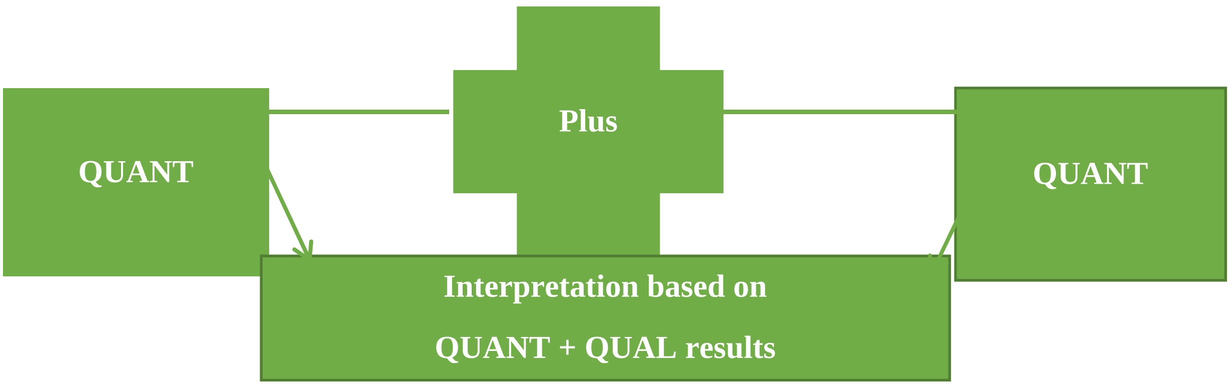


Figure 5.11- Triangulation Design Model- Source Researcher (2017)

The illustration above indicates that the researcher' interpretation is based on both merged both methods given it equal rating.

Design Type	Variants	Timing	Weighting	Mixing	Notation
Triangulation	• Convergence • Data • Validation • Multilevel	Concurrent: Quantitative and Qualitative at the same time	Equal	Data is merged during interpretation or analysis	QUANT + QUAL

Table 5.18- Triangulation Approach Method

The researcher employed the triangulation design procedure because she wanted to implement the qualitative and quantitative method at the same time frame and with the same equal weight. The researcher has employed it because it involves concurrent but separate collection and analysis of data for the researcher to best understand the research problem. The researcher merges the data by bringing separate results together in the interpretation to integrate the two data types during the analysis. The variant employed by the researcher is the convergent model of mixed method triangulation design as it is the traditional model that allows the researcher to collect and analyse quantitative and qualitative data on the same phenomenon. The researcher converges the different result by comparing them during interpretation. The purpose was to validate, confirm and corroborate both quantitative results and qualitative findings with the aim of ending up with well substantiated conclusions about the single phenomenon. As illustrated on the above table, the timing decision employed by the researcher is concurrent since the researcher collected, analysed and interpreted both quantitative and qualitative approximately at the same time. The weighting decision by the researcher indicates equal weighting which means both methods have equal priority in addressing the problem as shown on summary table above. The researcher has opted for pragmatic world view with special focus on equal weighting.

5.10.2 Triangulation from three components of study (Theoretical, Data and Methodological components).

This section attempted to integrate, and triangulate, findings from the three different components of this study. The researcher opted for three types of triangulation where the first option was Theoretical triangulation. The reason for opting theoretical triangulation was understanding theoretical perspective and interpretative frameworks that were adopted. The next option that was employed by researcher was data triangulation because the researcher had collected data from more than one source of respondent group. The third one was methodological triangulation since the researcher had employed more than one methodological approach to collect data which was a mixed method approach. By using an adapted version of the triangulation protocol method as the researcher identified areas of overlapping information, as well as difference in results from the three components.

Although there were no areas of specific disagreements that were identified through their triangulation process. The researcher incorporated entrepreneurial culture analysis; context analysis; individual entrepreneurial skills; qualitative research themes which were processes, resources and entrepreneurial intention.

The researcher further incorporated internal circumstances such as institutional culture; external circumstances such as Education Industry characteristics as well as institutional innovation and innovation on cultural landscape aspect. The researcher however notes that once of the challenges she encountered was the lack and absence of detailed information on how exactly to perform triangulation. The manner in which all these concepts were integrated are illustrated b on the next page. The researcher came up with the process and stages that are detailed below-: whilst employing the self-designed process and steps to be unpacked below-:

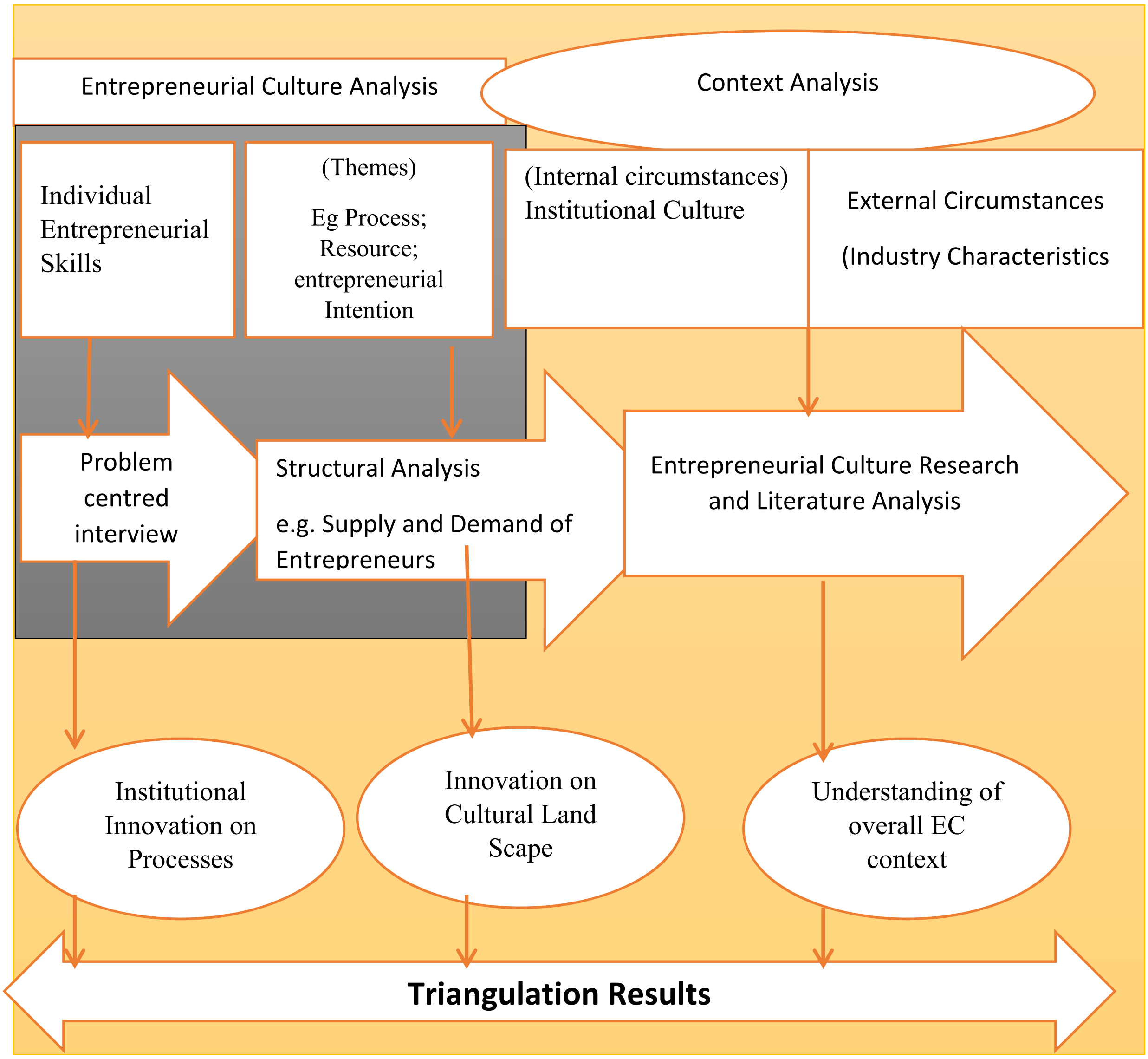


Figure 5.12 Steps and Processes followed- Source: Researcher (2017)

The researcher utilized the theoretical frameworks and perspectives from and adopted a self-designed framework as seen above as her first step. She collected the data collected from both quantitative and qualitative method on the same topic of entrepreneurial culture as a way of ensuring validity. The goal was to understand multiple ways of the data. The researcher then transcribed participants' thoughts and responses into a written format, got some informants to establish if their responses were transcribed correctly. EC in the diagram abbreviates Entrepreneurial Culture. Step three was when the researcher collaborated with an independent evaluator which in this case was one of the head of department in Municipality but without compromising the confidentiality of the participants. The collaboration with the Municipality/government was strategic partnership because upon seeing the results, the researcher collaborated with the municipality to facilitate life skills that incorporated entrepreneurship skills to the youth participants. The way the triangulation took place illustrated in three layers as per illustrated diagram above. The square layers as illustrated in the diagram, the detailed arrow with its content and ovals with its content.

5.11 Conclusion

The results reflect higher representation on student with also the higher representation of Females. The age Frequency distribution of ages between twenty-one and twenty-five revealed the highest frequency distribution of 67.68 percent with the total number of one hundred and seventy-eight of total participants. This is due to the focus of second year students because most of them fall between ages 21 to 25. The Race frequency distribution reflected the representation of 70.34% with the total representation of 185 and the lowest race frequency was for whites with the total presentation of 4. The frequency distribution for occupation indicated that highest frequency of students with the percentage of 97.77% and staff represented 2.23%. This chapter presented the results. The researcher employed mixed method approach. The paradigm and the selected methodology are covered for the execution of the study. The chosen methodology was motivated in terms of its relevance to the research problem. An overview on how the exploratory sequential mixed method procedure was implemented for the gathering and analysis of the data was presented. The chapter also provided information on the population, sample selection, questionnaire both open and open-ended questionnaire instrument design, interview question design and how validity and reliability will be maintained. The elimination of bias was discussed and how it was managed throughout the study. Finally, a discussion on how the ethical stance of the study and its relevance to the progressive stages of the research was presented. The next chapter will present the outcomes of the statistical analysis of the data and discussions linking the theoretical literature foundation to that of the findings.

CHAPTER 6
DISCUSSION

6.1 Introduction

This chapter presents discussion that transpired from both quantitative and qualitative results that was reported on the chapter above. The findings postulate the demographic profile; gender distribution of respondents; faculty profile; racial profile of participants.

6.2 Demographic Profile

Demographic profile is defined as a concept around gathering information on large group of people with the purpose of identifying common trends. To cite a few, it includes race, gender etc. The subheadings below will first describe what is meant by mean rating and later unfold the mean rating on gender, race and faculty.

6.3 Inferential statistics discussion

6.3.1 Positive Correlation

Positive correlation refers to the relationship between two variables move in tandem nature or in the same direction. It tends to take place when one variable increases while the other increases and when one decreases while the other decreases. Pearson's correlation analysis was conducted between the service quality dimensions and their related variables. For each dimension, correlations with their most important variables are reported and the findings.

6.3.2 ANOVA

The researcher employed the unbalanced ANOVA as it allows for normal distribution. The reason for employing the unbalanced ANOVA was due to having different number of participants which were Head of Departments, Deans and Senior Management. The type of ANOVA employed was N-Way Multivariate ANOVA. The reason for employing N-Way Multivariate ANOVA is its ability to examine even IQ scores by gender, age and even coutry symultaneously. ANOVA also assumes the assumption of homogeinity where variance amongst the group should be approximately equal. Assumptions are tested using intellectus statistics. Anova was employed to illustrate whether the created model would be significant or not. It was found that when all the variables were included the model was not significant (p=0.067). After removing many variables, the model found to be significant (p=0.004). This meant that entrepreneurial intentions could be predicted by using only Entrepreneurial Skills

(ES) and innovation variables. Upon realising that entrepreneurial intention could be predicted by only using entrepreneurial skills and innovation variable, the researcher illustrated that diagrammatically and came up with the model which she termed Belligerent Education system model which she believe could best entrepreneurial intention as illustrated below.

6.4. Introduction of Belligerent Entrepreneurial Education Model (BEEM)

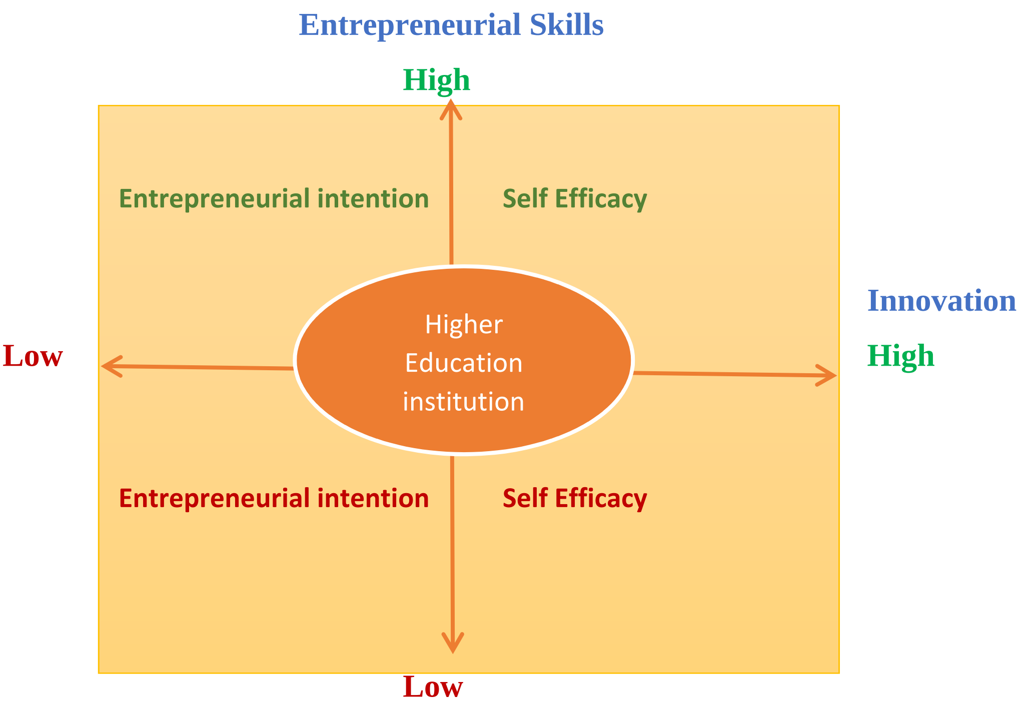


Figure 6.1- belligerent Entrepreneurial Education Model(BEEM) – *Source: Researcher (2017)*

The Diagram illustrated above denotes findings that entrepreneurial education system is expected to consider the important aspects such as entrepreneurial skills and innovation as the key constructs. The diagram illustrates that entrepreneurial skills must increase together with innovation. Entrepreneurial intention and Self-efficacy should accompany these two key constructs which are entrepreneurial skills and innovation. What is even more interesting about any skill is that it is unlike a talent that an individual is born with, a skill is acquired. That is where a higher education institution will serve as a common denominator as illustrated as circle in the diagram where the higher education institution is at the centre of it all. The expectation and assumption from the higher education institution is that it must incorporate the practical environment that is on-going and not the one to pass the learner for his or her qualification (Abaho, Olomi, and Urassa, 2015).

The researcher is introducing the type of education that she terms belligerent Entrepreneurial Education Model (BEEM) that will be hostile and aggressive but for the benefit of the learner. The researcher visualises that type of education as an education that will bring sleepless nights to the graduate who wants to add to the pool of unemployed graduates. Such type of education will make him or her think of continuing with what he pursued at the higher education institution as opposed to folding and contemplate on being unemployed.

6.5. Synopsis on Likert scale for Discussion

The synopsis below has been illustrated to assist to refer some of the key findings to it as source of reference. It indicates how the participants responded each question.

Objective One	To develop a framework/model with the intention to meet test of theory which are -:***functional significance*** which is usefulness in helping people to understand entrepreneurial culture; ***Comprehensiveness*** that entails embracement of the range of diversity of phenomena; **Verifiability** that entails logicality of concepts; ***Parsimony*** that encompasses the economic aspects of explaining events; ***Internal consistency*** where model/theory must not contradict itself but should account for things internally in a consistent way within a given set of assumptions, ***Heuristic Value*** where theory model or theory should stimulate further research

		Agree-1	Strongly Disagree-2	Unsure-3	Disagree-4	Strongly Agree-5
1	I know that I have a right to education	263	0	0	0	0
2	I believe South African Education gives/ gave me the practical skills required for the world of work	7	230	14	11	1
3	When I grew up I had always considered of being a professional employee	213	11	22	14	3

4	The qualification I am doing/ I hold has always been my dream qualification	32	203	6	13	9
5	My future lies to the security of my job	78	14	3	7	161
6	My education will lead/ has led me to employment prospect	23	177	11	51	8
7	I believe government has a responsibility to create job opportunities	111	19	6	11	116
8	I always want to work for the best performing institution	114	7	4	9	129
9	My family future lies on the success of their business	5	138	31	92	4
10	Environment is not conducive for me to start up business	111	3	16	12	121
11	When I grew up I had a dream company to work for	99	5	31	6	122
12	I have an insight of how to draw a business plan	21	151	12	55	24
13	I see myself starting the company with all benefits for my employees	12	129	41	74	7
14	I am familiar with local economic Development aspects in relation to business start-ups	6	115	26	101	15
15	I wish my family can get the best job for our betterment	84	5	3	8	163

Table 6.1 Synopsis on Likert scale for discussion- Objective 1

Question one of objective one which was *"I know that I have a right to education"* required respondents to indicate their level of agreement. The results reflected in objective one according to question one indicated that the total number of 263 participants agree that they have a right to education. This statistic indicates an indication of entitlement which according to the researcher's observation is also orchestrated by the current government. The researcher premised this observation from the statement made by the South African President Jacob Zuma in December 2017 where he announces free education when the universities are expected to produce the self-sufficient graduates who should know that they need to contribute meaningfully to their country. According to the Times Live, dated 19 December 2017, Universities of South Africa (USAF), through spokesperson Professor Bawa, indicated that they were annoyed that they were not consulted before the decision was made and they needed at least one year to go through the strategy and implement. The universities were further hoping for sustainability with delivery mode that would work. The researcher cited this because one of the key aspects of her study results was to see the alliance of universities- government and industries working together to towards the model and framework that would assist students in having the entrepreneurial culture mentality. It was disturbing to the researcher to see this gab of communication concern. That seemed to be fascinating because the commission report that had been received in 30 August 2017 recommended that government should increase Block funding to the Post School Education and Training Sector (PSET) thereby increasing government expenditure by 1% of the GDP on Higher Education and Training, paying attention on Technical and Vocational Education and Training colleges since they cannot perform at their current funding levels.

The Commission further recommended the funding of universities through a cost sharing model with the involvement of banks and students where banks would issue government guaranteed loans that would be payable by students upon graduation and attainment of income threshold. Such disintegrated communication urges the researcher to design model and framework where this tripartite alliance will work together towards instilling entrepreneurial culture producing students who feel the urge to unleash parsimony that will explain the sequence of events that through synergy that will produce self-sufficient students. Such Model and Framework would trigger and stimulate further research on the future level of impact on future graduates produced (USAF, 2017; Times Live, 2017). What is even more interesting is that according to the Commission of Enquiry Fees must Fall report(Commission of Enquiry report to Higher education and Training, it is cited that Higher education plays a central role in the social, cultural and economic development of modern societies, yet the decision by the President versus lack of communication cited by Professor Ahmed Bawa speaks volumes on whether the universities play central roles if they feel they were not consulted(Commission of Enquiry Report to Higher education and Training, 2016).

Objective Two	**To contribute towards meaningful education that is meant to instill entrepreneurial culture with the purpose of driving self-reliance, self-dependence as well as profit driving mentality**					
		Agree-1	**Strongly Disagree-2**	**Unsure-3**	**Disagree-4**	**Strongly Agree-5**
1	The environment is conducive for me to display my talent	63	89	33	71	7
2	My family future lies on my job security	85	5	4	6	170
3	One or more of my family members own a business	6	177	0	76	4
4	I have a business Idea but do not have facilities to realize it	39	51	159	10	4
5	I believe government must provide employment opportunities	116	11	4	6	126
6	I am doing/ I did this qualification because I could not meet minimum requirements/ it was full in my initial dream qualification	90	21	18	21	113
7	I feel there are other ways of forcing the government to ensure I get grant/housing	97	11	11	12	132
8	My future lies on the success of my business	4	139	32	84	4
9	I have plans to own a business in the next three years	16	157	76	8	6
10	I would like to work for the company with all benefits	114	7	7	0	135
11	I know of / I am a student who has a registered and active	3	158	41	57	4

	business that is more two years or more					
12	The knowledge I have is sufficient for me to start up my new business	4	136	45	72	6
13	South Africa has enough entrepreneurs and there is no more need for new entrants	0	233	0	30	0
14	I have the person mentoring me towards business start-up	2	206	0	51	4
15	I believe instilling entrepreneurial culture in Tertiary institutions would yield positive results for the South African Economy	79	9	26	3	146

Table 6.2 Synopsis on Likert scale for discussion- Objective 2

Question two of objective two which was *"My family future lies on my job security"* required participants to voice their level of response as per five point Likert scales. The score indicated the total number of 170 participants who strongly agree that their family future lies on job security of their families. This is urgent since graduate unemployment has increased over time. It is important to improve the understanding of the reason for this phenomenon. In addition to the statistics highlighted, graduate unemployment is also an important area of study because theory suggests that the South African economy experiences severe skills shortages, whilst the economy is unable to generate sufficient job opportunities for graduates. This seems to contradict studies suggesting that the higher a participant's education level, the higher the probability of finding employment (Oosthuizen, 2005). It is therefore important to identify the necessary requirements for graduates to become employed This instils further drive to objective two citing to contribute towards meaningful education that is meant to instil entrepreneurial culture with the purpose of driving self-reliance, self-dependence as well as profit driving mentality. Such objective could be achieved if the institutions by enforcing the *"Learning by Doing, Selling, and Earning" aspects* which gives students hands-on experience in operating on-campus microenterprises. Students learn not only how to produce efficiently but also how to package, sell, and market their products while gaining exposure to real world market pressures. Such practice will in return drive the profit mentality leading to self-sustainability of students (Altbeker and Storme, 2013).

Objective Three	To support students with teaching, learning and education tools and support that will help them for the establishment of businesses from small to medium size					
		Agree-1	**Strongly disagree-2**	**Unsure-3**	**Disagree-4**	**Strongly Agree-5**
1	I feel there is adequate integration between business sectors, government and post matric institutions	32	177	26	21	7
2	I know/knew what I want/ wanted to be during foundation and it is still according to initial plan	12	143	65	27	16
3	I believe Industries must provide employment opportunities	81	27	32	6	117
4	I believe South African Education gives/gave me adequate entrepreneurial skills	3	186	21	39	14
5	I am entitled to government grants or NSFAS	64	11	9	3	176
6	I believe I have a way of helping government towards provision of education	46	20	138	6	53
7	I have a way of surviving if what I am currently doing fails	48	34	152	21	8
8	I have considered to start my registered business	24	21	151	55	12
9	I regard myself as a self-starter	44	8	137	5	69

10	My family future lies on the security of their employment	94	11	14	6	138
11	I know/ have a relative who finished tertiary and started business without getting employed first	3	193	9	54	4
12	There has been registered business in my family	9	188	0	59	7
13	I regard it as a right to receive government grant/education	4	0	0	0	259
14	I believe in the possibility of free education	96	21	11	14	119
15	I believe I have something to offer towards reducing unemployment	29	161	40	27	6

Table 6.3 Synopsis on Likert scale for discussion- Objective 3

Question four of objective three required participants to indicate their level of response *on "I believe South African Education gives/gave me adequate entrepreneurial skills"*. The scores indicated a total number of 186 students who strongly disagree that the South African education system gives them adequate entrepreneurial skills. The objective three was to support students with teaching, learning and education tools and support that will help them for the establishment of businesses from small to medium size. This statistic warrants the researcher boldness on creating awareness to stakeholders to interrogate the current education system and to work together towards encouragement of collaboration of emphasising programmes promoting entrepreneurial culture to students as opposed to employability culture. Such need is alluded by the high number of unemployed graduates produced who are not considering any business concepts besides believing that one day they will be employed and change their current state together with the state of their families. Question 12 of this objective reveals the total number of 188 participants who indicate the total disagreement indicating that there is no one with the registered businesses within their families. Working together towards promotion and instilling of entrepreneurial culture is bound to improve this number where this response might turn to strongly agree since the drive of opening businesses will take place whilst they are still students. This will even reduce the total number of 161 as indicated in question 15 for those who strongly disagree that they can have something to offer towards reducing unemployment and level of entitlement will be reduced as well.

Objective Four	To unleash within students, the potential of creating manpower through establishment of business from small to medium size and other job opportunities incorporated with risk management and uncertainty bearing information when managing their businesses					
		Agre-1	Strongly Disagree-2	Unsure-3	Disagree-4	Strongly Agree-5
1	I have a business idea that can sustain my community/family	35	71	101	23	33
2	I know about the scarce skills of South African Country	27	42	132	51	11
3	I am familiar with National Skills Development strategy	19	147	75	15	7
4	I feel it is the responsibility of the government to alleviate poverty and unemployment	73	31	21	26	112
5	I do not know about scarce and critical skills of South Africa	51	116	50	30	16
6	I believe I must provide employment opportunities	24	124	32	56	27
7	I believe I must provide employment opportunities	21	126	30	54	32
8	My family future lies on the success of their business	21	172	8	6	56
9	My family can/ does survive without government subsidy	65	132	13	21	32
10	When I grew up I had always considered to be my self-employer	11	134	28	63	27

11	I know of the tertiary institutions with Business Plan Competition	5	163	37	48	17
12	The knowledge I have will sustain or /sustains me for the best future employment top position e.g. MD or CEO, Principal, HOD	38	51	126	34	14
13	I believe entrepreneurship is for people who are doing business studies	86	31	22	53	71
14	I may have some impediments in opening registered business	94	13	41	26	89
15	I have no one mentoring me towards business start-up	90	23	0	31	119
16	I do not see any difficulties in opening new business	11	134	46	60	12

Table 6.4 Synopsis on Likert scale for discussion- Objective 4

Question 11 which is objective four which is "*I know of the tertiary institutions with Business Plan Competition*" required the participants to state their responses. The scores indicated a total number of 163 participants who strongly disagree that they know of any tertiary institution that has business plan competition. Objective four of this study was to unleash within students, the potential of creating manpower through establishment of business from small to medium size and other job opportunities incorporated with risk management and uncertainty bearing information when managing their businesses.

Participation in a business plan/pitch competition forces participants to think critically about each and every aspect of their prospective companies. The value of their technology, their target market and its size, the competitors, key milestones, the strength of their management team, and their financial projections. The lack of business competitions in institutions deprives them of innovation paths, working towards goals whilst discovering their potentials, Multiple points of feedbacks through critiquing of their models, connections from stakeholder experts, Social proof of the student ability of being a self-starter; Understanding of how the whole industry and company works; presentation skills; decision making and trade-offs as well as understanding finance especially because South Africans are known to be more spenders as opposed to being savers or investors.

6.5.1 Role played by tertiary institutions in promoting entrepreneurial culture

Findings revealed that no matter how hard the tertiary institution tries and would like to pioneer promotion of entrepreneurial culture, they cannot do it alone. Main aspect particularly depicted from open ended responses with Deans, Head of Departments and Management revealed that a huge percentage of this cluster has an insight of entrepreneurial culture. But one may argue the difference between having an insight and having the practical side of entrepreneurship. The next question to be posed following these findings is how one pioneers something without first-hand information. This is traced from the tertiary education systems which the pioneers received from their previous tertiary institutions were moulding them for employability purpose (See open ended questionnaire responses). The whole system of teacher development, education and training as well as curriculum brings injustice to world view expectation of reducing employment, poverty and expectation of quality management towards instilling entrepreneurial culture (See Question 1 of open ended questions response).

Even Likert scale total responses from students attest on the teething education system. This is traced from 230 students out of a total number of 263 who strongly disagree that South African Education system provides them with the practical skills required in the world of work. That is huge percentage of 85% who attested.

This is also drawn from their response of 230 where they strongly disagreed when responding on whether their education will lead them or has led them to employment prospect. This is a percentage of 65.55% who are in tertiary but now uncertain about both employability and education system. One can also attest to their uncertainty as many graduates are neither employed or own their businesses (as per Question 2 of objective 1 and Question 6 of objective one under Students summary response).

6.5.2 Subjective norms and cultural aspects affecting and or interfering with promotion of entrepreneurial culture

Findings from open ended question responses reveal that there is either little that is done about entrepreneurial culture, and some believe it does exist but there are no tangible results that contribute to the economy. The findings attribute this to system once more that strives towards producing employable graduates when there are limited numbers of jobs in South Africa. Some respondents feel there is disconnection between entrepreneurial culture and education (Refer to Question 7 of open ended questions which is -*What is your comment regarding South African education in relation to entrepreneurial culture?*

The open-ended responses in Question 6 where the participants were asked if they do plan to have business in the next three years indicate the norm and institutional culture. These students are led and lectured by people where most of them respond by saying they are not planning to have their business in the next three years. Another question that may be posed is how one expects participants who are not planning to have their business to drive entrepreneurial culture.

The Likert scale response also attest to the norm and culture students are exposed to. Question 12 of objective 3 findings indicate the response of 188 participants out of 263 who strongly disagrees when asked if there has been a registered business in the family and a total number of 66 who disagree. In percentage 69.63% strongly disagree and 24% still add to disagree.

Findings are further justified in Question 11 of objective three Likert scale questions where participants are asked if they have a relative who started business without getting employed first. A total number of 193 strongly disagree and 61 disagree. That is a percentage of 71.48% who do not know of any person who started business straight from school without getting employed first.

6.5.3 Support needed by tertiary institutions from community and government to promote entrepreneurial culture

Findings indicate that tertiary institutions are in dire need of funding which they expect to come from government and businesses where possible. The respondents also emphasise on the aspect of collaboration as the key (See Question 2 of an open-ended questionnaire).

6.5.4 Level of entrepreneurial intention and attitude perceived in becoming entrepreneur and findings on level of entitlement

Findings on open ended questionnaire indicate that participants who are custodians of transferring knowledge have low level of entrepreneurial intention themselves. This is witnessed by their response in Question 8 of the open-ended questionnaire where they are asked if they foresee any challenges that can hinder them from starting their own businesses. Some cite finance, their full-time employment jobs; some do not even have business idea. According to the response in question 8 only one has an existing business and it is in an inception stage.

When translated in to percentage it is 1/6 or 16 % that has a business which is at an inception stage and 83.33% do not have entrepreneurial intention but ironical must transfer knowledge on entrepreneurial culture.

Findings on Question 10 of the open-ended questionnaire which is, "*Which is more beneficial between self-employment and being employed-why*" revealed that most participants believe in being employed by an institution as opposed to self-employment. When they were asked which is more beneficial between self-employment and being employed and why? They cited the following aspects-:

That self-employment business is doomed to fail if one does not have high level of self-efficacy;

There are benefits if one is working for a reputable company;

Security that is on the job when being employed and the shifting of risk to the employer;

There is security to the dependence in case of unforeseen circumstance such as death.

There is a risk of not being able to differentiate between being an entrepreneur and being a tenderpreneur.

They mentioned the fear of the unknown such as the business lifespan of from six months to three years at most.

Findings on Question 13 of the open-Ended Questionnaire which could be read as *"Would you advise an individual to start a business whilst schooling, or finish school first or to simple follow his business passion and not go to school? Elaborate"* further indicated that these participants would advise that students start by going to school before opening business. One out of six cited that not all learners are gifted at school. Those who are not gifted at school, their talent must be identified and be nurtured.

Findings on Likert scale questionnaire Question 9 of objective one which was *"My family future lies on the success of their business"* indicated that 138 pouts of 263 participants strongly disagree when they were asked to respond on the question stating that their family future lies on the success of family business. A total number of 92 participants disagree on the same question too.

Question 10 of objective one, 128 out of 263 participants strongly agree that environment for starting up a business is not conducive for them. 111 agree that environment is not conducive for them. When translated to percentage, 47.40% strongly agree that environment is not conducive for them to start up a business 41.11% agree that environment is not conducive for them to start a business.

6.6 Conclusion

Entrepreneurial Skills and Innovation have indicated positive correlation because entrepreneurial skills are increasing, Innovation increases with entrepreneurial skills. The key findings prompted the researcher to introduce the model called belligerent entrepreneurial education model (BEEM). It is however note that there is a risk of not being able to differentiate between being an entrepreneur and being a tenderpreneur. It became clear that that self-employment business is doomed to fail if one doesn't have high level of self-efficacy. There is a need for strong emphasis on support needed by tertiary institutions from community and government to promote entrepreneurial culture as not one alliance can do it alone out of these alliance. It should however be emphasised that higher education institution should pioneer entrepreneurial culture as they are custodians of knowledge and one of the key pillars of assist government to achieve economic objectives through the kind of students they are breeding in the academic fraternity.

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CHAPTER 7
RECOMMENDATIONS CONCLUSION

7.1 Introduction

This chapter considers the overview of the whole study with special reference on what transpired under findings and discussion and thereafter unfold the recommendations and conclusion of the study.

The study postulates that subjective norms and cultural aspects have a role that they play which interferes with promotion of entrepreneurial culture in a South African Higher Education Institution. The study also unpacked the importance of attitude, level of entrepreneurial intention as well as self-efficacy that affect and influence the decision making in becoming an entrepreneur. The study also revealed the positive correlation between entitlement and entrepreneurial intention. In a ground level understanding, it is not easy for the person who feels the world or government, or parents owe him or her something to have entrepreneurial mentality. The mentality that reigning in his head is that government, parent or even the world sometimes must fulfill the closure and gap in his or her life. The study revealed the importance role to be played by tertiary institutions where the researcher came up with the model which she termed *belligerent education system* with the belief that it will be an aggressive education system model that will cause sleepless night to the unemployed graduate or to the student who is towards completion of his or her degree. This ideal model is perceived to create the mentality of thinking what to contribute to the economic system as opposed to what the economy can contribute, what to contribute to the education system as opposed to what education system will contribute to the individual. The section below will cover the recommendations that explore most of the avenues that may have direct or indirect impact on towards entrepreneurial culture.

7.2 Recommendations

This part of the chapter covers recommendations that transpired after findings for this study. Each recommendation has been given subheading. Subheadings that will follow for each recommendation are outlined as follows-:

- Recommendation in relation to integration of National Strategic Plan to entrepreneurial culture

- Recommendation in relation HR Practitioners and Performance Management
- Recommendations in relation to an entrepreneurial culture within a South African Higher Education
- Recommendation in relation to Radical Economic Transformation;
- Recommendation in relation to entitlement versus Narcissism and;
- Recommendation in relation to gatekeepers' cooperation

7.2.1 Integration of National Strategic Plan to entrepreneurial culture

National Culture normally tends to be the biggest risk whist having high level of avoidance in terms of visitation. The first question that needs to be answered is how the country or the state can improve or instil entrepreneurial culture, and then all other parts will fall and will buy into national strategic plan. Governments can foster a culture of entrepreneurship by getting foreign entrepreneurs to relocate temporarily to their country. This is evidenced by what the Chilean government aimed to do when it launched Start-Up Chile in 2010. By July 2015 more than 200,000 Chileans had benefited from workshops hosted by participants. The idea is to help diversify an economy largely dependent on mining and to get Chileans to think globally and to collaborate more with one another. In addition, over 1 200 start-ups from 72 countries had taken part in the programme, through 13 rounds, with the government having spent more than $40 million. Participants coming out of the programme raised over $100 million and had created more than 1,500 jobs (GEM, 2015).

The second important point which also worked for Chillians is making company registration easier. This is also evidenced in Gem report that it worked for them. Despite a slowdown in the Chilean economy, the number of new company registrations continues to increase (registrations grew by 4.3% in July 2015 compared to the same month in 2014). This follows the launch by the Chilean government in 2013 of an online platform (www.tuempresaenundia.cl) that allows individuals to register a business in Chile for free and takes just a single day to conclude. In the year to the end of July 2015, two-thirds of new registrations were conducted through the platform. Previously, if an entrepreneur wanted to start a business in Chile, it would take about eight days and cost more than $500.

There is a recommendation that would be increasing tax net which worked for Brazilians. Brazil has been able to substantially increase tax collections under a small business tax bill called Simples Nacional. Simples Nacional refers to simplified taxation system designed for small Brazilian businesses. A further tax dispensation for one-man businesses, called Micro Empreendedor (adventurous or pushy) Individual, has helped to increase the number of small business registrations, despite Brazil entering a recession in 2015. Tax collected under an initiative which offers certain small and micro firms a reduced tax rate climbed almost 7% in the first half of 2015 compared to the same period last year. In addition, small and micro firms added a further 116 500 jobs between January and May 1, 2015. The economy also shrunk during this period and unemployment having edged up. In 2014 new rules for Simples were promulgated, greatly expanding those categories of businesses with an annual turnover of up to $3.6million ($0.9million) that can benefit from this tax reform. In 2015, more than 10 million businesses subscribed to the Simples tax system. A further 450 000 companies applied to join the new tax initiative in the months following the enactment. The figure is double the average number of firms that usually enter the special tax system per year. A key focus in South Africa's development strategies should be to facilitate growth that is sustainable and inclusive to generate widespread employment and to reduce poverty (Felipe, Vitoria and Santos, 2017).

The potential of the SME sector to create job opportunities is therefore regarded as the crucial factor. South Africa should instil accountability through being answerable to GEM. South Africa should be able to respond to GEM on how many entrepreneurs per province and metropolitan they currently have and expect to have in the next five years. That will indicate commitment to growth expectations. According to 2015 GEM report, South African growth potential had not yet been tested. It is however noted that businesses that do not aspire to grow are significantly less likely to do so successfully. This recommendation includes engagements in interventions aimed at easy access of both the banking and the non-banking systems which worked for the Malaysian government, hence it has been able to ensure that SMEs have relatively good access to finance. Such is evidenced by share of loans, SME financing increased from 30% to over 41% of total outstanding business financing between 1999 and 2011. Today the country is ranked by the World Bank and others as one of the world's leading countries when it comes to access to finance. Over the years, the Malaysian government has carried out several initiatives to improve SMEs' access to credit. These include: The setting up of a credit guarantee scheme (CGC) by the Reserve Bank in which banks were initially mandated via legislation to meet minimum targets of net credit lent to SMEs between three and 12% of net lending). A credit guarantee provides risk protection to a lender in case of default by the borrower. The guarantor, typically in return for a fee, commits himself to repay the loan to the lender, in case of the borrower's default. The design of this triangular relationship depends on a number of parameters, the most important being the distribution of risk between guarantor and lender. Credit guarantees are used in many developed and developing economies to alleviate the constraints faced by Small- and Medium-sized Enterprises (SMEs) and mid-caps in accessing finance caused by a lack of collateral and information asymmetries, the so-called SME financing gap The establishment of the SME Credit Bureau by CGC in 2008 to assist SMEs to enhance their credit standing, to facilitate easier access to financing. By the end of 2012, the bureau had issued over 800 000 credit reports and rated over 400 000 SME partnering with the private sector to promote venture capital investments has also played a vital role. CGSs operate in many developed and developing economies to alleviate the constraints faced by SMEs and mid-caps in accessing finance, the so-called SME financing gap. In August 2015 Malaysia became one of the first emerging economies to allow equity crowd-funding, when rules came into effect. The Malaysian law allows individuals to invest between 500 and 5 000 ringgits in funds held by peer-to-peer lenders. GEM 2015 research findings indicated that that access to finance is a key problem is a common feature of research on problems facing all entrepreneurs and is apparent in research done in both developed and developing countries (Chatzouz, Gereben, Lang and Torfs, 2017).

Comments from the participant who formed part of GEM research regarding to access to finance as a constraint include: Most government funding for entrepreneurship is aimed at previously disadvantaged individuals. While there is a need to support these entrepreneurs, there is a whole segment of potential entrepreneurs who are completely dis-intermediated from the funding landscape available to SMEs. As one expert, oneself an entrepreneur notes, through the businesses have been established, some entrepreneurs pride themselves that over the past three years they now employ more than 75 staff who have secure employment and get good training. Most of these staff had never had a job previously and had little hope of securing one. Yet for entrepreneurs to collectively achieve this which is very beneficial to the economy there is a feeling of involving government every step of the way instead of being aided in any way.
The following have cited as impediments of succeeding of entrepreneurs as outlined below-: (a) inadequate start-up funds are available for activities, such as business plan development, business viability assessments and prototype development. (b)Too many funding organizations are managed by bureaucrats and have requirements that inhibit access to the funding for many potential entrepreneurs. (c) Many entrepreneurs do not know who to approach to obtain finance for their businesses. In addition, they have no idea of the criteria on which funders will assess

their business/business idea and therefore are disadvantaged in terms of presenting viable funding proposals. (d) Funding programmers are often not well administered, with a waste of the funds and lack of accountability on the part of the entrepreneurs. The most challenging task is alignment of the entrepreneurship strategy with the broader private sector development agenda. Those responsible for assessing funding applications or providing support to entrepreneurs are often inexperienced in the field. (e) Investors and funders in South Africa are too risk averse. The banking sector, while being advanced and sophisticated, is particularly risk-averse and often doesn't lend to new or smaller companies. State-owned banks and funders have also come under pressure to be self-sustaining and make a profit, which has put more stress on these organizations, making them also increasingly risk-averse. With public funding institutions using the same risk matrix as banks, entrepreneurs face similar resistance across the board. (f) Large banks tend to be security-based lenders (including salary slips) making it more attractive to seek formal sector employment if one wants a car, house, or consumption loan. (g) Almost, all financial institutions require loans to be secured by physical property, which means that most entrepreneurs cannot access finance from this source. This recommendation is that the South African government need to revisit the challenge of entitlement from South Africans since the research indicates that low level of entrepreneurial culture is heavily influenced by a sense of entitlement and an over-reliance on government, rather than individuals using their own initiative to start businesses. One expert notes, Entrepreneurship or self-employment is not aspirational in some of the dominant cultures. This is witnessed and evidence by people burning infrastructure that will help them because they feel they are entitled to free housing, free education, grants. Less has been instilled by government to educate them on owning government infrastructure and ways of sustaining and contributing towards maintaining it. People no longer believe hard work leads to success, but instead are looking for quick wins (GEM, 2015).

This recommendation is that South African Government needs to implement an award-winning procurement since it worked for South Korean government. Setting up an award-winning e-procurement portal South Korea has been able to significantly increase the share of SMEs among companies participating in state procurement, while cutting the cost and time to do business with government. Between 2003 and 2012, the share of contracts awarded to SMEs increased from 55% to 75% of all contracts. While making bidding more transparent, the portal saves the government about $8 billion in transaction costs annually and has cut the bid process from an average of 30 hours to just two hours. This recommendation, like Slovenia government, South Africa needs to devise strategies and campaigns of doing away with red tape. Slovenia's government has been able to steadily improve the country's business environment through a red-tape reduction campaign called Stop the Bureaucracy. In 2013 the World Bank found that among European countries, Slovenia had made considerable progress in SMME development by simplifying business procedures in the five years before this. During Business report in 2016, the country was ranked as the 18th easiest country in which to run a business by the World Bank, up from 98th in 2007. The establishment of one-stop shops (alongside an electronica portal e-VEM: (evem.gov.si) in 2008 to assist business owners to register their businesses. (i)The simplification of the tax process for small firms from 14 forms to just two forms (ii) the drafting of a handbook to help guide civil servants when preparing regulations. It also outlines how one can prepare impact assessments on proposed laws. (iii) The launch of a web portal (eugo.gov.si) in 2012 to offer comprehensive information on business in Slovenia (iv)The adoption in 2013 by the government of a single document containing commitments and implementation deadlines to reducing red tape. The document includes more than 260 concrete measures. These include addressing work permits, easing building plan legislation, putting in place e-procurement and improving bankruptcy laws. An inter-ministerial working group, led by the Minister of Public Administration and the minister responsible for the economy, was also set up and the government is kept updated three times a year on what progress is made. (v) In 2014, in all 64, or a quarter of the measures proposed for that year was implemented, while a further 104 measures (41%) were in various stages of implementation. A third of the proposed measures were unrealized. (vi)In 2015, the government began piloting the Business SOS portal (www.poslovnisos.gov.si) which allows businesses to report problems, which they are faced with when dealing with state researcher, local bodies and statutory researcher.

They are entitled to receive a written explanation from the researchers within 15 days. This recommendation is that policing of competition laws needs to be strengthened so that large businesses are not able to squeeze out smaller competition. This recommendation is that people of South Africa need to hear less of corruption from media so that it will be easier for them to believe when they are informed of the low economy performance and hence limited resources to supporting of entrepreneurial culture. Such can be addressed through serious penalties such as serious lengthy jail time. The country needs an effective justice system to prosecute quickly and effectively. Powel (2011) presented the following seven essential elements that demonstrate solid and purposeful Quality Control (QC) as follows:

- ✓ **Consistence:** QC is usually destroyed by any appearance to have double standards values serve as an anchor and reference point for those difficult circumstances. People may not always like it, but they will appreciate knowing where things stand and not some ambiguous idea built in the spur of the moment.
- ✓ **Useful**: Institutional culture must be of use relative to its mission and vision. If not, it will be received for what is manipulation and micro-management under the innocuous banner of culture. People know what a farce is and accord it minimalist attitude devoid of productivity. Micro-managing people will force you to continue to do so to accomplish anything.
- ✓ **Learning:** People want to know that you care and by developing them professionally, are assured that QC not only supports, but champions learning and development. Learning environment leaves room for mistakes and errors without the fear of being chastised unnecessarily. Honest mistakes happen, and a learning environment reduces stress of making them. Less stress means more productivity; fewer health issues usually translate into less absenteeism.
- ✓ **Truthful:** No matter what past experiences, people want and can handle the truth. It is offensive and insulting to be treated with kiddie gloves under the assumption one is not educated enough or mature enough to hear the truth. Many innovative solutions can be developed when the truth is consistently shared throughout the organization.
- ✓ **Utilitarian;** No matter what is in place, there will always be those who choose to operate on the fringes. Make sure that the overall Management and Head of Department of institutional values and culture support the largest majority. There may be an occasional opportunity to make special concessions if habitual naysayers are not allowed to contort how QC is developed. Culture acts as a governance of a community based on commonly accepted behaviours. There will always be those who feel they should be able to operate outside these boundaries and these will be dealt with accordingly.
- ✓ **Respectful:** Conflict will always occur. There is no way to avoid differences, nor should you try. Everything can be dealt with via the lens of respect. Respect does not automatically mean compromise or common ground must rule the day. A respectful. Dialog can take place for the sake of understanding the position of another.
- ✓ **Empowerment**: Let people explore their creativity. Give them the freedom to be autonomous. Empowered people make positive changes. Sure, you will have a few irresponsible persons but that is the price of progress. Do not let the irresponsible ones

diminish the opportunity to experience the successes. Shafty (2012) expounds on this by outlining five main ingredients for developing QC as:

- A mentality of “we are all in this together” (the institution, suppliers, and customers). The institution is not just the buildings, assets, and employees, but also clients, customers and suppliers. The goal is consistently to ensure a win-win situation for all parties.
- Open, honest communication is vital. An important way to encourage truth-telling is through creating a culture where people listen to one another. This is a culture where open as well as honest communication is understood as necessary for people to function best.
- Information accessibility: Information accessibility is at the heart of the work we do. Leaders should be open about sharing information on the institution company’s strategic goals because this information provides direction for what will be done next and more importantly direction for how to improve focus on processes where everyone moves away from a "blame the person" mentality to a "blame the process and let's fix it" approach to problems and challenges.

7.2.2 Recommendation in relation to Performance Management

Ranjan (2017) cites the importance of integrated function of human resources development as key aspect to success of any organisation. For this study the focus will be limited to performance management as recommendation to success towards instilling entrepreneurial culture. Performance management is one of the key wing of organisational success and behaviour. Success of any organisation starts with a sound performance management system which has also worked well for Barclays as it is **drilled in each staff member** in any gatherings be it training/workshops and in each will which will address the following-:

The Purpose: of Why DUT exists? - That means aspiring single minded institutional Management and Head of Department to staff, stakeholder where all of them understand strategic themes

- To improve the life chances and aspiration of students, helping them to reach their maximum potential;
- Contributing to *building safety* society by addressing poverty reduction through food security, health security, energy security, safety building, culture of non-violence and peace.; *learning society; busy society and playing society* but all evolving around student centeredness

It should be noted that the purpose is too long to comprehend, and the researcher had to shorten it by taking key concepts
Vision: Where DUT wants to be: like this DUT aspires to be preeminent what separates it from other Higher learning institution? The vision stated for DUT is -: *To be a preferred university for developing leadership in technology and productive citizenship.*
Mission: What institutional achievement does DUT want to accomplish? The mission for the DUT is to excel through: • *A teaching and learning environment that values and supports the university community.* • *Promoting excellence in learning and teaching, technology transfer and applied research.* • *External engagement that promotes innovation and entrepreneurship through collaboration and partnership* That can be achieved by ensuring the following-: • Building on diversification whilst driving collaboration between institutional units • Each institutional unit puts clients first (both internal and external clients) where they will feel superior experience • Encouragement of innovation and agility of taking advantage of growth opportunities • Encourage a challenging, yet rewarding environment to work at. • Strive to be leading transformation • Offer World Class Service to stakeholders
Strategic Themes/ Priorities: What are they? (Not only known to the senior people, everyone must know how he is contributing strategically and must know the damage of breaking the chain
Institutional/ Business Plan: Where strategic themes are translated into actions
Specific Priorities: CSMART objectives: Where everyone knows what DUT is aiming to achieve through the performance development process where the team leader for each department will create certainty about what is expected from each staff member by agreeing with performance objectives with staff member. Performance objectives should be agreed upon close to the start of each new business year. Role profile will direct staff member in terms of his/her -: • Accountability

- Expected Output
- Qualifications and Experience
- Training and on-going coaching as well as coaching needs to effectively deliver as per expected outcome/ output as cited by McCaffery (2010:217) that coach is about helping others to help themselves through discussion, guidance, encouragement, observation and assessment. Or art of facilitating performance and development of others.

The above-mentioned process will instill formal discipline as there will be on-going feedback and corrective measure and *Performance Acceleration Programmes (PAP)* for non-performance that will be known during the beginning of each year and recognition in the form of rating, be it from A for best performance and D for non-Performance which may lead to dismissal after PAP if persistent.

DUT Growth Charter: Where DUT commits to the development of its people as follows

- You(Employee) have a right to question the way company X does things and have responsibility to propose constructive changes and improvement
- You have a right to voice out your opinion and differ from others and have the responsibility to address the issue and not the person
- You have a right to ask for feedback, information and support. You have a responsibility to share information give feedback and support.
- You have a right to explore and experiment with new ways of doing things. You have a responsibility to exhibit good judgment and not to expose DUT to reckless action
- You have a right to participate in learning opportunities as dictated by budget. You have a responsibility to ensure your own growth and to apply your knowledge and skills in the best interest of company X (Gumede, 2014)

Below are the designed slides which DUT may utilize to create awareness on the performance management system as McCaffery (2010: 303) states that leadership qualities need to be tapped at all levels by harnessing the skills and knowledge within the institution.

INSTITUTION X PERFORMANCE MANAGEMENT SYSTEM

HUMAN ASSETS

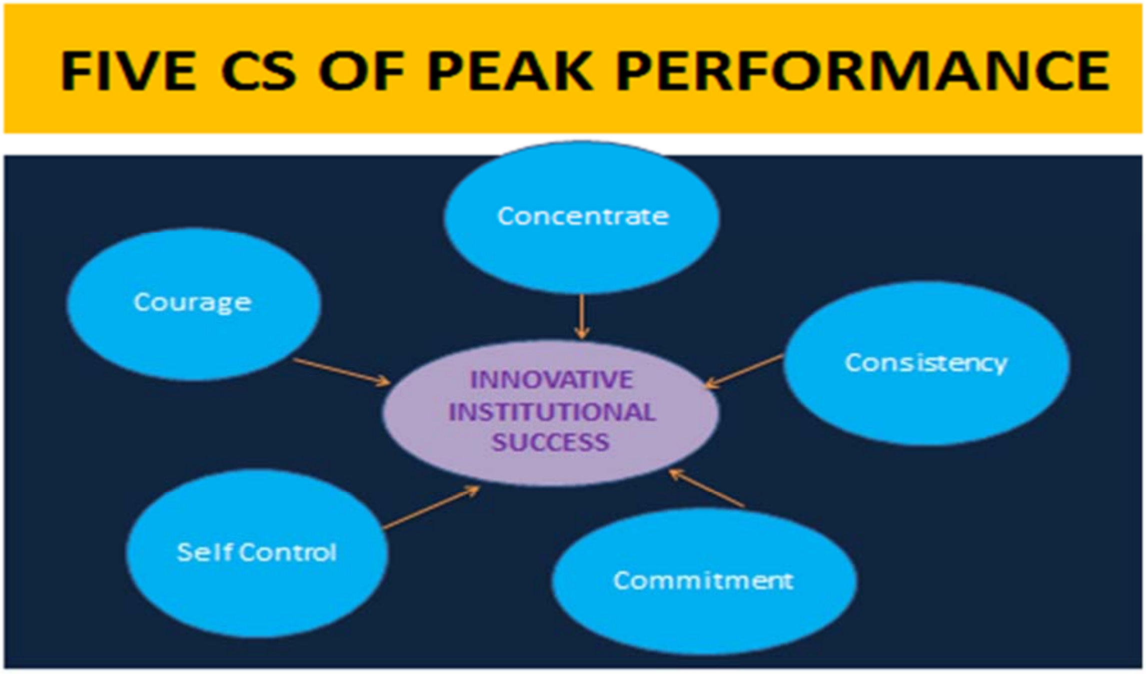
-KNOWLEDGE
-SKILLS
-QUALIFICATION
-STAKEHOLDERS
-INNOVATION
-DECISION
-VALUES
- ATTITUDE
-MOTIVATION

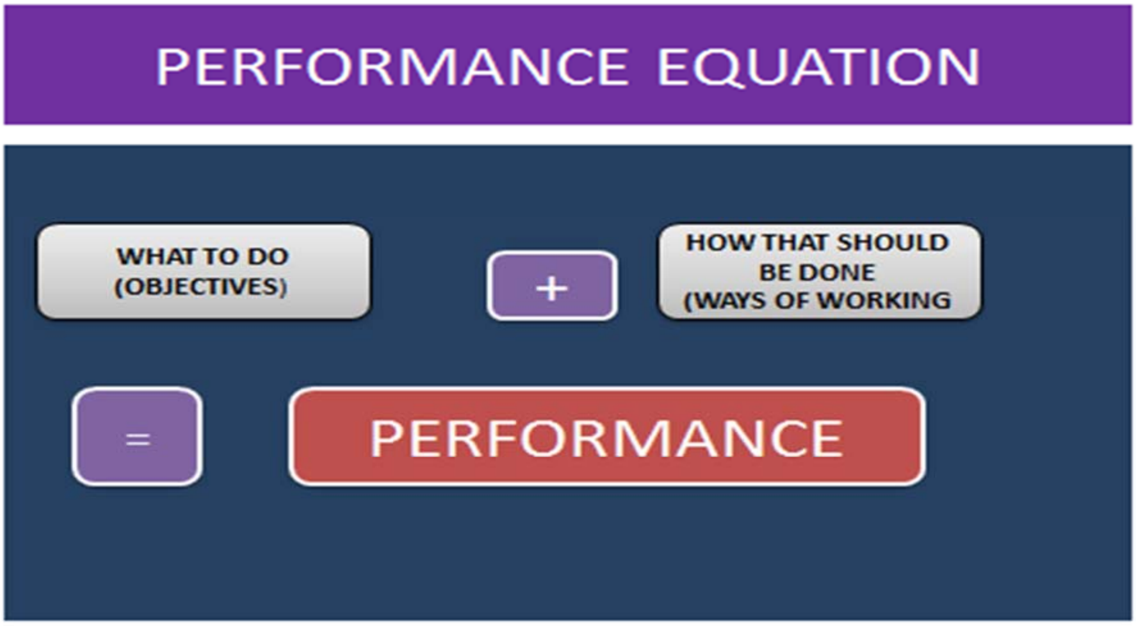
MATERIAL ASSETS

- QUALITY OF SERVICE
-QUALITY INFRASTRUCTURE

QUESTIONST TO BE ASKED BY INSTITUTION

- A- ASSET
- WHAT IS THE MOST VALUABLE ASSET?
- HUMAN ASSET
- WHAT IS THE MOST EXPENSIVE ASSET?
- HUMAN ASSET
- WHAT IS THE MOST WASTED ASSET?
- HUMAN ASSET
- THEREFORE PEOPLE CAN BE THE BIGGEST ASSET OR THE BIGGEST LIABILITY IF HUMAN QUALITY IS NOT TAKEN INTO CONSIDERATION


FIVE CS OF PEAK PERFORMANCE
Concentrate
Courage
Consistency
INNOVATIVE INSTITUTIONAL SUCCESS
Self Control
Commitment


PERFORMANCE EQUATION
WHAT TO DO (OBJECTIVES)
+
HOW THAT SHOULD BE DONE (WAYS OF WORKING
=
PERFORMANCE

CSMART OBJECTIVES

Objectives (What to be done by institution X	Institution X core Values (How to do it)
Challenging	Respect, Recognition, Opportunity and Access
Specific	Loyalty, Dignity and Trust
Measurable	Transparency, Openness, Honesty and Shared Governance
Achievable	
Realistic	
Time-bound	

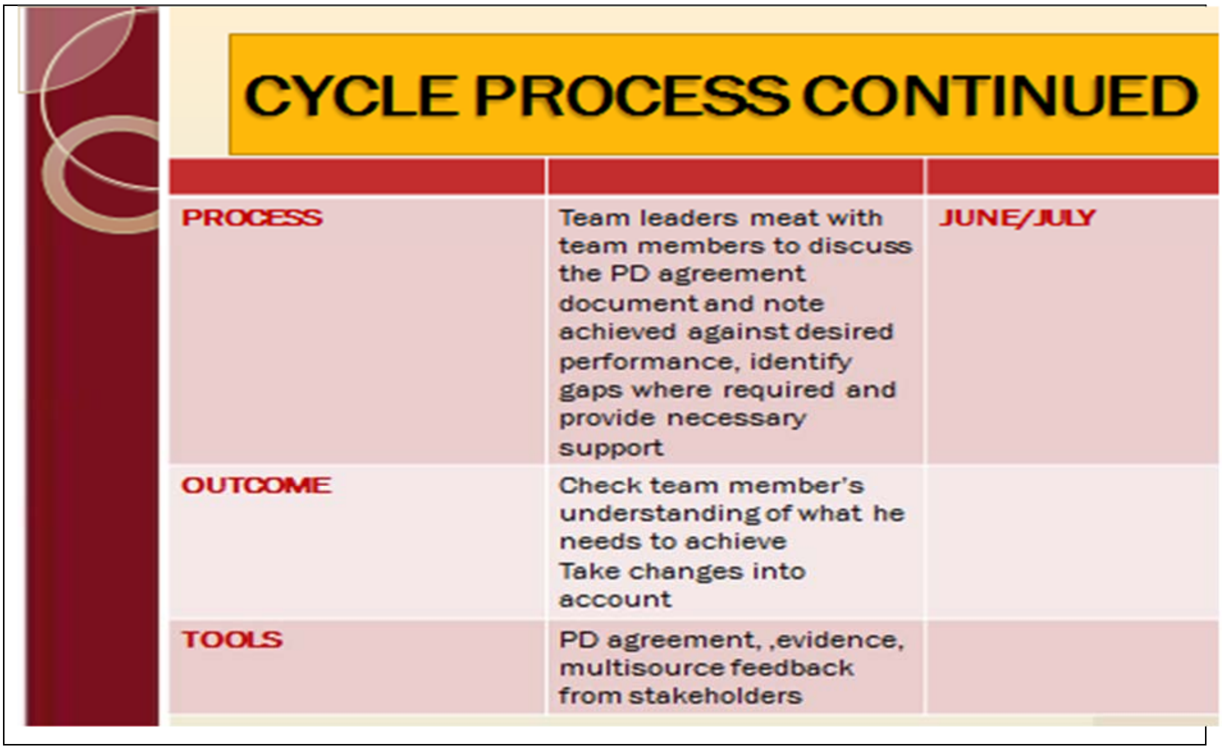
PERFORMANCE REVIEW

CYCLE PROCESSES

PROCESS	At the beginning of each year, team leader discusses and agree on the Performance objectives for the period ahead with team members	January
Outcome	Agreed Performance Development with objectives, performance measures and target Team members understand what they need to do and how	
TOOLS	PD Plan, Multisource feedback from other stakeholders	

CYCLE PROCESS CONTINUED

PROCESS	Team leaders meat with team members to discuss the PD agreement document and note achieved against desired performance, identify gaps where required and provide necessary support	JUNE/JULY
OUTCOME	Check team member's understanding of what he needs to achieve Take changes into account	
TOOLS	PD agreement, ,evidence, multisource feedback from stakeholders	



CYCLE PROCESS CONTINUED

PROCESS	Team leaders meat with team members to discuss the PD agreement document and note achieved against desired performance, identify gaps where required and provide necessary support	JUNE/JULY
OUTCOME	Check team member's understanding of what he needs to achieve Take changes into account	
TOOLS	PD agreement, ,evidence, multisource feedback from stakeholders	

(Source Gumede, 2014)

Such framework will be applicable for DUT as it also incorporates the human resource management practices for knowledge work that underpins -:

- Organizational Structure with Enabling conditions
- Phenomenon of encouraging an appropriate culture
- Harnessing motivation in form of performance management and rewards
- Development and learning as well as building relationship networks
- Different employment and human capital allocation as well as understanding socio political context (Open University, 2010).

7.2.3 Recommendations in relation to an entrepreneurial culture within a South African Higher Education

Higher learning institutions should collaborate with government to aggressively run Awareness campaigns about government entrepreneurship programmes and initiatives whilst understanding that young adults do not have financial track records to back them and have mitigating plans for that.

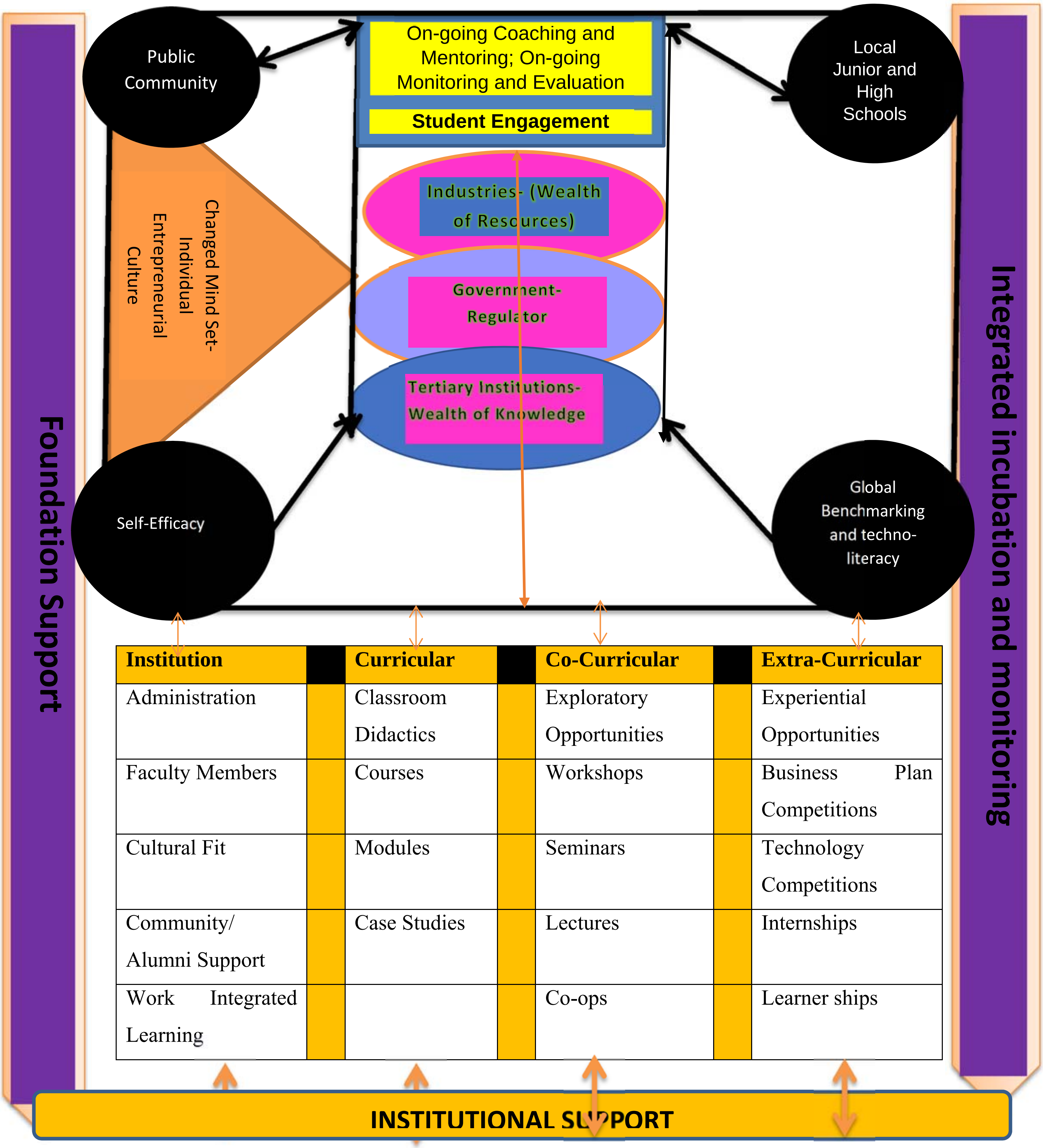
South African Institutions need to ensure that their Educational facilities continuously improve their capacity to provide the education and job skills that will be needed to develop greater productivity and technology-intensive industries as well as improving the quality of skills pertinent to modern economies. This will be done through the relevance of curricula.

Mentorship networks between private sector and higher education sector must be strengthened to provide entrepreneurs with access to experienced people who can inspire, mentor and coach them through the entrepreneurial culture. This will be referred to the guidance provided by a mentor, especially an experienced person in a company or educational institutions but specifically for entrepreneurial perspective. This will benefit both mentor and mentee in the sense that for mentees, some key benefits of business mentoring include: The opportunity to develop new skills and knowledge; Exposure to new ideas and ways of thinking; Advice on developing strengths and overcoming weaknesses; Guidance on professional development and advancement; increased visibility and recognition within the company. The benefits for mentor will include; Development of their personal leadership and coaching style; Recognition as a subject matter expert and leader; Exposure to fresh perspectives, ideas and approaches; Extension of their professional development record; Opportunity to reflect on their own goals and practices towards contribution in instilling entrepreneurial culture.

Internships for entrepreneurship should be provided and be fostered for young adults within higher education institutions. Internship is an opportunity offered by an employer to potential employees, called interns, to work at a firm for a fixed, limited period of time. Interns are usually undergraduates or students, and most internships last for any length of time between one week and 12 months. This will assist in impartation of skills by outgoing students or graduates to new entrants' students who will impart entrepreneurial culture and skills with the help of their mentors who might be lecturers. Many young people choose an entrepreneurial direction after school. The only difference is that they go to companies who normally utilise them and drop them after a year and they join the pool of unemployed graduates. Entrepreneurial culture need to be instilled during tertiary education level.

Experiential incubation in relation to entrepreneurial culture should also be encouraged within the higher learning institutions. Incubation is one of the four proposed stages of creativity, which are preparation, incubation, illumination, and verification. It may be regarded as Incubation is defined as a process of unconscious recombination of thought elements that were stimulated through conscious work at one point in time, resulting in novel ideas at some later point in time. It is usually related to intuition and insight in that it is the unconscious part of a process whereby an intuition may become validated as an insight. Incubation substantially increases the odds of solving a problem, and benefits from long incubation periods with low cognitive workloads.

7.2.3.1The model below is proposed new DUT model



Institution		Curricular		Co-Curricular		Extra-Curricular
Administration		Classroom Didactics		Exploratory Opportunities		Experiential Opportunities
Faculty Members		Courses		Workshops		Business Plan Competitions
Cultural Fit		Modules		Seminars		Technology Competitions
Community/ Alumni Support		Case Studies		Lectures		Internships
Work Integrated Learning				Co-ops		Learner ships

Figure 7.1 Proposed DUT Model- Source: Researcher (2017)

This model still indicates an interactive framework. The interaction within triple Helix Industries-Government-Tertiary institution is in spiral format as indicated through orange ovals in the diagram above. As much as equivalent participation is expected the reality is that the South African economy amounts to four trillion rand and Industries maintain three quarters of that economy hence it is ranked on the first oval. Government collect, one quarter of the economy, which is one trillion rand, hence, it is ranked on the second oval, yet it is the key regulator. Post school education out of that trillion rand has been allocated 195 billion rand for 2015; hence it is situated on the third oval. This model emphasizes on self-efficacy and changed mind-set on entrepreneurship with the commitment of tertiary institution groomed within the local community and at a basic education level through on-going coaching and mentoring.
It emphasizes on integration of foundation support, integrated incubation and monitoring.

7.2.4 Recommendation in relation to Radical Economic Transformation

Whilst the statistics reveals that 8% minority population holds 90% of the economy according to Huffington post, Pravin Gordan argues that the transformation of the economy must benefit all South Africans. The key aspects for radical economic transformation are expected to have the following seven criteria according to the African National Congress-: Reindustrialising South African economy with emphasis on exporting raw materials; Emphasis on Black ownership of land and the economy with emphasis on mining, entrepreneurs and small business; Dismantling monopoly structures and practices that incorporates elimination of price fixing and anticompetitive behaviour; An end to cadre deployment that has emphasis on recognising young talent; State should be expected to be in the driving seat of development where it will harness strength of private sector; Continuity of policy over change such as continuation of National Development Plan even if President Jacob Zuma who is the founder of National development plan is out of power; and; Political intelligence such as elimination of factional battles. Others, however, would mislead the public. He states that the "*others*" would articulate it [radical economic transformation] in a way in which it is designed to mislead people in that if they do these extremely, so-called radical things, they would benefit. But ultimately, it would be small elite that benefits. He also argues that economy needs to be more diverse, dynamic and innovative and needs to find new areas in which we can compete with the word, while at the same time, it needs to be restructured to be more inclusive of all sections of our people. He believes if we build an inclusive economy, establish a moral authority and evoke harsher punishment to corrupt individuals. Some African National Congress Members like David Ka Ndyalvan believe that radical transformation is muddied at the expense of the poor. One main recommendation is that for the entrepreneurial culture to be instilled, the Universities need to work hand in hand to advise and assist eradication of oligopoly which is a state of limited competition in which market is shared by small number of producers and sellers. The universities, government and businesses should play major role in building more equal society and draw more people in to main stream economy. It should be borne in mind that they need to be made part of contributing to the economy and not to fish and do things for them. In that way life would be easier for tertiary institutions to instill entrepreneurial culture. Moreover, the institutions need to radically and aggressively work together with Businesses within the African Continent in developing African database on number of entrepreneurs produced whilst in the tertiary institution. They should also make themselves accountable in monitoring how numbers can be increased yearly and that will positively contribute to the South African economy as well as in the African economy.

7.2.5 Recommendation in relation to entitlement versus Narcissism

Psychologists believe on the ten characteristics of a Narcissist which are (i) Conversation hoarding; (ii) Conversation interrupter; (iii) Rule Breaker; (iv) Boundary violator; (v) False image projection (vi) Entitlement; (vii) Charmer (viii) Grandiose personality; (ix) Negative emotions; (x) Manipulation and using others as an extension of self. Most characteristic enshrined here are of an individual who can hardly think innovatively. Such characteristics can be attributed to a person whom all is about him. If such characteristics can be expanded to South African country, looking at lifestyle people are holding on to, where hold on to government promises that they were once promised free education, free housing, free water and endless list South African country is somehow indirectly bound to narcissism. Narcissism is closely related to entitlement. These assumptions are attributed to the responses from questionnaires that results indicate high level of expectation from the government to perform some duties. It is therefore recommended that awareness is created on the concept of narcissism and most people are unconsciously narcissistic. Such characteristics may hinder instilling of entrepreneurial culture. There is a strong belief that if awareness on narcissism can be created, South African citizens may be familiar with independence as well as becoming part of creating their own wealth. Looting, illegal occupation of land, burning of infrastructure may decrease as everyone will be regarding the country as his own and cares about its wellbeing. In conclusion the main therapy is admission and disclosure of being narcissistic.

7.2.6 Recommendation in relation to gatekeepers' cooperation

While *pros* for gatekeepers focus on maintaining *consistency* where he follows guidelines to conduct his work, *quality control* where complex task is directed to him for quality control, *streamlining* as a single point of contact; there are also cons to be portrayed below-: *Cons* highlight (a) *Bureaucracy* where the gatekeeper holds the liberty to exercise authority, risk of abusing the authority sometimes for bureaucratic purposes. On the academic world it becomes so even embarrassing when one undergoes the process of ethical clearance process, gatekeeper's process and one receives full approval of conducting research only to find that the most difficult world is the academic world to assist with information when they are supposed to be cooperative in generating knowledge. One ponders on what to expect particularly in instilling entrepreneurial culture when it is difficult to cooperate when one wants to contribute to knowledge. Main recommendation is that of cooperation requested from gatekeepers especially for knowledge generation. *(b)Delays* which pertains to paperwork to be prepared to handoff to the gatekeeper, then there is a waiting period for that paperwork to be reviewed and completed. As much as it is for security reasons, it becomes unproductive if the gatekeeper creates policies that generate unnecessary work. The recommendation relating to this con is that gatekeepers, especially in the academic world need to be sensitive to on-going generation of knowledge thereby responding promptly and to be cooperative especially to other tertiary institutions; (c)*Duplication of Work* where one receives paperwork, reviews, passes it on and the foreman uses same information source for worked time. The assumption is that whenever institution hires someone it is because that person has relevant knowledge and qualification. Institutions are therefore required to observe duplication of work.

7.2.7 Recommendation on the importance of collaboration with local and global institutions

Harmonization with strategic processes pursued by different national ministries and national commissions are crucial to exploit synergies. The first challenge relates to the internal coherence of the strategy. Its key components need to be designed and coordinated in a way that reflects the systemic character of entrepreneurship development. If the most binding constraint is not addressed, improvements in other areas may not produce the expected results. As entrepreneurship is a systemic phenomenon, a bottleneck in one area may become a bottleneck for all the other areas. Enterprise can only thrive if the overall environment enables them to obtain all the external inputs that they require skills, finance or technological services at the right time. The second challenge is to embed the national entrepreneurship strategy in the overall development plans of governments. The targets set in those plans should be reflected in the specific objectives of entrepreneurship development, determining e.g. whether entrepreneurship promotion should be focused on specific economic sectors or groups of society; Specify goals and set priorities; Strengthen the institutional framework where entrepreneurship policies are implemented is as important for success as the right choice of instruments. The first step will be to *designate a lead institution* in charge of entrepreneurship development. This can be a working group, ministry or an agency in the government that would be assigned responsibility for all phases necessary to develop a national entrepreneurship development strategy ; Measure results and ensure policy learning where (i) basic indicators such as the number of start-ups created (where applicable by sector or target group) and survival rates; ((ii)) more complex economic indicators such as value added, employment generation, or export generation by recent entrepreneurial activity; and (iii) sustainable development related indicators such as poverty reduction, women entrepreneurship or start-ups in green-energy sectors; Specify goals and set priorities that will be Based on the analysis of structural characteristics and binding constraints, it is important to specify the *goals* of a National Entrepreneurship Strategy. Entrepreneurship policies may pursue a variety of objectives and therefore set priorities differently. They may, for example, put emphasis on modernizing agricultural societies; leapfrogging into next generation technologies; increasing and diversifying exports; creating new economic opportunities for women; boosting youth employment; overcoming ethnical divides; or re-integrating ex-combatants in post conflict countries into civil life.

Higher education institutions have a duty of continuously doing audit on whether what is provided is still relevant to the needs of the country. This will be evidenced by the minimal unemployment, increased number of entrepreneurs, improved country’s economy where there will be minimal case of the country being put into junk status. The higher education further investigates what is required in during the fourth industrial revolution and provide curriculum that is relevant to fourth industrial revolution. The curriculum should respond to the application of what is listed below-: To conclude the literature review chapter the question of who can become an entrepreneur; there is no one definitive profile. Every entrepreneur has these qualities in different degrees. But what if a person lacks one or more? Many skills can be learned. Or, someone can be hired who has strengths that the entrepreneur lacks. The most important strategy is to be aware of strengths and to build on them.

Flexibility is the ability to move quickly in response to changing market needs. It is being true to a dream while also being mindful of market realities. Creativity is the spark that drives the development of new products or services or ways to do business. It is the push for innovation and improvement. It is continuous learning, questioning, and thinking outside of prescribed formulae. Leadership is the ability to create rules and to set goals. It is the capacity to follow through to see that rules are followed, and goals are accomplished. In contrast, some people are attracted to entrepreneurship by the advantages of starting a business such as: Entrepreneurs are their own bosses as they make the decisions. They choose whom to do business with and what work they will do. They decide what hours to work, as well as what to pay and whether to take vacations; it offers the prestige of being the person in charge; offers a greater possibility of achieving significant financial rewards than working for someone else.

Successful entrepreneurs come in various ages, income levels, gender, and race. They differ in education and experience. But research indicates that most successful entrepreneurs share certain personal attributes, including: creativity, dedication, determination, flexibility, leadership, passion, self-confidence, and "smarts. Self-confidence comes from thorough planning, which reduces uncertainty and the level of risk. It also comes from expertise. Self-confidence gives the entrepreneur the ability to listen without being easily swayed or intimidated; it gives an individual the opportunity to build equity, which can be kept, sold, or passed on to the next generation; Entrepreneurship creates an opportunity for a person to contribute. Most new entrepreneurs help the local economy. Through their innovations they contribute to society as a whole. Entrepreneurship is an attractive career choice. But many decisions must be made before launching and managing a new business, no matter its size. Among the questions that need to be answered are: Does the individual truly want to be responsible for a business? What product or service should be the basis of the business?; What is the market, and where should it be located?; Is the potential of the business enough to provide a living wage for its employees and the owner?; How can a person raise the capital to get started?; Should an individual work full or part time to start a new business? Should the person start alone or with partners? Preparatory work includes evaluating the market opportunity, developing the product or service, preparing a good business plan, figuring out how much capital is needed, and deciding to obtain that capital.

Through careful analysis of entrepreneurs' successes and failures, economists have identified key factors for up-and-coming business owners to consider closely. Taking them into account can reduce risk. In contrast, paying them no attention can precipitate the downfall of a new enterprise.

Realistic Vision: Insufficient operating funds are regarded as the cause of many failed businesses. Entrepreneurs often underestimate start-up costs and overestimate sales revenues in their business plans. Some analysts advise adding 50% to final cost estimates and reducing sales projections. Only then can the entrepreneur examine cash flow projections and decide if he or she is ready to launch a new business. **Motivation:** that touches on the incentive for starting a business or whether it is money alone. Many entrepreneurs can acquire massive wealth. However, money is almost always tight in the start-up and early phases of a new business. Many entrepreneurs do not even take a salary until they can do so and still leave the firm with a positive cash flow; **Strategy:** What is the strategy for distinguishing the product or service? Is the plan to compete solely based on selling price? Price is important, but most economists agree that it is extremely risky to compete on price alone. Large firms that produce huge quantities have the advantage in lowering costs. That will mean understanding the strength of each student on whether the student capability is on making important choice that new entrepreneurs must start a business alone or to team up with other entrepreneurs. They need to consider many factors, including each entrepreneur's personal qualities and skills and the nature of the planned business (Cai et al, 2015).

They need to consider many factors, including each entrepreneur's personal qualities and skills and the nature of the planned business. There are many advantages to starting a firm with other entrepreneurs. Team members share decision-making and management responsibilities. They can also give each other emotional support, which can help reduce individual stress. Companies formed by teams have somewhat lower risks. If one of the founders is unavailable to handle his or her duties, another can step in. Team interactions often generate creativity. Members of a team can bounce ideas off each other and brainstorm solutions to problems. Studies show that investors and banks seem to prefer financing new businesses started by more than one entrepreneur. This alone may justify forming a team. Other important benefits of teaming come from combining monetary resources and expertise. In the best situations, team members have complementary skills. One may be experienced in engineering, for example, and the other may be an expert in promotion. The uniqueness of the business idea should be drilled through making a venture stand out from its competitors; uniqueness can help facilitate the entry of a new product or service into the market. It is best to avoid an entry strategy based on low cost alone. New ventures tend to be small. Large firms usually have the advantage of lowering costs by producing large quantities (Cai, et al, 2014).

Successful entrepreneurs often distinguish their ventures through differentiation, niche specification, and innovation. Differentiation is an attempt to separate the new company's product or service from that of its competitors. When differentiation is successful, the new product or service is relatively less sensitive to price fluctuations because customers value the quality that makes the product unique. Part of entrepreneurial culture curriculum should include fourth industrial revolution education through revolutionized commerce by bringing together people from all over the globe. Many of its features can be used to shape a new business. *Communications*: An entrepreneur must communicate with many people suppliers, distributors, and customers, such as a quick and relatively inexpensive way to send letters, reports, photographs, etc. to other Internet users is with electronic mail or e-mail. E-mail can be used even for marketing. Various forms of computer software are available to protect documents from unauthorized access or alteration so that they can be securely shared and easily authenticated. *Research*: Starting a business takes lots of research. An entrepreneur can find information on almost any subject very rapidly by using the Internet's World Wide Web. (The Web is a collection of text and multimedia documents linked to create a huge electronic library.) Many government agencies, universities, organizations, and businesses provide information on the Internet, usually at no cost. The easiest way to find information on the Web is by using a search engine a data retrieval system. The user types key words for a subject on the computer, clicks the enter button, and receives a list of materials– often within seconds. The items are linked electronically to the actual documents so that Internet users can read them on their computer screens. Among the most popular search engines are Yahoo! (http://yahoo.com) and Google (http://google.com).; *Promotion*: Web sites, pages of print and visual information that are linked together electronically, offer an opportunity for entrepreneurs to introduce a new business and its products and/or services to a huge audience. In general, Web sites can be created and updated more quickly and inexpensively than printed promotional materials. Moreover, they run continuously. To create a Web site for one's business, the entrepreneur can hire a firm to create one or purchase computer software to create it on her own. Education on starting entrepreneurship should also incorporate the ability to start an online business where an entrepreneur must be able to-: (i) Register a domain name an Internet name and address. (ii) Purchase a server or contract with an Internet service provider to host the Web site. (iii) Buy Internet software to create a Web site or hire an expert to do so. Design an attractive and easy to navigate online store. (iv) Create an online catalogue. Provide clearly written in formation, without technical language or jargon. Use lots of photos to encourage potential customers to buy. Include clear instructions to order by phone or online

Entrepreneurship education should comprise of activities such as curriculum, co-curricular activities, and research efforts. Decisions regarding such activities include everything from pedagogy, learning objectives, topics, selection of materials, learner type and delivery mechanisms. Research regarding the effectiveness of entrepreneurship education has grown over time and expanded beyond measuring new business formation to assessing the increase in positive perceptions of entrepreneurship and intentionality towards being entrepreneurial. Emerging findings suggest that there is indeed a positive relationship between entrepreneurship education and entrepreneurial behaviours. That should incorporate the following aspects-:

(a)*Inspection and repairing of Pedagogy and Place:* Revamp instructional standards and classroom paradigms to promote team-based, action oriented learning in spaces designed to enhance collaboration and creativity that includes real world interactions with entrepreneurship practitioners and with target markets for new products and services. (b) *Develop Teachers*: Establish program standards, training programs and assessment tools that encourage teachers to acquire and employ skills and behaviours that enable them to function as facilitators and guides to learning, rather than as traditional classroom instructors. (c) *Expand Ranks of Learners:* Make entrepreneurship education compulsory for all learners in primary, secondary and perhaps even tertiary levels, because of its effectiveness at instilling beyond twenty first century skills, in addition to venture creation skills.(d) *Expand Access to Resources:* Increase funding for entrepreneurship education and develop and promote innovative mechanisms to leverage partnerships with corporations, global institutions, and foundations, as well as with individuals who understand the fourth industrial revolution era and it potential to raise the global income levels as well as improving quality of lives for populations around the world.

The concept of fourth industrial revolutions interests the research because it has the potential of impacting business through acceleration of innovation. The velocity of disruption may be hard to comprehend as this constitutes constant surprises thereby replacing many existing services in the form of introducing new technologies. That on its own encourages constant innovative competitors. On the side of customer expectation, it enhances new products.

It also has got impact on government in the sense that innovative citizens constantly engage with governments, through coordinated efforts of public authorities and academic institutions. On the other side it will force government to revisit and change the engagement approach to public engagement. The fourth industrial revolution also impacts the nature of national and international security which in turn produces new fears to both. To individuals it channels them on how they should develop and channel their careers, cultivate their skills and build new relationships. In terms of shaping the future it instils the sense of ownership where everyone feels responsible for guiding evolution through decisions made daily. This enforces people to develop a comprehensive globally shared view of how technology is affecting everybody lives globally. (e) *Facilitate Sharing of Content and Pedagogy:* Create a clearinghouse of leading-edge curricula and pedagogic methodologies. Much good work has been done in this field over the past decade, and many institutions are willing to share their curricula and teaching methodologies (Teriesen et al, 2014).

Research reveals that Entrepreneurship education has grown dramatically over the past three decades. In 1986, there were approximately 600 colleges and universities offering entrepreneurship courses around the world. Today, the Kauffman Foundation estimates that there are more than 5,000 courses offered at 2,600 schools (Kauffman, 2008). That is an indication that through proper instilling of entrepreneurial culture a South African tertiary institution will not only impact the institution but has the capability of turning around the country's economy, reduced unemployment as well as impacting of global economy and innovation. Whilst instilling entrepreneurial culture, South African Institution needs to take cognisance that despite the enormous growth in entrepreneurship training, education, courses and organizations, there has been less focus on the importance of policies and programs that support this entrepreneurship imperative. The Global Entrepreneurship Monitor (GEM, 2014).

Some scholars like Neck, Greene, and Brush (2014) argue that entrepreneur-ship education is a method versus a process. Their assumptions include that it applies to novices and experts the method is inclusive meaning that it applies to multiple level of analysis that the method requires continuous practice and that the method is for an environment that is changing and unpredictable. Findings by Vanevenhoven and Liguori, (2013) revealed that for undergraduate education, the more a university collaborates with other universities and organizations on all levels (local, state, federal), the lower the motivation to go into entrepreneurship by undergraduate students. It is argued that the new approach to economics, in the opinion of many experts, would have to be a developmental view consisting not only in raising profits or incomes, but also in offering people the maximum opportunities, thus strengthening human rights, freedoms, capabilities and opportunities, and enabling citizens to lead a long, healthy, creative life. Human development is a process aimed at expanding people's opportunities, as they acquire more skills and have more opportunities to use them. This is aimed at expanding people's opportunities, as they acquire more skills and have more opportunities to use them (Vanevenhoven and Liguori, 2013; Welsh et.al, 2016).

This is vital because it is indicated that the notion of human dignity is closely related to the notion of basic capability: it is something inherent in the person who demands to be developed. While there is room for debate about whether innate potential differs among people, human dignity is the same in all of them. This will however require strong installation of cultivating emotions requires the adoption of a normative project of coexistence in which dignity of all people, equal respect for all, the commitment to freedom of expression and association of all citizens and series of fundamental social and economic rights are highlighted (Sanz, Peris and Escámez, 2017).

In conclusion the researcher argues that if a country wants to be more proactive in developing an entrepreneurial culture, it is relevant to implement consistent policies and programs on restructuring the capability of its education system toward providing entrepreneurial competences as a kind of transversal skills for everyone. This can only be possible through a global consideration of entrepreneurship education is needed to recognize the impact of culture, acknowledging that values arising from the nation and region resonate down to the level of the organization. Training of the mind-set to both Teachers/lecturers and learners is most effective in contexts with favourable institutional environments, where the training-induced positive skills, perceptions, and intentions can be translated into action. This can only be practical if programme of action can be able to respond to the following questions such as-: What are the learning outcomes? How are the program/ curriculum/ course being funded and supported? Where is entrepreneurship education being taught and by whom? Who are the learners? What are they being taught? How is theory integrated to practice? How are they being taught? Why is entrepreneurship being taught? How is impact being measured and evaluated? What is being measured? What kinds of businesses are being started? What is the extent of scalability or the capacity in size or scale?

This has worked mainly for China where the importance of entrepreneurship education in fostering entrepreneurial culture has encouraged entrepreneurship to emerge as a business discipline in universities and colleges, vocational schools, and even in some high schools. Entrepreneurship education is expected to provide motivation, knowledge, and skills essential for launching successful ventures, but the content of entrepreneurship education differs by country. The Chinese ministry of education delves on The Ministry of Education emphasizes four goals for entrepreneurship education in China: (i) Expose students to the challenging prospect for employment and raise their entrepreneurship awareness, (ii) Lay a solid foundation of knowledge about entrepreneurship (iii) Improve college students' entrepreneurial skills and abilities through both classroom learning and other activities, and (iv) Reduce entrepreneurial risks among college students.

Instilling of entrepreneurial culture in a South African tertiary institution will be expected to turn around normal education into entrepreneurial education that will yield result to provide motivation, knowledge as well as skills that are essential for launching successful ventures. Even the first competition that was the Student Entrepreneurship Competition organized by Tsinghua University in 1997 yielded results. That was known as the birth of entrepreneurship education in China. Their program is termed Accelerator program. China employed X-lab that was designed to foster creativity, innovation, and entrepreneurship education. The letter "X" has the double meaning of unknown and cross-linking among multiple academic disciplines, while the word lab" connotes experiential learning and teamwork. X-lab serves three types of university students: *Type A*: Imagination phase students with a strong interest in innovation and entrepreneurship who do not yet have a project. They represent most of the student body.
Type B: Innovation phase students who have specific creative and/or innovative ideas but have not yet moved them into entrepreneurial projects. *Type C*: Implementation phase students, who have concrete entrepreneurial projects. China's impact assessment was measure, and the following results were witnessed measured by several indexes including (a) Number of students participating: more than 8000, (b) Projects that emerged: more than 580 by the end of April 2015, (60 % initiated by students on campus, 40 % projects initiated by students who have graduated), (c) Number of registered enterprises: 229 distributed across (d) multiple cities in China, (e) Expanding employment: more than 5000, and (f) Innovation achievements: more than 20 invention patents and a Gold Medal at the International Invention Exhibition, Geneva, Switzerland (Teriesen et al, 2014).

Their tracked success is trace from the following practice

- Within three years, provide students with more than 5,000 square meters of space for creative, innovative, and entrepreneurial activities.
- Within three years, engage ten to 20% of students across schools/departments annually (approximately 3,000 to 6,000 people) to participate in at least one experiential learning activity related to creativity, innovation, and entrepreneurship; encourage active participation by faculty and alumni (Type A students).

- Solicit more than 200 student teams each year to engage in innovative and entrepreneurial activities inside Tsinghua x-lab (Type B and Type C students).
- Within three to five years, become a higher education role model for cultivating creative, innovative, and entrepreneurial talents.

Their modules entail Thinking, Skills, Function, and Field. The goals of these modules are to enable the learners to have open minds (Thinking), necessary tools for starting a business (Skills); management knowledge and skills (Function); and multiple abilities for discovering and solving problems (Field).

This has also worked for Finland where the new general education curriculum increasingly emphasizes entrepreneurship and working life skills. Schools are encouraged to work with local companies and introduce projects where pupils learn about jobs and business. Finland scenario might be like South African scenario because Higher education has not typically been a pathway to entrepreneurship in Finland. However, universities have made increasing efforts to boost the number of graduates willing and able to consider entrepreneurship as a career. Their buzz ideal concepts are also Hubs and Incubators supporting start up communities. But since the beginning of 2016 they have made academic entrepreneurship more visible. The Finnish national core curriculum includes drilling of ownership a cross-curricular thematic entity called participatory citizenship and entrepreneurship. The concept used is I-Me and My City and the researcher is adding My Country. The researcher is incorporating the country concept to assist learners to view everything in a broader perspective, such as understanding that whatever action one takes as an individual will in in one way or the other affect the sum of the part. That means whatever impact the learner is adding will positively or negatively affect his country. That even teaches them to own their country, their economy as well as their city (Raunch and Hulsink, 2015).

Various entrepreneurship programmes, seminars and conferences have been organized to find lasting solutions to the reasons why youth have not been fully engaged towards setting up their future venture. Different countries have invested in various entrepreneurship programmes to see whether students can exploit untapped business opportunities. Various approaches have been used to encourage the youth towards entrepreneurial activities such as giving bank loans, business facilities and access to finance (capital) to influence their career options. In other instances, some youths are given opportunity to submit their business proposals for private firms or government to fund their viable business opportunities. It is however noted such

numerous and tireless activities have not yet improved South African economy, yet it is now in junk status despite all these activities, unemployment pandemic is also cited daily. Despite all these activities, the youth participation in entrepreneurial activities remains a call for concern (Olugbola, 2017).
Entrepreneurial ability is required to ensure perfection of administration in creation of new firm. Managerial and administrative abilities are very important for every student aiming to create venture in the future. Also, most of the new businesses fail at inception because of lack of effective business plan (Barringer and Ireland, 2015).

The importance of opportunity identification is mostly cited as the best tool for success in entrepreneurial culture. Opportunity identification defined opportunity as perceived means of generating economic value that have not been previously exploited or currently being tapped by other youth. Therefore, opportunity identification be the cognitive process through which youth perceived opportunity have been recognized. It is one step to identify opportunity, it is another to evaluate and develop it into a new business. Ellis and Williams (2011) describe opportunity identification as the way youth perceives opportunity or choose their own business, despite having the option of generating income through employment opportunities at the time of considering starting a new business (Ollugbola, 2017).

The researcher believes that if entrepreneurial culture can be instilled within all programmes in South African institutions, entrepreneurial readiness can follow suit. Entrepreneurial readiness can be defined as the "confluence of a set of personal traits that differentiates individuals with readiness for entrepreneurship as especially competent to observe and analyse their environment in such a way that they channel their high creative and productive potentials, so they may deploy their capability to dare and need for self-achievement that is depicted through *sociological, psychological, and business management.* It is the confluence of a set of personal traits (or features) that distinguishes individuals with readiness for entrepreneurship especially competent to observe and analyse their environment. Coduras, Saiz-Alvarez, Jesús Ruiz (2016) point out that income interacts with other variables in such a way that individuals are more likely to become entrepreneurs where there are more entrepreneurs, even if entrepreneurial income is lower *(*Coduras, Saiz-Alvarez, and Ruiz, 2016; Ruiz, Soriano, and Coduras, 2016, Olugbola, 2017).

The importance of leveraging of intellectual capital. They cited it as it was proved to be useful for promoting organizational change processes especially in this world of technology. It is cited that there are two main views under which the higher education need to decide the approach to capability building and Higher Education will adopt. Boni and Walker (2013) illustrate that there are two main views on the role, objectives, and success indicators of universities. The first vision, which is the dominant one, is focused on efficiency and economic competitiveness, as shown by the *Council of the European Union* (2007), the OECD (2007000) and the World Bank (2002), who perceives Higher Education as an industry to achieve national competitiveness and as a lucrative service to be sold in the world market. Such vision eclipses other possible representations of the university as the *public good* (the public service, the strengthening of democracies or human rights), *social good* (the service learning or regional development) and the *common good* social justice or the strengthening of coexistence bonds (Krueger, 2015; Capatina, Bleojua, Matos and Vairinhos, 2017).

The second vision claims as its own objectives, and identifies them as more characteristic of Higher Education institutions as it is stated in the *Preamble to the Charter of European Universities* (1988), the *World Declaration on Higher Education for the 21st Century: vision and action* (1998), and in the *Talloires Declaration* (2005) – the goods that defend a broader perspective of what universities should be and which have produced an abundant literature exploring Higher Education from the perspective of the development of human capabilities (Yang and Li, 2011). Some of the aspects the tertiary institutions need to consider whilst instilling entrepreneurial culture are that the market has its rules and selects the businesses accordingly. The rules to be considered might be of technical, organizational, social and economic creativity nature. The capabilities of survival in a complex environment, in which the markets depend on the economic cycles and/or the way in which they are managed by public policies are of great importance as well.

Tertiary institutions need to observe that nature on its own also has its rules and its ecological limits. Although these rules do not represent insurmountable physical limits for creativity and development in business sectors and even though the legal limitations are increasingly greater, they are operational by means of culture (Martin, 2016).

If a South African tertiary institution can adopt similar practice as suggested in the researcher's model, positive results can be realised and observed. Regarding what needs to be taught, the curricula need to be customised not only to the needs of the institution but to the needs of the country to eliminate disjuncture of skills supply and demand. Responding to why entrepreneurial culture should be instilled in a South African tertiary institution, there is growing demand for entrepreneurship education, driven by government, collaborating with a South African tertiary institution as well as private sector entrepreneurs produced by South African tertiary institution who will drive an instil courage and zeal for people to start their own businesses as per the above practice.

The researcher further concludes that if the focus of entrepreneurial education is limited to commerce students only, little progress will be made with the neither acceptance of entrepreneurship as a neither legitimate discipline nor acceptance in Higher Education Institutions of entrepreneurship as an integral part of the curriculum. In the end, this will have a major impact on graduates' success hence entrepreneurial culture in a South African institution will be very minimal. The whole South African country will always contemplate about unemployed graduates. The paradigm shift of entrepreneurial mind set within the entire institution of a South African Higher Education institution should be aggressively facilitated through the re-visitation of curriculum. Some of students, eyes get opened very late when they do their MBAs, (Master of Business Administration) that it is possible to incorporate diverse modules to make up such an eye opener programme. The sad part is that by the time they realize that they are already in world of employment. In most often than not one finds unemployed graduates staying at home and not thinking about any business venture, only to discover that some of them have been unemployed for more than two years but still form part of unemployed pool.

Cherif and Bidan (2017) cite the importance of collaborative open training with serious games relations, culture, knowledge, innovation. The researcher alludes that trainings with serious games that will improve knowledge and innovation it can positively contribute towards instilling zeal for entrepreneurship especially if they are related to either innovation integrated with entrepreneurship. The researcher normally witnesses this Good news community radio on Saturday when graduates phone asking to be connected for employment, stating their qualifications. When the researcher listens to that station she would gear graduate saying she/he is looking for any kind of employment because she/ he has run out of choices.

The curriculum should also incorporate the ability to cope under pressure, failure and disappointments and how to wake up and run with the vision. The researcher cannot leave out incorporation of entrepreneurial motives, intention as well at attitudes or the how approach which can be achieved through excessive mentoring programmes. This is emphasized because although the students' knowledge and strategic competencies could be expanded with a business strategy simulation, the decision-making style is not significantly influenced by practice, possibly because it is driven by other forces, such as cultural factors and personality. The researcher acknowledges that as much as she is focusing on instilling entrepreneurial culture in a South African institution is important, future research must focus on instilling entrepreneurial culture during the junior phases of study. The researcher's urgent concern was the rationale behind the vast number of unemployed graduates. However, going forward the body of knowledge should focus on how this can take place for early grades. Such practice might not only influence students' career choice towards entrepreneurial readiness but will also pave way for economic development.

7.2.8 Recommendation on environmental influences

South African Higher education need to be always ahead and on top of their game towards being proactive on (a) *economic environmental* influence such as Lack of suitably qualified technicians and specialists**;** Cost of higher education; Cost of employment of scarce skills; Salary and wage levels; Advent of knowledge economy; National Skills Fund and Pivotal funding (b) *Socio-Cultural e*nvironmental influence such as Unemployed youth; Funding of under-privileged students; Language proficiency; Changing demographics of workforce; Lack of HE facilities in rural areas; Legacy of apartheid; Perception of Universities of Technology; Income distribution; Social mobility; Lifestyle changes © *Technological* environmental influence such as Cloud based learning applications; Digital libraries; Focus on technology; Advances in computer controlled manufacturing; Discoveries and patents; Government spending on research(Vernon, 2014).

7.3 Conclusion

The researcher's aim was to contribute through the development of advanced entrepreneurship education as essential for influencing attitudes, aspirations and intentions of individuals striving to launch new ventures. This study broadens the definition and impact of entrepreneurship education. The researcher does not limit her definition of entrepreneurship to starting a business but extends it to starting a business as a vehicle to develop an entrepreneurial mind-set while also developing a robust set of beyond twenty first century life skills that can be used to start and grow new ventures of all kinds hence the researcher defines entrepreneurship education as a method whereby students practice creating, finding, and acting on opportunities of creating value. Entrepreneurship education is in a state of transition. This is largely since business schools, as well as. Higher Education Institutions overall, are in the middle of transformative changes both at the conceptual new models of entrepreneurship education) and technological levels such as eLearning, mobile devices, learning networks, entrepreneur-ship networks. This has been spurred by upheavals globally, socially, politically, and technologically. The South African higher education should mostly focus on enhancing the knowledge base and filling the innovation chasm in the areas of housing, water, energy, agriculture, biotechnology to avoid disjuncture between the skills required by South African economy and skills the South African Higher Education Institutions provide. One cannot over emphasise the need for all South African Higher Education Institutions to collaborate and work together. The researcher is emphasising this because it is pointless for the institutions to operate in silos because individual institution cannot individually impact the South African economy and combat employment. The network that has been pursued by universities of technology is commended however there are only six of them in the country out of the total of twenty-six universities (Welsh, Tullar, Nemati, 2016).

The main threats South African Higher education institutions (HEIs) need to take heed of are substitutes that could take the form of product for product substitution, need substitution, generic substitution and doing without, lack of financial resources as well as brain draining where the students who are expected to be assets to South African. Higher education institution decides to enrol in international HE institutions and not even bring back the skills acquired abroad. The future research is recommended by the researcher to urgently mitigate the threats and weaknesses that seem to be hazardous particularly for university of Technologies. Which are -: (a) Slow brand building; (ii) Substitute courses at other universities; (iii) Lack of articulation with other sectors (iv) Inability to deliver on projects due to lack of resources; (v) Unfavourable perceptions in the market Poor market understanding of the status of University of Technology programmes (vi) Lack of centralised research capacity and (vii) Lack of support capacity to carry out research.

One can however not ignore the UoTs strength and opportunities which they can capitalise on to expand their territory and benchmark with other countries like they have already begun with Nambia. The cited strength and opportunities are -:(i)Desire to work together; (ii) Promotion of differentiation (iii)regional responsiveness ((iv) Generally work ready students (v) Good reputation of former Technikons; (vi) Opportunity to build industry contacts even abroad to the learners and not to staff only; Opportunity to be fully on the map on research to be competitive in a global industry as well as; Opportunity to develop fully functional Self-employment Integrated learning systems as opposed to fully focusing on Work Integrated Learning Systems. One more important aspect is to foster skills development partnerships more that will enhance self-sustenance regarding self-employment. This will in turn minimise the entitlement mentality that sometimes lead to destruction and demolition of infrastructure because of the basic needs that even some unemployed graduates cannot afford. As part of conclusion, Researchers are encouraged to research more around topics around-:

- Introduce new cases or extend research that offers alternative pathways for Business-Led Triple Helix and the university incubation process while taking into consideration development or economic contexts.
- Present/highlight initial trends, roots and advocates for business-led university incubation in country-specific settings in line with existing objectives and underlying principles.
- Focus on specific evolutionary stages in the business-led university incubation process while highlighting alignment of organizational structures and adoption of pioneering management strategies/techniques.
- Introduce state-of-the-art financing models for structural intervention of industry in the university incubation process that are considered applicable to countries with limited resources and weak infrastructures.
- Highlight configuration and introduction of innovative programmes and pedagogics because of the business-led university incubation process.
- Highlight critical roles of stakeholders and local community in the business-led university incubation process while noting challenges and lessons learned.
- Introduce new forms of Government intervention policies and programmes that have proven effective in assisting the role of enterprises as incubators of universities.
- Identification of trends for engagement of government and corporate sectors through Business-Led Triple Helix interventions for enabling the independent participation of the University in the technological catch-up process.
- Establishment of possible road maps for utilizing innovative financing through partnership building between government, industry and universities.
- Utilizing shared knowledge and lessons learned to address existing loopholes in current systems and practices that inhibit the potential entrepreneurial growth and development of the University as an autonomous player for technological catch-up.

Such research topics much specifically focus on South African perspective and can talk to the South African scenario as a source of local reference.

In conclusion, the following *six key recommendations* have been identified to assist in inculcating entrepreneurial culture in higher education institutions:

- ✓ Integration of National Strategic Plan to entrepreneurial culture.
- ✓ Collaboration of local and global institutions.
- ✓ Collaboration between Higher Education and government to run entrepreneurship awareness and initiatives.
- ✓ Use of Performance Management that inculcated from National Strategic Plan, synergic down to Higher Education with emphasis on Student Engagement towards entrepreneurial culture.
- ✓ Implementation of radical economic transformation including land reform.
- ✓ Cooperation from gatekeepers of knowledge from other institutions of higher learning.

The researcher concludes that the study is underpinned by sociological and anthropological theories where social and cultural factors place a high value on innovation, risk taking. The researcher presumes that independence is more likely to produce entrepreneurial results than a system with contrasting values. The researcher believes that, as much as there is an urgent need for entrepreneurial culture in South African Tertiary Institutions, the researchers should further investigate on the urgent need of injecting entrepreneurial culture as early as at the junior phase in order to address the ever-growing unemployment pandemic. The student engagement in entrepreneurial culture should be based on what matters on student success with specific focus on post tertiary outcomes.

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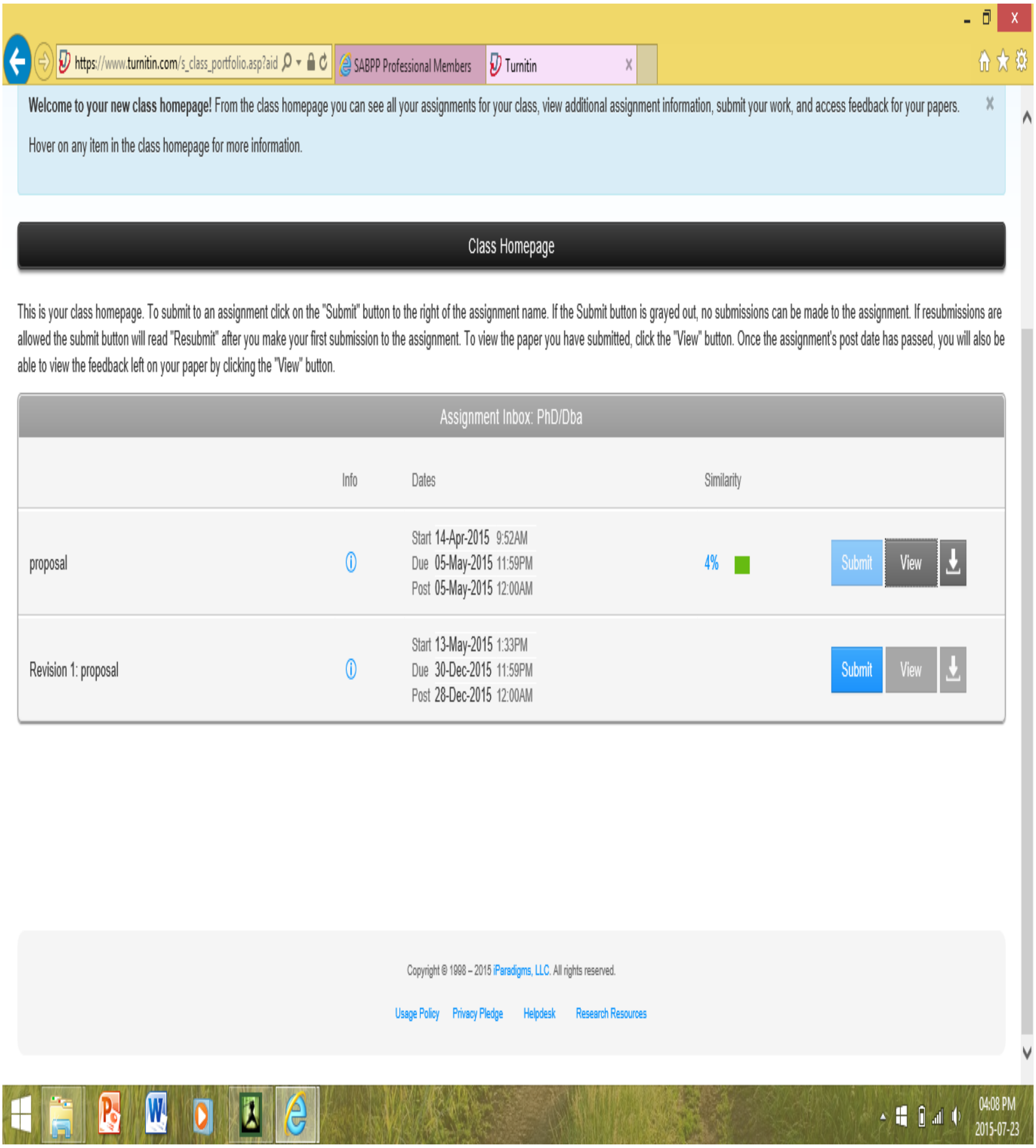
Turn it in Report



ANNEXTURE A

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SAMPLE ANNEXTURE FOR PERMMISSION TO CONDUCT RESEARCH

Dear Ms Gumede

PERMISSION TO CONDUCT RESEARCH AT THE X INSTITUTION

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research Committee (IRC) has granted full permission for you to conduct your research "Entrepreneurial culture in a South African higher education institution" at the X institution.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of your studies

Kindest Regards

Yours Sincerely

XXXXXXXXXXX

____

DIRECTOR OF RESEARCH AND POST GRADUATE SUPPORT

ANNEXTURE B

SAMPLE ANNEXTURE FOR ETHICAL CLEARENCE FULL APPROVAL

Mrs Smangele Evidence Gumede

Graduate school of business and Leadership

Westville Campus

Protocol Reference code XXXXXXX

Project Title: Entrepreneurial Culture in a South African Higher Education institution

Full Approval- Expedited application

In response to your application received on (date), The Humanities and Social Sciences Research Ethics Committee has considered the above-mentioned application and the protocol have been granted **FULL APPROVAL.**

Any alteration/s to the approved research i.e. questionnaire/interview schedule, informed consent form, Title of the Project, location of the study, research approach and methods must be reviewed and approved/ through the amendment and/ modification prior to its implementation. In case you have further queries please quote the above reference number.

Please note that research data should be secured in a discipline/ department for the period of five years.

Ethical clearance is only valid for the period of three years from the date of issue thereafter recertification must be applied for, on an annual basis.

I take this opportunity wishing you everything of the best with your study.

Yours Faithfully

……XXXXXX……………….

Chair KW

ANNEXURE C

Informed Consent Letter 3C

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

Dear Respondent,

DBA/PHD Research Project

Researcher: Name: Smangele Evidence Gumede (xxxxxxxx)

Supervisor: xxxxxxx (Office Telephone number- xxxxxxxx)

Research Office: xxxxxx (office Telephone Number-xxxxxxxx

I, **(Smangele Evidence Gumede)** a DBA/ PHD student, at the Graduate School of Business and Leadership, of the University of KwaZulu Natal invite to participate in a research project entitled (**Entrepreneurial Culture in a South African Higher Education Institution)**

The aim of this study is to: (To promote an entrepreneurial culture in a higher education institution, through an integrated approach amongst tertiary institution, business sector, and students' self-efficacy).

Through your participation I hope to understand through your participation I hope to understand [the role played by tertiary institution in entrepreneurial culture, subjective norms and cultural aspect that may affect promotion of entrepreneurial culture as well as entrepreneurial intention and attitude towards becoming an entrepreneur].

The results of the research are intended to contribute to: [addressing entrepreneurial culture gap between professionals and target audience thereby unpacking some of the realities facing higher learning institutions in relation to entrepreneurial culture and how such gaps can be closed].

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey/research. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The survey should take you about 30 minutes to complete. I hope you will take the time to complete this survey.

Sincerely

Investigator's signature____________________________________ Date_________________

This page is to be retained by participant

UNIVERSITY OF KWAZULU-NATAL

GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

DBA/ PHD Research Project

Researcher: Name: Smangele Evidence Gumede (0789930872)

Supervisor: Name Dr M. Hoque (Office Telephone number-031 2608690)

Research Office: Ms. M Snyman 031 2608350

CONSENT

I…………………………………………………………………… (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT DATE

……………………………………………………………………………………………

SIGNATURE OF LEGAL GUARDIAN IF YOUNDER THAN 18 DATE

……………………………………………………………………………………………

ANNEXTURE E

SAMPLE FIVE POINT LIKERT SCALE QUESTIONNAIRE

DEMOGRAPHIC INFORMATION	
1. Age Group e.g. 15-20, 20-25… NB: Please indicate if you are under 18 years to arrange consent from legal guardian.	
1. Gender	
2. Nationality	
3. Province	
4. Occupation	
5. Sector/faculty	

MARK WITH AN X NEXT TO YOUR MOST APPROPRIATE OPTION: (A) STRONGLY DISAGREE, (B) UNSURE, (C) STRONGLY AGREE FROM QUESTION 6-40 AND RESPOND APPROPRIATELY FROM 41-50.	**A Agree**	**B Strongly Disagree**	**C Unsure**	**D Disagree**	**E Strongly agree**

OBJECTIVE ONE	To develop a framework/model with the intention to meet test of theory which are -:***functional significance*** which is usefulness in helping people to understand entrepreneurial culture; ***Comprehensiveness*** that entails embracement of the range of diversity of phenomena; **Verifiability** that entails logicality of concepts; ***Parsimony*** that encompasses the economic aspects of explaining events; ***Internal consistency*** where model/theory must not contradict itself but should account for things internally in a consistent way within a given set of assumptions, ***Heuristic Value*** where theory model or theory should stimulate further research

		Agree	**Strongly Disagree**	**Unsure**	**Disagree**	**Strongly agree**
1	I know that I have a right to education					
2	I believe South African Education gives/ gave me the practical skills required for the world of work					
3	When I grew up I had always considered of being a professional employee					
4	The qualification I am doing/ I hold has always been my dream qualification					
5	My future lies to the security of my job					

6	My education will lead/ has led me to employment prospect					
7	I believe government has a responsibility to create job opportunities					
8	I always want to work for the best performing institution					
9	My family future lies on the success of their business					
10	Environment is not conducive for me to start up business					
11	When I grew up I had a dream company to work for					
12	I have an insight of how to draw a business plan					
13	I see myself starting the company with all benefits for my employees					
14	I am familiar with local economic Development aspects in relation to business start-ups					
15	I wish my family can get the best job for our betterment					
OBJECTIVE 2	**To contribute towards meaningful education that is meant to instill entrepreneurial culture with the purpose of driving self-reliance, self-dependence as well as profit driving mentality**					
		Agree	**Strongly Disagree**	**Unsure**	**Disagree**	**Strongly agree**
1	The environment is conducive for me to display my talent					
2	My family future lies on my job security					
3	One of more of my family members own a business					
4	I have a business Idea but do not have facilities to realize it					
5	I believe government must provide employment opportunities					
6	I am doing/ I did this qualification because I could not meet minimum requirements/ it was full in my initial dream qualification					
7	I feel there are other ways of forcing the government to ensure I get grant/housing					
8	My future lies on the success of my business					

9	I have plans to own a business in the next three years					
10	I would like to work for the company with all benefits					
11	I know of / I am a student who has a registered business that is more two years or more					
12	The knowledge I have is sufficient for me to start up my new business					
13	South Africa has enough entrepreneurs and there is no more need for new entrants					
14	I have the person mentoring me towards business start-up					
15	I believe instilling entrepreneurial culture in Tertiary institutions would yield positive results for the South African Economy					
OBJECTIVE THREE	**To support students with teaching, learning and education tools and support that will help them for the establishment of businesses from small to medium size**					
		Agree	**Strongly Disagree**	**Unsure**	**Disagree**	**Strongly agree**
1	I feel there is adequate integration between business sectors, government and post matric institutions					
2	I know/knew what I want/ wanted to be during foundation and it is still according to initial plan					
3	I believe Industries must provide employment opportunities					
4	I believe South African Education gives/gave me adequate entrepreneurial skills					
5	I am entitled to government grants or NSFAS /					
6	I believe I have a way of helping government towards provision of education					
7	I have a way of surviving if what I am currently doing fails					
8	I have considered to start my registered business					
9	I regard myself as a self-starter					

10	My family future lies on the security of their employment					
11	I know/ have a relative who finished tertiary and started business without getting employed first					
12	There has been registered business in my family					
13	I regard it as a right to receive government grant/education					
14	I believe in the possibility of free education					
15	I believe I have something to offer towards reducing unemployment					
OBJECTIVE FOUR	**To unleash within students, the potential of creating manpower through establishment of business from small to medium size and other job opportunities incorporated with risk management and uncertainty bearing information when managing their businesses**					
		Agree	**Strongly Disagree**	**Unsure**	**Disagree**	**Strongly agree**
1	I have a business idea that can sustain my community/family					
2	I know about the scarce skills of South African Country					
3	I am familiar with National Skills Development strategy					
4	I feel it is the responsibility of the government to alleviate poverty and unemployment					
5	I do not know about scarce and critical skills of South Africa					
6	I believe I have a capability to create employment opportunities					
7	I believe I must provide employment opportunities					
8	My family future lies on the success of their business					
9	My family can/ does survive without government subsidy					
10	When I grew up I had always considered to be my self-employer					

11	I know of the tertiary institutions with Business Plan Competition					
12	The knowledge I have will sustain or /sustains me for the best future employment top position e.g. MD or CEO, Principal, HOD					
13	I believe entrepreneurship is for people who are doing business studies					
14	I may have some impediments in opening registered business					
15	I have no one mentoring me towards business start-up					
16	I do not see any difficulties in opening new business					

ANNEXTURE F

OPEN ENDED QUESTIONNAIRE

1. Age Group e.g. 15-20, 20-25… **NB: Please indicate if you are under 18 years to arrange consent from legal guardian.**	
6. Gender	
7. Nationality	
8. Province	
9. Occupation	
10. Sector/faculty	
OPEN ENDED QUESTIONS	
1. How do you think post metric institutions should assist in alleviating poverty and promoting self-employment?	
2. Do you think government, business, universities and you should be involved in promoting self-employment? Please elaborate	
3. In which way do you think government should government assist in alleviating poverty and promote self-employment	
4. In which way do you think business sectors should assist in alleviating pervert and promoting self-employment	
5. In which way do you think you as an individual think you can assist in alleviating poverty and promoting self-employment	
6. Do you have any business Idea that you plan to do in the Next three	

years? If Yes, how will you ensure sustainability	
7. What is your comment regarding South African education in relation to entrepreneurial culture	
8. Do you foresee any challenges to hinder you from starting your own business if yes what are they	
9. Do you think product of students from foundation is prepared enough for either post matric of self-employment mentality? Elaborate	
10. Which is more beneficial between self-employment and being employed? Why?	
11. What do you think is the life span of small businesses in South Africa? Elaborate	
12. Do you think tertiary institutions government and industries are collaborative enough to encourage entrepreneurship? Elaborate	
13. Would you advise an individual to start a business whilst schooling, or finish school first or to simple follow his business passion and not go to school? Elaborate	
14. What additional comments would you like to add towards eradicating poverty and unemployment?	

AFFIDAVIT FROM PROOF READER

174 Margaret Mncadi Avenue

715 Gables

Durban 4001

Secat074@gmail.com

031 3011899

Reg. No. 2012/064963/07

EDITING AND PROOF READING REPORT

This serves to confirm that the dissertation submitted by Smangele Evidence Gumede has been proof read and edited with the emphasis being on grammatical correctness and general flow of language. It further confirms that it is her own work submitted in fulfilment of the requirements for the degree of Doctor of Business Administration. The work is ready for submission and examination purposes. Research topic submitted to me for proofreading and editing is "**Entrepreneurial culture in a South African Higher Education institution**".

……………………

Nitsha T.T.
On behalf of Secat Enterprise Company

031 3011899

0.2. Supervisor's permission to submit Thesis

College of Law and Management Studies

Supervisors Permission to Submit Thesis/ Dissertation for Examination

Name: **Smangele Evidence Gumede**		No: **9151207**	
Title: **Entrepreneurial culture in a South African Higher Education institution**			
Qualification: **Doctor of Business Administration**		School: **Graduate School of Business and Leadership**	
		Yes	No
To the best of my knowledge, the thesis/dissertation is primarily the student's own work and the student has acknowledged all reference sources		**Yes**	
The English language is of a suitable standard for examination without going for professional editing.		**Yes**	
Turnitin Report %		**4%**	
Comment if % is over 10%: n/a			
I agree to the submission of this thesis/dissertation for examination		**Yes**	
Supervisors Name: **Prof Muhammad Hoque**			
Supervisors Signature:			
Date:23 January 2018			
Co- Supervisors Name: N/A			
Co- Supervisors Signature: N/A			
Date: N/A			