NATIONAL UNIVERSITY ENTREPRENEURSHIP ECOSYSTEM BASELINE REPORT

higher education & training
Department:
Higher Education and Training
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EDHE
ENTREPRENEURSHIP DEVELOPMENT IN HIGHER EDUCATION

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Acknowledgements

In a first attempt at establishing a baseline of the nature and scope of entrepreneurship in South African higher education, we learnt that a project of this nature, in the absence of any prior work and amid the complex and uncertain higher education landscape, is no simple task. This report is the result of the valued contributions of a large number of individuals and entities. We acknowledge some key stakeholders here, but are sincerely grateful to every person who contributed in one way or another.

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A research study conducted by Pivot Global Education for the Entrepreneurship Development in Higher Education (EDHE) Programme of the Department of Higher Education and Training (DHET) and Universities South Africa (USAf), in partnership with the British Council

FEBRUARY 2020

Foreword: An Essential Baseline Study to Shape EDHE's Engagement

Prof. Ahmed Bawa
Chief Executive Officer,
Universities South Africa (USAf)

> It is paramount that each institution deliberately designs the ecosystem that best suits its needs and its conditions.

The complex relationship of universities with society has constantly to be worked at. These institutions are global in scope because of the nature of knowledge as an entity that spans borders and cultures, but they are also deeply rooted in the social, economic and political geographies in which they are located. They are simultaneously intensely local and intensely global. This forces universities to focus heavily on how they relate to their local contexts and, as Professor Chris Brink posits (and I paraphrase): "it is not enough to ask what universities are good at – we must also ask what universities are good for!"

At the heart of South Africa's simultaneous crises of poverty and inequality is its unbelievably high unemployment rate. At close to 30%, South Africa has a shockingly high unemployment rate which for young South Africans rises to close on 50%. This is clearly a mirror of the state of South Africa's economy. It is stagnant. And any hope of addressing these crises will depend on understanding how to grow the economy so that there are higher levels of employment. How should the universities respond to these crises?

One response of universities would be to contribute to the generation of a new, vibrant culture of entrepreneurship. This imagination is what gave rise to the DHET's initiative in establishing the Entrepreneurship Development in Higher Education (EDHE) Programme, which is now based at and run out of USAf. The idea of the programme is four-fold. Firstly, it is aimed at providing students with the opportunity of engaging with the world of entrepreneurship while they are busy with degree and diploma studies. Secondly, it focuses attention on building the capacity of academics to facilitate this engagement, to ensure that there is learning taking place at the theory-praxis nexus and to provide students with appropriate learning experiences. Thirdly, it works with the universities themselves to understand how best to facilitate the development of entrepreneurial ecosystems within which students are immersed. And finally, the research-innovation chasm is deep in South Africa. One of the challenges we face as a sector is to understand how both undergraduate and postgraduate students engage the ideas of entrepreneurism as they work on projects, so that the innovation imperative is built into the research enterprise rather than seen as being retrofitted.

EDHE, will have to work with the objective conditions at each of the institutions, to understand what the international best practice tells us and to understand what the nature of South Africa's entrepreneurial terrain is like. This baseline study is meant to provide EDHE with these kinds of details and data as a basis upon which to design interventions.

At the end of the day, it is paramount that each institution, on the basis of the evidence before it and in partnership with EDHE, deliberately designs the ecosystem that best suits its needs and its conditions so as to maximise its impact on building an entrepreneurial culture amongst its graduates.

This is an exciting intellectual adventure that has the potential to make important social and economic impacts on students and the economy more generally. This baseline study will provide important information and data to allow EDHE to maximise its impact.

Foreword: Towards a National Policy to Guide Entrepreneurship Development in South African Universities

It gives me great pleasure to share a few thoughts on the first research study to be jointly commissioned by the British Council and Universities South Africa, as part of our collaborative partnership on expanding the capacity of South African universities in the area of entrepreneurship. The notion of an entrepreneurial university is gaining momentum globally. In South Africa, the UK and other parts of Europe, universities are increasingly becoming more entrepreneurial as they move away from the more traditional management and academically-focussed structures and ways of operating, towards more inclusive, flexible, student-led curricula that reflect the realities of industry and the world of work today and ahead into the future.

The nature and magnitude of entrepreneurial initiatives, however, vary from one university to another. In the UK, universities tend to be diverse, with some being research intensive and others being more teaching focussed. Likewise, this National University Entrepreneurship Ecosystem Baseline Study reveals the rich diversity and uniqueness of each university in South Africa. From this study, it is evident that the degree and form of entrepreneurship at universities vary greatly across the country, depending on the type of university and its history.

Considering the above, this research maps and analyses the state of affairs in relation to entrepreneurship at universities, guided by an acknowledgement and an understanding of the diversity within the university sector in South Africa. As the higher education sector proceeds to engage with, and make meaning of the findings of this study, I would strongly encourage universities to embrace their unique identity and diversity, and continue to discover their own pathways to becoming entrepreneurial, because in the world of education, there is no one-size-fits-all model. With further research and engagement with the universities in South Africa, a core set of principles, criteria or values could form the basis of a framework that all universities could adopt as they see fit.

What is clear is that instilling a culture of entrepreneurship across universities, in whatever shape or form, is key to the advancement of social welfare and economic development in the region and this Ecosystem Baseline Study is a progressive step in the right direction. Programmes that seek to advance entrepreneurship in the higher education sector, such as the Department of Higher Education and Training (DHET's) Entrepreneurship Development in Higher Education (EDHE) Programme, are very important to the UK as they align with the ideals of our Overseas Development Assistance (ODA) which ultimately aims to benefit low income, historically disadvantaged and vulnerable populations.

This Entrepreneurship Ecosystem Baseline Study fills a crucial knowledge gap in the South African university entrepreneurship ecosystem. This study has succeeded in analysing South Africa's reality and providing key information that will be used to further support entrepreneurship. More importantly, it will feed into the design of a National Policy Framework that will seek to address the policy regulatory vacuum and stimulate entrepreneurship activities in South African universities. This will be facilitated through interventions such as the EDHE Programme and others in the sector.

British Council South Africa would like to thank all those individuals who contributed to making this publication possible. Without the participation of the university representatives, we would not have been able to collect the information that makes this study so valuable and so useful. Very special thanks also go to our project implementation partner, USAf, and Pivot Global Education (UK) for conducting the research and compiling this crucial report.

Susana Galvan
Country Director,
British Council South Africa

> Instilling a culture of entrepreneurship across universities is key to the advancement of social welfare and economic development in the region.

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Glossary

ANDE	Aspen Network of Development Entrepreneurs
DHET	Department of Higher Education and Training, South Africa
ENACTUS	Experiential learning platform (known formally as Enactus)
Entrepreneurship education	Formal academic programme
Entrepreneurship training	Formal or informal, accredited or non-accredited training
EDHE	Entrepreneurship Development in Higher Education: a programme of the Department of Higher Education and Training, South Africa and Universities South Africa (USAf)
MCF	MasterCard Foundation
NYDA	National Youth Development Agency
SEDA	Small Enterprise Development Agency
SEFA	Small Enterprise Finance Agency
STEP	Student Training for Entrepreneurial Promotion, a programme supported by UNESCO SA and Leuphana University of Lüneburg
TEF	Tony Elumelu Foundation
USAf	Universities South Africa
Wadhwani Foundation Entrepreneur Programme	An international programme to accelerate economic development in emerging economies through entrepreneurship, innovation and skills

Executive Summary

Overview

This baseline study provides insight into the enabling entrepreneurship ecosystem within the 26 South African public higher education institutions and existing practices and activities currently underway. Its purpose is to enable, using the recommendations gathered, the creation of a framework to inform the development of a National Policy Framework on Entrepreneurship Development in South African Higher Education. The report deals with complex issues of definition, delivery, design and impact. Through an approach of review and analysis, this report provides a mapping of existing activity; an analysis of trends and expectations; and a series of recommendations regarding future practice.

The study illustrates several key factors that must be addressed for future strategy and development of Entrepreneurship Development in Higher Education (EDHE) in the higher education institutions and among their partners. There is much scope for increased clarity within the field of entrepreneurship in South Africa in terms of institutional expectations; measurement and impact; hosting and activity; and indeed, the definition and terminology itself. The EDHE Programme must position itself as the support unit for entrepreneurship in higher education, providing policy frameworks to build successful university entrepreneurship engagement. EDHE should continue looking for partners, such as the British Council, who align with their vision of championing the development of entrepreneurship in tertiary education. A key issue that arose in this project was the presence of discrepancies in the interpretation of the findings which were often unclear. Responses by individuals within the same institutions varied within, and between the identified job types. This was highlighted in the disparity between what was reported externally by an institution, and what was reported in the focus groups and interviews. The study highlighted a lack of clarity and awareness throughout, pointing to communication lines that can be improved upon.

Activity stems from understanding: both of an idea itself and of where, how and why it should be delivered. In the context of this study, the issue is compounded by one of definition. When terms like 'entrepreneurship', 'innovation' and 'entrepreneurial' are used almost interchangeably, there is naturally scope for confusion and a need for further clarity. There is a need to more clearly define entrepreneurship in the South African context, with a particular view to improving impact and outcomes. There is a tendency, currently, to talk more about the process and activity of developing entrepreneurs in relation to the definition as this is how people see entrepreneurship and how it is implemented. Entrepreneurship is a loaded term, often associated with Business Schools and more readily connected to academic delivery which is problematic in its own right, as highlighted by the data presented. This study highlights the need to improve the socialisation of entrepreneurship in the world; normalising the idea that the validity of being a job creator is equal to that of being a job seeker. Traditionally, jobs have been seen as the focus and impact factors surrounding entrepreneurship, rather than the encouragement of engagement.

A key finding of this research is the positioning of entrepreneurship activity within an institution, as this has a direct impact on the level of visibility, credibility, support and funding. There is considerable evidence indicating that academic entrepreneurship (bringing academia and private sector research and development closer together through knowledge transfer) is doing well; however, as a function of degree delivery, particularly at undergraduate level and within the Business School structure, there is more work to be done to broaden the appeal and access of entrepreneurship across a university. This report highlights the value of having a central entity, with accompanying senior champion to support the coordination and delivery of entrepreneurship activity on campus. This would support the breaking of entrenched silos, which are evident in universities across the world, and promote greater levels of communication and awareness. Academics need to be involved in the design and delivery of entrepreneurship activity, but training and development need to be embedded at an institutional level, and in so doing, support the building of a culture and system that promotes entrepreneurship at all levels.

Findings in this study indicate that institutions are convinced of their value and relevance in providing entrepreneurship training to the youth of South Africa, but the data also reveals that the current model and approach is not fulfilling this obligation. The need is great for Universities South Africa (USAf), through EDHE, to work with external partners such as the British Council, to provide the support and guidance needed to enable universities to deliver on their objectives around entrepreneurship development. In addition, there is a need for an in-depth review of what is delivered, who is delivering it and the manner of delivery. In order to assess and adapt this accordingly, the needs of students must be taken into account in this ever-evolving sector. Herein lies the paradox. Universities rely on tradition and history; entrepreneurship needs disruption and flux. Universities should be incubators, however, and provide both opportunity and access, with a more practical approach than in the past. Traditionally, academia within higher education is rooted in a strong research tradition. To strengthen the entrepreneurial ecosystem, universities need to increase their focus on developing and supporting entrepreneurship action.

As is evident in this report, entrepreneurship is a complex and evolving subject. It is also largely subjective, depending on where, and by whom, it is delivered. The complexity of how entrepreneurship is delivered and the learning that is being conveyed

ensures that there is no simple solution; there is no silver bullet to solve this issue.

This study highlights examples of good practice that can be factored into subsequent strategic decision making. The aim of the benchmarking exercise undertaken was not to rank systems, but to build a picture of entrepreneurship policy and delivery in addition to identifying priority areas that the Department of Higher Education and Training (DHET) and USAf can support institutions in addressing. A framework for future activity is recommended, but it must take context and capacity into account. This is of particular relevance in the South African case, given historic and economic disparity; and the fact that the perception of value and the location of each institution plays a very specific role in its capacity and function.

Recommendations at a glance

Audit of entrepreneurship development

1. Using an established and agreed upon EDHE framework, universities should **commission an internal audit of their entrepreneurship development activities**. This should include outline staffing and funding received. It should evaluate effectiveness in order to increase communication within the silos and present areas for collaboration between academic staff and support professionals within the institution.

Creating an enabling environment for an entrepreneurial university

2. EDHE, in collaboration with the EDHE Communities of Practice, should work with universities to appoint a 'senior management' level **champion for entrepreneurship to consolidate responsibility for entrepreneurship development** within their portfolio.
3. **The role of the EDHE Communities of Practice within institutions should be bolstered** to provide an internal support structure, as well a direct line to the 'senior management' level champion.
4. Universities should work with EDHE to **create clear and widely distributed strategies** that specify their institutional objectives in entrepreneurship development.
5. Institutions should aim to have a **dedicated, well-resourced team with strategic oversight for entrepreneurship development activities.** This means an allocation of funds, job descriptions, titles and objectives that align with the universities' positions on entrepreneurship development.
6. EDHE policy should look to work with universities to create **opportunities for students to engage** in entrepreneurship on campus.

Curriculum design

7. EDHE should work with the Council on Higher Education to create pedagogically suited Training of Trainers programmes (by general subject area) to **integrate entrepreneurship thinking into curriculum design** outside traditional business faculties and departments.
8. EDHE should use its position in USAf as the representative organisation of universities in South Africa to **establish partnerships with foundations** (Tony Elumelu Foundation, MasterCard Foundation) and **delivery partners** (LinkedIn Learning, Get Smarter) to strengthen the entrepreneurship activities within the universities.
9. Through the Communities of Practice, EDHE should encourage institutions to **assess and explore their entrepreneurial culture abilities through the use of the HE Innovate tool** (https://heinnovate.eu/en).

Teaching and learning provision

10. USAf should design a **skills audit to assess the institutional development needs** for developing and implementing the entrepreneurship agenda. This can be an additional pillar for performance management through key performance indicators and productivity units.
11. The British Council should consider expanding its support towards the EDHE Programme by partnering with DHET and USAf to design and implement activities that seek to build the capacity of emerging student entrepreneurs at South African universities, thus making a meaningful contribution in the graduate outcomes space.
12. USAf should **seek funds** designed to support institutions **to allow staff to engage in non-conflicting entrepreneurial pursuits**.

Funding specifically for entrepreneurship development

13. DHET should work with government funding agencies like SEDA, SEFA and the NYDA to **set aside funding for entrepreneurship development** tied to an institution's ability to meet key performance indicators as set out in the EDHE framework. This should be based on a scale of engagement to avoid disadvantaging smaller institutions.

Introduction

This research project was co-commissioned and co-funded by Universities South Africa (USAf) and the British Council.

The two partners share mutual objectives to support Entrepreneurship Development in Higher Education (EDHE) in South Africa. EDHE was established at the end of 2016 from within the University Education Branch of the Department of Higher Education and Training (DHET) and has been funded through the University Capacity Development Programme since 2018. EDHE is a movement aimed at driving and supporting entrepreneurship development in universities and has continued to grow in output and impact year-on-year. Entrepreneurship in its different forms is now increasingly recognised as a priority area by the public universities, and most universities are making good progress in supporting student entrepreneurship, increasing the audience exposed to entrepreneurship through teaching, learning and research, while repositioning themselves as entrepreneurial institutions.

As the driver of this collaborative partnership, EDHE sought a baseline study to assess the level, scope and scale of entrepreneurship development in the 26 public universities in South Africa. Set against a national backdrop which sees entrepreneurship development as being paramount to the growth and development of the nation and its youth population, this work and the activities surrounding it, are underpinned by EDHE's objective of developing the entrepreneurial capacity of universities, students, academics and support professionals.

This baseline study provides insight into the enabling entrepreneurship ecosystem within the South African public higher education sector and the existing practices and activities currently under way. Using the recommendations gathered, it creates a framework that allows for the development of a National Policy Framework on Entrepreneurship Development in South African Higher Education.

All 26 public universities in the country have been included in the study, albeit, with various levels of engagement. These institutions, all of which are to be considered unique and functioning in diverse institutional, geographic, socio-economic and political contexts, are working in a landscape that is complex and at times volatile. Data presented in this report are aggregated so as not to unfairly rank institutions based on their entrepreneurship provisions. The aim of the study was to understand what entrepreneurship activity was taking place, where it sat within an institution, who had strategic responsibility for it, how entrepreneurship development activity was delivered and what challenges were being faced by those within the institution who were engaging with it, in order to provide USAf and EDHE with data to build policy to support entrepreneurship development.

Why entrepreneurship?

The growth and development of entrepreneurship ecosystems around the world is a well-researched topic. The drive behind its timely and imperative narrative, especially in South Africa, is the increase in youth unemployment which has been attributed to unpredictability, uncertainty and instability surrounding the country's economy. Self-initiated job creation is thus seen as key to alleviating youth unemployment and improving the economy.

With the global emphasis on entrepreneurship, entrepreneurs are increasingly becoming role models in society, and entrepreneurship as a career choice has risen in popularity. The term has become part of everyday language and is often associated with economic growth and, in socio-economic terms, the well-being of societies (Achampong, Harber, Falk and Lee-Wolf, 2017; Kew, Herrington, Litovsky and Gale, 2013).

If entrepreneurship contributes to economic growth and employment, then more youth should be encouraged and trained to become entrepreneurs. The studies that underpin this belief indicate that entrepreneurship is generally considered a positive opportunity for youth, rather than simply a means of escaping unemployment. Entrepreneurship can help alleviate socio-economic challenges through the promotion of business formation and self-employment as a viable career option. It helps youth build interpersonal skills, and non-cognitive skills such as perseverance and it motivates and empowers youth in other life circumstances, including coping with poverty and adapting to adversity.

The implementation of entrepreneurship programmes has been recommended in national plans and strategies, as depicted in Table 1.

Table1: *Summary of South Africa's youth development policies (Yiannakaris, 2019)*

Policy	The National Development Plan 2030 (NDP)	The Department of Trade and Industry Youth Enterprise Development Strategy 2013–2023
Year	2012	2013
Description	The NDP is a detailed blueprint for how South Africa can eliminate poverty and reduce inequality by the year 2030. It proposes that fertile conditions for entrepreneurship and career mobility will contribute significantly to uniting South Africa's people and supports entrepreneurship as a youth development strategy.	A strategy instrument intended to foster youth economic participation by deliberately enhancing youth entrepreneurship and accelerating the growth of youth-owned and managed enterprises. It aims to increase the number of self-employed youth from approximately 6% to 20% by 2023, as well as increase entrepreneurial culture, business managerial capacities, technical skills and talents among young people.
Recommendations include	Introducing community-based programmes to offer young people life-skills and entrepreneurship training.	Introducing young people to a curriculum on entrepreneurship at an earlier stage, particularly at the basic level of education. A programme to raise awareness of entrepreneurship as the first option for economic participation endeavours.
Source	(National Planning Commission, 2012)	(Department of Trade and Industry, 2013)

Analysis and recommendations around current and future activity are best seen in light of the policy implications in Table 1. There is a connection between driving forces, expectations and intended outcomes that should be given attention and factored into future strategy discussions. While the data does not advocate a top-down approach that controls all activity, there is certainly scope for a more cohesive and structured approach that would better support and measure engagement and impact – with a further view to review and adaptation.

Literature Survey

Background

In recent decades, scholars, policy makers, and educators have shown increased interest in the field of entrepreneurship. Entrepreneurship is viewed as a critical source of economic growth in most countries, and its effects are evident in terms of increased innovation, competitiveness, wealth creation, productivity, job creation, and new-industry development (Kuratko, Morris and Schindehutte 2015; Kuratko 2005). Today, promoting entrepreneurship is a key theme in government policies and strategies around the world, aiming to stimulate economic activity, increase employment rates, and promote international competitiveness (Arshed, Carter and Mason 2014; O'Connor 2013). Along with policy makers' efforts to promote entrepreneurship, there has been significant growth in entrepreneurship education programmes and courses in universities (Fayolle and Gailly 2012). This growth is fuelled by a belief that entrepreneurship, or at least some aspects of it, can be learned via formal education and training (Valerio, Parton and Robb 2014).

Despite the worldwide proliferation of entrepreneurship education programmes, there has been little agreement on their objectives, target audience, content, teaching methods, and assessment practices (Mwasalwiba 2010). This lack of consensus has been partially attributed to the multi-definitional nature of entrepreneurship (O'Connor 2013), which may give rise to differences in the quality and effectiveness of different programmes. It has been suggested, therefore, that the abovementioned components need to be aligned.

Nature of entrepreneurship activity

Existing literature suggests there is great variation in entrepreneurship education programmes around the world (Mwasalwiba 2010; Henry 2013; Fayolle and Gailly 2012; Maritz and Brown 2013), some of which is naturally attributable to context. While most entrepreneurship programmes are offered by higher education institutions (Maritz and Brown 2013), various other programmes are offered in training and development fields for non-business and non-academic audiences, and often for specific groups such as women and immigrants. Mwasalwiba (2010) argued that such variation was mainly attributable to a lack of consensus on key issues as well as the conceptually fragmented state of the field. Fayolle (2008) (as cited in Maritz and Brown, 2013), suggested there was no common framework or agreed-upon best practice regarding entrepreneurship education.

Entrepreneurship education can help realise a range of socio-economic goals. Therefore, its objectives are often expressed as broad economic, social, or pedagogical aims. Economic goals can include creating new ventures and jobs; social goals can include developing an entrepreneurial 'culture'; and pedagogical goals can include educating potential entrepreneurs about entrepreneurship (Maritz and Brown 2013). Reviewing 50 entrepreneurship education programmes, Hytti and O'Gorman (2004) (as cited in Jones, Matlay, and Maritz 2012) found that the majority of these programmes were designed to help individuals become entrepreneurs, followed by programmes intended to help people understand entrepreneurs and become entrepreneurial in their lives. In a similar review, Mwasalwiba (2010) estimated that 34% of scholars believed that entrepreneurship education aims to increase entrepreneurial attitudes, spirit, and culture; 27% associated entrepreneurship education with new venture creation; and 24% associated it with social contribution by helping entrepreneurs to form and grow, developing their capabilities and improving the tangible and practical links between these capabilities and social need.

Scholars generally agree there are three types of entrepreneurship courses (Pittaway and Edwards 2012; Mwasalwiba 2010; Robinson, Neergaard, Tanggaard and Krueger 2016; Sirelkhatim and Gangi 2015). 'About' courses typically teach theories of entrepreneurship and aim to increase awareness of entrepreneurship and encourage students to consider it as a career choice. 'For' courses aim to support students' intentions to become entrepreneurs (Sirelkhatim and Gangi 2015) by providing them with tools and skills (Mwasalwiba 2010). Lastly, 'through' courses aim to help students acquire a range of skills, competencies, and business understanding as they create new ventures (Mwasalwiba 2010). While 'for' and 'through' courses are considered more effective than 'about' courses, the latter is the most dominant in higher education institutions (Robinson *et al.* 2016). These classifications, based on course objectives, affect the types of learning outcomes educators seek (Pittaway and Edwards 2012). Here, a learning outcome is 'a very specific statement that describes exactly what a student will be able to do in some measurable way' while an 'objective' is 'a very general statement about the larger goals of the course or program' (Hartel and Foegeding 2006).

Nature of delivery

The literature on entrepreneurship education generally emphasises 'learning by doing' (Fayolle 2013) over traditional teaching methods (Maritz and Brown 2013). While traditional approaches might be effective for presenting information (Bennett 2006, as cited in Mwasalwiba

2010), experiential methods more closely mirror the unpredictable nature of entrepreneurship and expose students to broader possibilities (Maritz and Brown 2013), thus teaching them how to deal with real-world problems (Pittaway and Cope 2007).

Many studies have suggested that a research gap persists regarding assessment in entrepreneurship development programmes (Fayolle 2013; Duval-Couetil 2013; Maritz and Brown 2013). Duval-Couetil (2013) differentiated between 'summative' assessment (measuring what students know at a given point in time) and 'formative' assessment (giving real-time feedback on students' performance to help adjust teaching and learning). Summative methods include quizzes, tests, projects, and course evaluations, while formative methods include observation, questioning, peer and self-assessment, and early or mid-course evaluations. Duval-Couetil (2013) also differentiated between 'direct' (tests, assignments, activities) and 'indirect' (surveys, interviews, focus groups) methods.

Pittaway and Edwards (2012) found that business plans and business reports followed by presentations (i.e. skill-based 'for' courses) were the most common assessment types in entrepreneurship development programmes. They also found that traditional methods (tests, exams, essays) were less prevalent than expected given the dominance of 'about' courses. This might point to potential alignment issues between a course's objectives/ learning outcomes and assessment practices. Methods such as reflective assessment, peer assessment, and interviews were the least prevalent. Pittaway and Edwards (2012) observed that 'about' entrepreneurship courses were more likely to use tests, exams, and case studies, while business plans, business reports, and presentations were more likely to be used in 'for' and 'through' courses. In addition, reflective assessment practices were more likely to be used in 'through' courses since they are considered essential for experiential learning (Pittaway and Cope 2007).

South African context

South Africa is the economic powerhouse of Africa, accounting for approximately 21% of the continent's $2.19 trillion GDP. In spite of its developed economic infrastructure, South Africa continues to experience severe income inequality. According to the national data agency, Statistics South Africa, in 2015, 55.5% of the population lived below the poverty line with limited prospects of finding employment (Statistics South Africa website). At 63, South Africa's GINI coefficient (a World Bank measure of statistical dispersion, representing the income or wealth distribution of a nation's residents, and used to measure inequality), is the highest in the world.

In addition, the country is plagued by high unemployment due to the misalignment of the skills required by the economy and those possessed by the populace. The government has committed to fostering entrepreneurship to advance its economic development and, in particular, job creation priorities. This is in recognition of the fact that investment in the development of small businesses has been among the key ingredients of success for many successful economies (Omidyar Network, 2013).

South Africa has a low rate of entrepreneurial activity when compared to the average for efficiency-driven economies. Just 9.2% of adults were involved in starting up a business in 2015, compared to the average of 15% in efficiency-driven economies, while 3.4% of adults were involved in running existing firms, against an average of 8% for efficiency-driven economies (GEM Report a).

Things are not completely bleak in the country. The Global Entrepreneurship Monitor (GEM) reported that a high percentage of adults viewed entrepreneurship in a positive light – with 73.8% seeing it as a good career choice and 76.1% as high status. The survey data also highlighted that over a quarter of entrepreneurs expected to create six or more jobs over the next five years. However, when GEM compared South Africa to other countries, it noted that the entrepreneurial ecosystem was weighed down by red tape, low transfer research and development, lack of entrepreneurship education at schools and poor cultural and social norms towards entrepreneurship.

In its 2019 survey of global social entrepreneurship, the Thompson Reuters Foundation contacted academics, social entrepreneurs, investors and policy-makers in the 44 countries with the largest economies in the world, to assess the level of social entrepreneurship in each country. Using six key indicators (government support; ability to attract skilled staff; public understanding of social entrepreneurship; the ability to make a living through entrepreneurship; the ability to grow momentum of social entrepreneurship; and access to investment), the report highlighted how accepting these countries are to social entrepreneurship. Canada topped the list, followed by Australia, France and Belgium, while South Africa came in 34th, advancing three places from the 2016 survey. The country summary emphasised that it had become easier for social entrepreneurs to access grants, attract staff with the required skills and make a living from their work in the last three years. The strongest point, and most telling of all, was that social entrepreneurship was reportedly gaining momentum in the country, which bodes well for the aims and objectives of EDHE and entrepreneurship activities within universities.

In addition to the policies aimed at youth development, the South African Government established the Department of Small Business Development in 2014. This department focuses on enhanced support for small businesses and cooperatives, with an emphasis on programmes to advance entrepreneurship amongst women, the youth, and people with disabilities, in order to contribute to job creation and economic growth. The department houses two major funding and support bodies, namely the Small Enterprise Development Agency (SEDA) and the Small Enterprise Finance Agency (SEFA).

The Aspen Network of Development Entrepreneurs (2019) mapped out the entrepreneurial ecosystem in South Africa illustrating a relatively high number of direct funders and capacity building agencies in the country. Funders identified include government agencies, fund management firms, venture capitalist and angel investors, as well as private equity funds and crowd sourcing organisations. Entrepreneurs also have access to a plethora of training and capacity building providers from government and corporate programmes through to 'not for profit' and 'for profit' trainers including academia, foundations and formal and informal networks. South Africa experiences a common problem here, however, namely that of access and location. There is, perhaps, a natural emphasis on activity within the urban environment and this could be to the disadvantage of the more rural population. While there are clearly initiatives in place to counterbalance this reality, it must be acknowledged that location and access play a key role in uptake, and therefore in impact. Indeed, this is a broader issue and one that is raised in the Findings section of this report on pages 32 to 38.

Research Methodology

Approach

With a view to supporting the development of a national policy framework, it was essential to understand existing activity, institutional capacity and appetite for engagement, and was important to capture activity within institutions and perception around the delivery of entrepreneurship development.

A mixed methods approach (quantitative and qualitative) assessed the scale and scope of entrepreneurship activities within the public higher education institutions. This resulted in a map, on a widespread scale, of types of activity, levels of engagement and strategic importance of entrepreneurship education at each university. The use of mixed methods allowed information to be analysed in multiple ways. This approach allowed the ability to support the data collected through interviews, desktop research and focus groups in order to generate a foundation for layered analysis and critical recommendations.

Data collection

The combination of the multiple data points (quantitative and qualitative) enabled triangulation of results and depth of explanatory meaning. Data collected was provided in a visual summary of key findings from across the country. The research team conducted a thorough analysis of the varying data components and used this analysis to inform the recommendations in this report.

The decision to use aggregated data and report and analyse more broadly was chosen over the case study approach in order to demonstrate the extent to which entrepreneurship activity takes place within the national landscape, rather than at an institution-specific level. The data received, while valuable, was inevitably incomplete and therefore a direct case-by-case based analysis would yield inconsistencies, driven by data, rather than by actual practice.

This research fully acknowledges the diversity and unique nature of higher education in South Africa and has adapted its approach accordingly. With an array of different types of institutions, including research-intensive organisations, universities of technology, as well as recently established universities, the South African higher education landscape provides learning opportunities to cater for its diverse population. Entrepreneurship development is diverse in its objectives and methodology. This means that it could be very different in different universities, because practical work methods may vary considerably depending on the aims of the programme, course or support measures (Zaring, Gifford and McKelvey, 2019). Given each of the universities' respective approaches, mandate and impact, often measured by history, reputation and location (institutions operate within their local context primarily, while being driven by an overarching sector agenda), this method was the most effective way of looking at the data presented to meet the overall aims of the baseline research project, which, in turn, naturally ensures a diversity of response and approach to issues and agendas such as entrepreneurship. This report reflects this; it accounts for the varied approaches and encapsulates them within the series of recommendations.

Surveys

The survey was created with the help of the team at EDHE; the British Council; Ms Charleen Duncan (Director: UWC Centre for Entrepreneurship and Innovation, University of the Western Cape); and Dr Poppet Pillay (Director, Centre for Social Entrepreneurship, Durban University of Technology) who serve as the Conveners of the EDHE Community of Practice for Entrepreneurial Universities. The survey was distributed to a list of over 700 people, compiled by Professor Susan Steinman in her initial research, incorporating additional details from the EDHE database. Participants were given the option of completing the surveys electronically or on paper.

The survey email requests were staggered, starting in mid-July 2019 with follow-up emails sent throughout August 2019 and into September 2019. The survey initially closed in early September 2019 with 136 respondents from all 26 public universities. Low initial response numbers meant there was a need for a further push and extension of the response deadline. Acknowledging both the nature of online data collection and the decentralised nature of the stakeholder base, data was cleaned to remove duplicate or defunct email addresses, reducing the initial list from 700 to 547. The survey was then reopened, yielding an additional 64 responses before finally closing at the start of October 2019. With a total of 200 completed responses out of a potential 547, this reflects a 36% response rate, which is within the expected boundaries of research of this nature.

Table 2: Survey responses by institution

Cape Peninsula University of Technology	3	Sefako Makgatho Health Sciences University	3
University of Johannesburg	6	University of Venda	9
Central University of Technology, Free State	11	Universiteit Stellenbosch University	10
University of KwaZulu-Natal	7	University of the Western Cape	3
DUT Durban University of Technology	24	Sol Plaatje University	3
University of Mpumalanga	1	University of the Witwatersrand, Johannesburg	7
MUT Mangosuthu University of Technology	6	Tshwane University of Technology	5
University of Limpopo	10	University of Zululand	3
Nelson Mandela University	8	University of Cape Town / Universiteit van Kaapstad / iYunivesithi yaseKapa	3
Universiteit van Pretoria / University of Pretoria / Yunibesithi ya Pretoria	15	WSU Walter Sisulu University	5
NWU	14	University of Fort Hare	5
UNISA University of South Africa	17		
Rhodes University	5	UFS·UV University of the Free State	11
VUT Vaal University of Technology	6		

Number of Completed Responses by Institution

Sample size and respondents

Respondents were directed in one of two ways to the survey. Of the total respondents, 99 identified as academics (professor, lecturer, training delivery, dean) while 73 respondents identified as support professionals (administrator, manager, director). The remaining 28 respondents self-identified in various ways and were directed to respond to the questions set for support professionals. There were some respondents who (by virtue of their job titles) misidentified their job type, which led them to respond to the questions designed for support professionals. Some respondents were both in academic and support professional roles.

Interviews and focus groups

Initially, it was suggested that focus groups be held concurrently with the regional rounds of the National Entrepreneurship Intervarsity Competition. The first attempt at this at the Eastern Cape regional round proved ineffective, as participants were often required elsewhere during the event, making it difficult to fully complete the focus group in the time allotted. The remaining questions were asked by email, phone and interview. While only a small and manageable number of people attended each of the focus groups, it was a highly effective method of collecting qualitative data and building the connections between participants and their fundamental understanding of key issues. Much of what was said in the group meetings corresponds with the responses seen in the initial review of the survey data.

The evaluation team conducted focus groups in the Eastern Cape (7 participants), Pretoria (3 participants), Johannesburg (3 participants), KwaZulu-Natal (5 participants) and Western Cape (7 participants). These focus groups represented 14 of the 26 institutions. Where focus groups were not able to take place, phone interviews were conducted with 10 participants, leading to a total of 22 institutions being engaged in qualitative data collection. The focus groups were invaluable in providing further and more in-depth detail to accompany the survey data. The qualitative data gathered highlighted issues that were shared across a number of institutions and added context to the survey responses, also allowing participants to learn more about what was going on in their regions and in some cases within their own university environment.

Challenges of the approach

There are inherent challenges in using a mixed methods approach. One such issue was the presence of discrepancies in the interpretation of the findings, which were often unclear. Responses by individuals within the same institution varied within and between identified job types. This was highlighted in disparities between what was reported externally by some institutions and what was reported in the focus groups and interviews.

As the responsibility for entrepreneurship development in most universities is shared across a number of individuals (some of whom deliver content and others who support entrepreneurship development), there were ambiguities, conflicts, discrepancies and overlaps in the self-recorded responses and qualitative data gathered in focus groups, interviews and from desktop research. This was highly indicative of (and heavily reflected in) the siloed model of entrepreneurship development within these higher education institutions. This underlined two major findings, firstly a lack of coordination regarding entrepreneurship development within universities and secondly that individuals delivering these programmes or activities were siloed and not privy to the full picture within their institutions. There was, however, one institution where this was not the case, owing perhaps to the fact that it is a new university and was still in the process of coordinating its offering.

Interpretation of Data and Research Outcomes

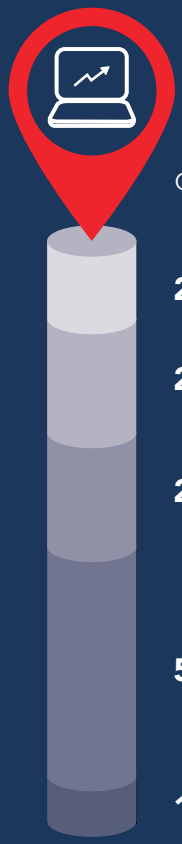
As previously mentioned, data was collected using both quantitative and qualitative approaches. The quantitative data was used to form the baseline and foundation for a mapping exercise which identified activity, processes and the relevance and implementation of strategies within the institutions. Where questions solicited a personal response, these were reported based on self-selected job types, namely academic staff (professor, dean, lecturer, trainer/service provider) or professional services (administrator or manager) within the survey. This data was presented in aggregate, both to protect the anonymity of the individual institutions, at their request in some cases, and to provide sufficient data to develop patterns and understanding. The raw data was provided in the form of appendices for full transparency and more detailed reference and was made available to the contracting entities.

The project team reviewed and critically analysed the qualitative and quantitative data against the initial project aims, with a view to providing explanations for the development of recommendations. The purpose of this research was not only to map current levels of entrepreneurship activity, but to ground these within context, expectations and capacity. In this regard, the project was guided by the following key questions and areas of interest:

- Types of activity already in place (what is taking place; where does it sit within the institutional structure?)
- The mechanisms/processes by which entrepreneurship is delivered at institutions (illustrating instances of good practice and providing information around opportunities and challenges; role of stakeholders and their level of engagement with higher education institutions)
- The extent to which entrepreneurship activity features in institutional strategic plans, policies and regulations (thereby highlighting levels of commitment; transparency; communication)
- How entrepreneurship activity is coordinated internally across institutions (indicating a locus of control with potential implications for strategy)
- Effectiveness of entrepreneurship activities (education and training) delivery (understanding of measurement tools in place to record and determine impact and success; exploration of the challenges/barriers in place)
- Institutional culture of support (how are students encouraged to engage, what internal processes are in place and are they student focused?)

The data collection process was therefore designed around these areas of interest as they relate to the aims and objectives of the project. The initial part of the survey method was to establish an understanding of activity and enable a mapping exercise relating to context and output. This was a necessary step and, while the findings were extrapolated from imperfect data, they were grounded in context, providing an insight into understanding and awareness within the institutions. Understanding and awareness represent a key barrier to implementation and are discussed in more detail in the Findings section of this report on pages 32 to 38.

The online survey was supplemented by qualitative collection methods, discussed in more detail in the sections below. In addition, a review of institutional websites was undertaken to better understand the public profile of entrepreneurship activity and the ease with which information can be readily obtained.



Of the **26 institutional websites** reviewed:

20% had entrepreneurship degree programmes on offer

28% had courses on offer

28% had explicit student activities (clubs, groups or competitions) listed

56% had evidence of institutional or departmental activity (entrepreneurship activity within the department)

12% had no evidence of activity (courses, curriculum, student activities, clubs, etc.) on their websites

> Understanding and awareness represent a key barrier to implementation.

As the report looks at the data in the aggregate, the coding processes included identifying concepts embedded within the data, organising discrete concepts into categories, and linking them into broad, explanatory themes (Strauss, 1987). Content analysis allowed the researcher to identify patterns or themes that emerged from the data (Patton, 2002) which are reported here. Emerging categories served as the filtering lenses through which the interview and focus group transcripts, filed notes, and documents were examined. Over time, the number of coding categories was reduced by eliminating and merging categories and by clustering yet other categories based on perceived connections. This repetitive process eventually led to the construction of qualitatively distinct themes.

Matters regarding sampling and data (disclaimers)

Throughout the course of this research, there were aspects of data collection and reporting that required adaptation and response from the project team. The proposed methodology was internally consistent and appropriate for the case, but was nonetheless subject to the standard constraints of data collection. As mentioned previously, the initial data collection process and period yielded low response numbers, requiring that the collection period be extended and the survey re-opened. The low response rate was partly to be expected given the common challenges of obtaining data from online surveys from a recognition and access perspective. There is always reticence in engaging in research

projects of this nature and this was one of the issues the project team worked to overcome. In regard to focus groups and interviews, every institution was invited to participate, however, four of the twenty-six institutions did not engage any further than the survey itself, leaving some of the narratives incomplete. As a direct result of this reality, which is not unique to this work, the project team designed a mixed-methods approach that would provide the opportunity for more direct access and engagement through phone interviews and face-to-face focus groups. While these research elements are naturally more labour intensive and time consuming, they can (and did) yield greater in-depth understanding and uncover the often hidden narrative of experience.

An added advantage of the face-to-face approach was one of increased understanding, both on the part of the interviewer and of the interviewee. Through the process of coding and analysing the survey data, it became evident that the responses were slightly convoluted and therefore confusing. Indeed, there were occasions where it was apparent that the respondent was not certain of their status as an academic or support professional. In exceptional cases, they could be both. This made the reporting process much harder and led to issues of ambiguity, discrepancies and overlaps in information received. The project team noted a lack of complete data due to decentralisation and the often personal nature of work that occurs in this space. Where there was evidence of activity under way, it was often relatively isolated and lacked central institutional coordination. This has implications for awareness and engagement, on the part of both staff and students. This reality provides an undercurrent to the data collected and forms one of the key recommendations provided.

The baseline for research of this nature is incomplete data and when responses are obscure or unusable, there is a further need for adaptation. The project team was fully prepared for this eventuality and tailored the approach accordingly. Consequently, additional time was spent on desktop research.

As the delivery of entrepreneurship development varied by institution, there was no way to ensure that everyone at an institution was aware of the survey (although participants were asked to share with colleagues) or to estimate how many potential responses there were which would denote a reasonable sample size which was statistically significant.

Themes

As a direct result of individual input, and driven by the data gathered, the project team employed aggregate data reporting by institution for several of the key thematic areas, as outlined below. This allowed the research findings to be examined more broadly in order to avoid reducing the study to a ranking system of achievement.

The thematic design of data reporting connected directly to the stated aims of the research project and focussed around understanding:

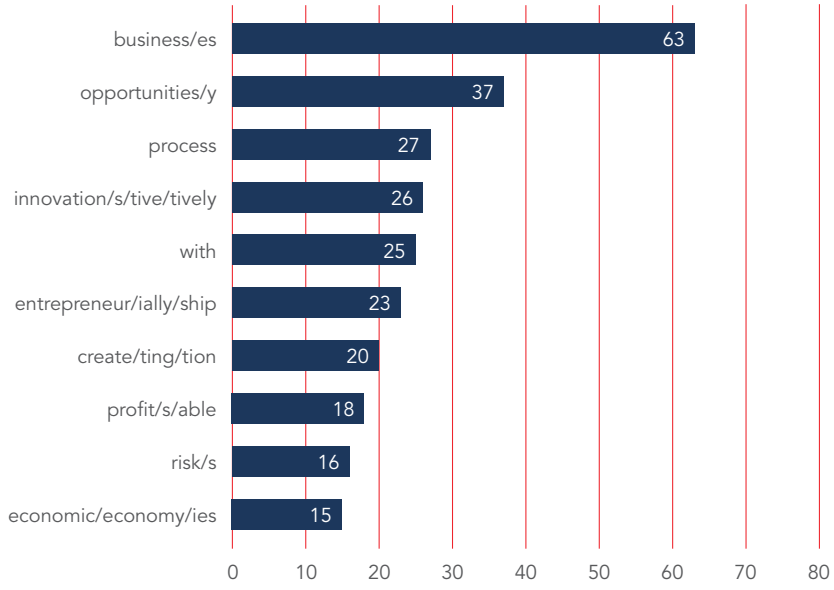
For the first two themes (Entrepreneurship activity and delivery, and Process and approach) the report and findings used predominately aggregated qualitative and some quantitative data to highlight and map levels of activity.

What is Entrepreneurship and what is an Entrepreneur?

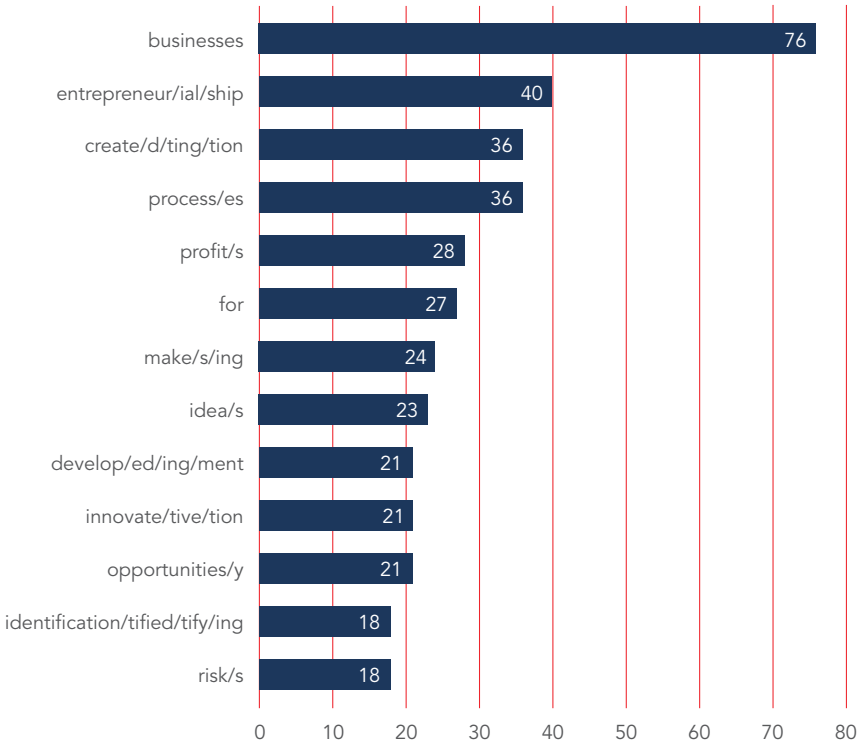
Defining entrepreneurship and the entrepreneur were key to gaining a better understanding of how respondents saw entrepreneurship within their context. Coding the responses on key words and phrases gave greater insight into how both academics and support professionals describe entrepreneurship, however, there were marginal differences in the responses of the groups.

Unsurprisingly, the single most used word that appeared most often in describing both entrepreneurship and entrepreneurs was business(es). In describing what an entrepreneur is, both groups used terms such as 'person, someone/body and individual' more than any other word, highlighting the emphasis on the personal nature of endeavour. Both groups of respondents used the word 'process' (a set of activities) more often than the word 'activity' (a set of procedures) in their description of entrepreneurship. Other words that rated highly in the academic staff description of entrepreneurship were: 'innovation/innovative', 'create/creating/creation', 'profit/profitable', 'risk' and 'economic'. Support professionals used terms like 'create/created/creation/creating', 'profit', 'make/making', 'idea' and 'develop/developing/development', 'innovate/innovative/innovation' and 'opportunity/opportunities' when defining entrepreneurship.

Graph 1: *Word occurrence for 'What is entrepreneurship?' (Academic)*

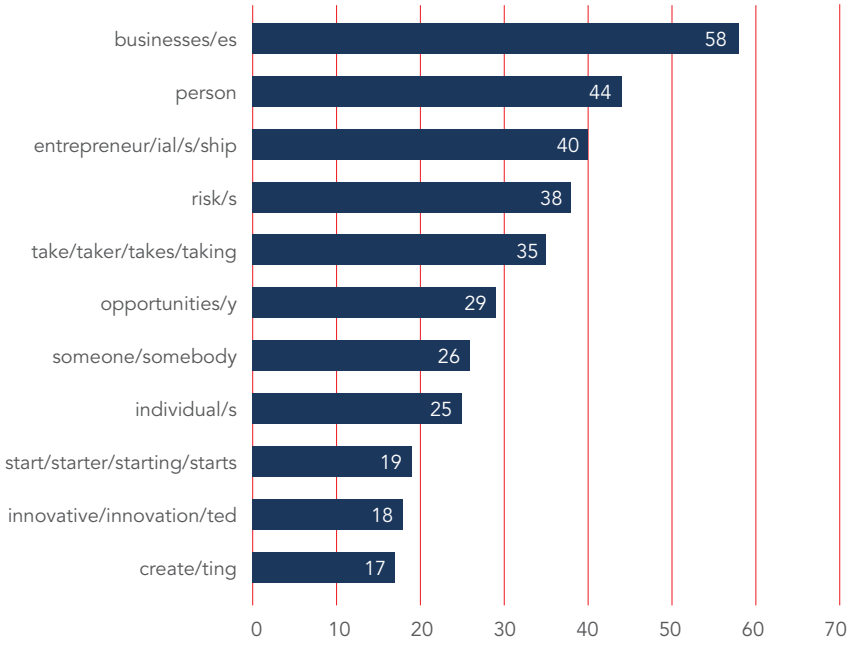


Graph 2: *Word occurrence for 'What is entrepreneurship?' (Professional Services)*

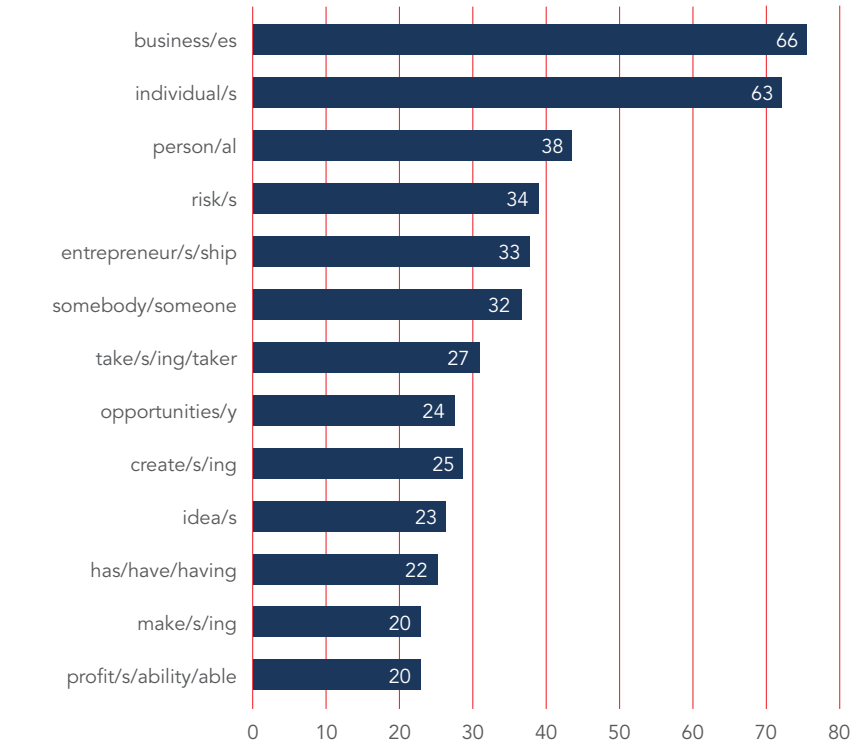


When looking at the definition of an entrepreneur, academic staff highlighted words such as 'risk', 'take/taker/taking' (but only in one case are the terms 'risk' and 'taker' used together), 'opportunity/opportunities', 'start/starting/starter', 'innovative/innovation/innovated' and 'create/creating'. Support professionals also frequently used the word 'risk' but unlike their academic counterparts, the term 'risk taker' was recorded twice. In addition, they used the words 'opportunity/opportunities', 'create/creating', 'idea', 'make/making' as well as 'profit/profitable/profitability'.

Graph 3: *Word occurrence for 'What is an entrepreneur?' (Academic)*



Graph 4: *Word occurrence for 'What is an entrepreneur?' (Professional Services)*



Entrepreneurship Activity and Delivery

Entrepreneurship activity

Each of the 26 universities recorded some level of entrepreneurship activity within the survey, which was assessed both qualitatively and quantitatively. While there was strong progress in these entrepreneurship activities at many universities, the development remained uneven, with some universities constituting the more 'strategic' actors (holding more influence across the institution) in the process, and others contributing decidedly less (Zaring, Gifford and McKelvey, 2019).

The diverse nature of the public institutions in South Africa means that entrepreneurship development delivery varies from full degree programmes within disciplines, short-courses delivered through specialist units (such as centres for entrepreneurship) and third-party delivery partners, to single modules or student clubs and societies around the theme of entrepreneurship. As the surveys were done on an individual basis, positive responses from the same institution were collated to give an overall picture of entrepreneurship activity at each university.

Largely, the responses were fairly positive and reflect a level of interest and commitment to the idea of entrepreneurship delivery in higher education. However, the study only surveyed people who were already engaged with entrepreneurship, so overall adoption of an understanding of entrepreneurship development across the institutions cannot be derived from this study.

Activity Areas

1. Full undergraduate degree programme (entrepreneurship)
2. Full postgraduate degree programme (entrepreneurship)
3. Course(s) within one or more undergraduate programmes
4. Course(s) within one or more postgraduate programmes
5. Short learning programmes
6. Business school; core curricular
7. Business school; elective
8. Short learning programmes - business school
9. Business school with entrepreneurship focus
10. Community engagement programmes
11. Entrepreneurship competitions
12. Student Entrepreneurship week
13. Entrepreneurship conferences
14. Technological Transfer Unit
15. Commercialisation Unit
16. Centre for Entrepreneurship and Innovation
17. Centre for Social Entrepreneurship
18. Defunct (closed) centres for entrepreneurship
19. Enactus society
20. Science Park
21. Maker spaces/ Creative labs
22. Specialised equipment/labs
23. Business incubator

Other (please elaborate):

Eight universities recorded activity in 20 or more of the 23 activity areas, 13 recorded activity in 10 to 19 areas, while five recorded activity in fewer than 10 areas. Those who recorded low levels of overall activity were predominately recently established institutions.

Overall, universities showed that they placed a higher emphasis on entrepreneurship as a degree at the postgraduate level than at the undergraduate level, but that they did provide entrepreneurship in an integrated way at the undergraduate level. Even where a full entrepreneurship degree programme was not in place, there were multiple options for delivery and access within existing modules, providing options for students. The presence of entrepreneurship courses at both undergraduate and postgraduate level shows that progression and sustained engagement with the subject matter is possible within institutions.

Most recorded activity happened within universities at the undergraduate level where an overwhelming 24 out of the 26 institutions (92%) surveyed responded that they had one or more courses in entrepreneurship as part of any undergraduate degree programme. In contrast, only 19 out of the 26 (73%) reported that they had one or more courses in entrepreneurship as part of any postgraduate degree programme. A glance at the data on full degree programmes in entrepreneurship shows that only 61% of institutions had a full undergraduate degree programme in entrepreneurship, while 73% had a full postgraduate degree programme in entrepreneurship. Six institutions offered a full postgraduate degree programme without the option of a full undergraduate degree programme and three institutions offered an undergraduate degree programme in entrepreneurship, but no full postgraduate degrees in the subject area. Of these three universities, all but one offered courses in entrepreneurship within postgraduate programmes.

Not only are universities engaging their students in entrepreneurship in the classroom, but 92% of them recorded that they had some level of entrepreneurship within their community through externally facing engagement programmes such as maker spaces, entrepreneurship centres and business incubators. Respondents highlighted that extracurricular student entrepreneurship activities ranked highly across the universities, with 96% of institutions recording participation in engagement initiatives such as Student Entrepreneurship Week (an EDHE initiative), entrepreneurship competitions (96%), conferences (84%) and Enactus societies (88%).

The role of centres in entrepreneurship development is mixed. In terms of dedicated entrepreneurship centres, 18 institutions stated that they had a centre for entrepreneurship and innovation, while only nine reported having a centre for social entrepreneurship; eight institutions reported they had both. Seven institutions did not report having either type of centre. Those that reported not having a centre were not limited to newly established universities (as one would assume) but also included some of the more established universities and universities of technology. Further to this, the data shows that two universities had closed their centres for entrepreneurship and in both cases had replaced them in some shape or form. One institution that closed its centre for entrepreneurship was currently assessing the role of a new centre and what it would offer students and the community that was different from its previously failed offering. The debate on the role of these centres of entrepreneurship development within higher education is examined in more depth later in this report.

Unsurprisingly, the responses around the questions relating to business school/faculty activity highlight that business schools represent a natural theoretical 'home' for entrepreneurship activity on campuses due to their general business undertones. This has both positive and negative connotations (explored in more detail in this report) because while business schools provide both a firm identity and structure for delivery, this also creates the perception that entrepreneurship is the domain of the business schools and faculties, and therefore does not fit into the wider university community. Twenty-one of the 26 institutions indicated that they had business schools or faculties that delivered entrepreneurship activities and 65% of them offered short courses, delivered through the business school/faculty. Entrepreneurship activities were offered as part of their core business curriculum by 69% of universities, with 65% offering it as an elective. The same 65% claimed that the main focus of their business school/faculty focus was entrepreneurship. One institution recorded an outlier response stating that its business school/faculty provided no core curricular, elective or short learning course in entrepreneurship, but did have an entrepreneurship focus; however, they did not have a business school (only a faculty of management science with no business course provision and no entrepreneurship programmes).

In terms of practical activities, 23 institutions reported that they had technology transfer offices (responsible for the applied translation of university research and the increased impact of university research), whereas only 15 had commercialisation units (moving research and ideas to commercially viable products and services) to move their student entrepreneurs to the next level of development. Although such units exist, in many cases the scale of these so-called facilities is very small and often negligible, comprising very basic support in a space with a few pieces of equipment and some brightly coloured décor. Even fewer were the number of institutions which reported the provision of hands-on technology for entrepreneurship, such as science parks (23%), maker spaces and creative labs (50%) and specialised equipment (42%). Nevertheless, 61% of institutions reported having a business incubator to provide practical, hands-on support to student entrepreneurs.

Delivery

The method of delivery of entrepreneurship activity differed greatly between those who identified as academics and those who identified as support professionals. The focus of academic staff (unsurprisingly) was on entrepreneurship education. Entrepreneurship education, it can be argued, differs from the wider umbrella of entrepreneurship development, since it focuses on developing an entrepreneurial mind-set and understanding the tenets of entrepreneurship. Entrepreneurship education has broader outcomes than simply producing entrepreneurs with business plans. Support professionals (the majority of whom work within centres for entrepreneurship, career and student services, incubators and technology transfer offices) are working to develop and support self-identified entrepreneurs beyond the basic understanding of the field and into the next level of entrepreneurship. Unfortunately, much of their work is focussed on the community and not on the students.

Academic Staff

Unsurprisingly, the entrepreneurship education curriculum is designed and delivered in large part by individual academic staff within their subject areas, with the large majority being from areas such as the business department or faculty of management sciences. The delivery of entrepreneurship activities in universities by academic staff is largely personal. While the narrative around the importance of entrepreneurship is a motivating factor, academic staff reported overall that the primary driver for delivering entrepreneurship education was personal interest (39%). This was followed closely by 25% of respondents who were motivated by internal, institutionally led demands within the university, with only 22% of respondents reporting that the motivation for delivery was due to external demand (government policies and directives). Very few academics (15%) saw their motivation for involvement in entrepreneurship development as being derived from response to student feedback.

In terms of delivery, of the 61 academic staff who responded to the question on the number of courses taught, it was reported that on average, the majority taught only one course relating to entrepreneurship per semester (49% of respondents), while 32% of academic staff taught two entrepreneurship courses per semester. Less than 3% of staff taught more than three entrepreneurship-related courses per semester.

Newer institutions looking for a starting point into entrepreneurship education made use of international third-party programmes such as Enactus or Student Training for Entrepreneurial Promotion (STEP) – entrepreneurship training for youths and young adults – to design their entrepreneurship offerings. In the case of one institution, staff members were in the process of using the learning and tenets of the STEP programme as a basis for their entrepreneurship education offering. In institutions with a longer and more varied history of entrepreneurship development programmes, staff are able to engage with senior management (deputy vice-chancellors, heads of department) to set the wider curriculum. In addition to this, larger institutions with more activities are able to use their centres for entrepreneurship to provide support in the design and delivery. In rare cases, there are entire departments dedicated to entrepreneurship:

> The design and development of the entrepreneurship education curriculum is informed by annual evaluations and discussions with our advisory board which consists of other academic experts, entrepreneurs, government organisations as well as students.
>
> **(Academic – Survey)**

As indicated through the qualitative survey data from academics, they were predominately delivering entrepreneurship modules within undergraduate courses, engaging with third-party providers such as Enactus and the Wadhwani Foundation Entrepreneur Programme, providing practical teaching, convening Student Entrepreneur Week programmes and providing skills-based training in their classrooms.

Practical teaching examples reported included:

- Applying real world scenarios to problem solving;
- Technopreneurship;
- Assisting with development of novel ideas (design and delivery);
- Corporate entrepreneurship;
- Entrepreneurial Value-Chain Programme: assisting, mentoring and incubating small and medium enterprises for sustainability and growth; and
- AppFactory – application development of student projects.

Examples of skills-based training included:

- Infusion of 4IR into curricula;
- Community engagement and training for development;
- Information on business environment (planning, organising, leading and controlling, and business functions such as production, form of ownership, operation, human resource management, marketing and financing), generation of business ideas and screening of those ideas by testing their feasibility, viability and marketability; and
- Design thinking and participation module in which students offer support and design to existing entrepreneurs in the creative sector.

When asked how they are were providing this training to students, academics reported the main methods of delivery were case studies, lectures, textbook learning, assignments and workshops, while blended and practical learning were some of the least used methods of delivery. These were incongruent with what academics said were more highly effective teaching methods to deliver better quality entrepreneurship education. Providing interactive approaches, mixing theory with practicality, mentorship, online learning and allowing students to get into the real-life experience of entrepreneurship and innovation by encouraging them to start their own businesses or become involved in working with another entrepreneur, were key findings, in addition to the use of incubators and hubs to support their development.

When questioned about any specific areas of improvement to curriculum delivery, many academic staff respondents expressed the need for the curriculum to be better fit for purpose by providing practical or experiential entrepreneurship education through the integration of entrepreneurship into a cross disciplinary curriculum at every university, as well as bridging the gap between theory and practice, stating that 'entrepreneurship should not just become a stand-alone module/ course, but should be inculcated in all modules in the institution'. Another academic stated that the 'curriculum should focus less on teaching entrepreneurship and more on doing entrepreneurship. Also, the curriculum should be university-wide and not just faculty-wide' and provide practical application; 'from idea generation to implementation, problem solving, it must also allow for a mentoring process'. Most importantly, the curriculum 'needs to focus on tangible things that students can do. Theory has been taught for many years, without yielding positive results'.

Linking research outputs to create practical opportunities, as well as the use of technology, were also highlighted by participants during the focus groups as a way to link the goals and drivers of universities to entrepreneurship development.

They noted that 'the curriculum must keep abreast with latest research, but must also focus on practical initiatives to skill students'. Respondents echoed that 'the curriculum is not keeping pace with what is required of future entrepreneurs. Design thinking, business model innovation, emotional intelligence, project management, analytical skills (e.g. data analytics and artificial intelligence), cognitive ability, networking ability' are all required to support the entrepreneurship development process.

> Entrepreneurship is a dynamic process and the field is within an applied scientific arena. Technology, for instance, asks for more advanced content and support (in curricula); also extreme pressure on scholars to stay up to date to enable themselves to continuously understand the ever-changing business model.
>
> **(Head of the Department of Business Management – Survey response)**

For some academics, it was not only about reforming how entrepreneurship is taught, but also looking at what is taught in regard to the individual. What was paramount for them was 'an inclusion of an entrepreneurial mind-set in courses within the curriculum'. Staff also indicated that the 'curriculum should put more emphasis on effectuation and self-understanding' and 'should put emphasis on ethical leadership' in addition to entrepreneurial skills.

Further insights on how the curriculum included the need for incubation, suggested the missing link to community outreach because current programmes are purely and mainly academic in nature; the need for more resources to create entities such as 'innovation labs, mini-incubators, 3D printers, app developers; as well as the need to make universities more flexible as 'today's textbooks are already outdated. Lecturers need to update students with the latest information and developments'. Respondents also saw the need to expand engagement of stakeholders to provide 'continuous improvement aligned with industry demands and bring theory closer to practice'. Not only do students need more innovative solutions to support their development as entrepreneurs, they also need to be given the opportunity 'to work in multi-disciplinary and trans-disciplinary contexts with science, law and commerce students working together' to widen their exposure.

However, there was one response that went against the dominant thinking of bringing entrepreneurship into the wider curriculum:

> The curriculum is not something into which endless topics/drivers can be inserted without it losing its structure (following Bernstein, 2000). There is a real danger of that. The call (see for example, Wheelahan, 2010) is to 'bring knowledge back in' as it is this that will equip graduates for a future world. Constantly inserting skills and topics into a curriculum risks this not being done.
>
> **(Emeritus Professor – Survey response)**

There is clearly scope here for a more formal response to the inclusion and development of entrepreneurship in higher education. What is evident is the recognition, on the part of the practitioners, of the need for reform and support. This report has highlighted evidence of good practice and key areas for further development and review. What has become increasingly apparent over the course of this research is that there is no single or quick fix to the issue at hand, and to attempt one is problematic in the extreme.

Support professionals

When asked who drives the process of design and delivery of entrepreneurship development within their institutions, support professionals acknowledged the fragmented nature of the responsibility. Many were quick to make the distinction between the design and delivery of the general curriculum (which they reported was driven by academic staff; mostly in business and commerce) and wider activity not confined to the classroom, with drivers such as senior administration in conjunction with dedicated centres for entrepreneurship, technology transfer offices, student and career services and incubators.

> The Division Research Innovation and Engagement drives Entrepreneurship and established a specialised unit which links activities to the TTO office plus academic departments. Each faculty has a dedicated Deputy Dean assigned to enhance entrepreneurship exposure plus academic staff to train as Innovation Champions from all faculties.
>
> **(Incubator Manager – Survey response).**

While the issue of silos was still apparent, a solid number of support professionals identified academic colleagues whom they named as responsible for the design and delivery of entrepreneurship development within their institutions. Participants also acknowledged that there was a problem with design and delivery of entrepreneurship development being done in an *ad hoc* way, but increasingly, institutions are looking into plans to bring together all the different entrepreneurship programmes under one umbrella body. Three institutions indicated that they had brought in outside consultants to evaluate how they were delivering entrepreneurship development and how they could best remove the silos that currently exist.

Involvement of support professionals in entrepreneurship development within higher education provides an opportunity for them to interact with students in a curricular and co-curricular space. In addition to working within their own spaces, they work with academia to design and develop short courses which are offered through various departments within an institution. This not only supports the aims of the institution by providing avenues for relevant learning opportunities for participants, but also allows practitioners the chance to gain additional skills to support entrepreneurship delivery in their classrooms.

Support professionals' work is not limited to engagement with the students within their institutions. As many of their entrepreneurship activities include work geared towards the community through centres for entrepreneurship, commercialisation units or technology transfer offices, most of their involvement goes beyond teaching about entrepreneurship to teaching for entrepreneurship.

A large majority of support professionals work within a physical space that serves as a development hub on the main campus. Their engagement comes through the promotion of entrepreneurship by assisting departments to develop short learning programmes, 'training interested students across faculties, on business proposal writing to provide them with skills to develop their own businesses'. Support staff also work within their context to provide spaces for entrepreneurs to identify opportunities and let them pitch these proposals for a small amount of start-up capital in addition to exposing them to mentorship by experienced business mentors.

Some incubation centres facilitate training sessions and workshops, and pre-incubation learning programmes for students with interest in innovation and entrepreneurship. Once students and staff participate in challenges, they are channelled into taking part in this entrepreneurial education pipeline. Alongside this, there are a number of specialised programmes delivered through the centres and units, including accelerated entrepreneurship programmes, management of the EDHE-driven entrepreneurship intervarsity competitions, women's empowerment programmes, as well as internal entrepreneurship competitions. There are development support hubs where students, staff and the public (with the assistance of experts and lecturers) can develop their innovative ideas, projects and products into products that can be commercialised. Often these form the pipeline to technology transfer, incubators or commercialisation offices that move the entrepreneur from ideation to prototyping, then through business development to spin-out. Here support professionals act as business advisors, mentors and specialists who assist entrepreneurs to access markets; provide business networking opportunities; and direct entrepreneurs to funds that might support their endeavours.

Many support professionals work within centres for entrepreneurship, incubators and technology transfer offices, as well as career and student services. This gives support professionals the ability to engage with entrepreneurs in a way that goes beyond teaching the basics of entrepreneurship and supporting their development, and brings them from ideation to delivery. In addition to this, professionals within these support mechanisms are not limited in

who they are able to engage with, since much of their work is externally facing, allowing engagement from within the wider community. The flexibility of being a part but separate from the institutions, allows for a move away from the basics of entrepreneurship education towards the ability to provide hands-on support to self-identified entrepreneurs who are looking to take the next step in their development to becoming an entrepreneur.

> We have an integrated business development model for student entrepreneurs and general entrepreneurs, which includes entrepreneurship training, structured mentorship, access to finance, commercialisation of IP, and access to markets.
>
> **(Acting Director: Centre for Entrepreneurship – Survey response)**

These functional units provide a number of programmes such as the coordination of the EDHE Entrepreneurship Intervarsity Competition, women empowerment programmes, internal competitions and accelerated entrepreneurship programmes. Entrepreneurship development delivered by professional support staff leans towards supporting entrepreneurs through coaching, mentoring, short learning programmes and skills development workshops to encourage and support them in bringing their ideas to fruition. They too, like their academic counterparts, work with third party-providers such as the Wadhwani Foundation, the STEP Programme and the Enactus Society on their campuses to enhance the student experience of entrepreneurship development.

Institutional goals

Using Pittaway and Edwards 2012; Mwasalwiba 2010; Robinson *et al.* 2016; Sirelkhatim and Gangi's 2015 definition of entrepreneurship education, the survey asked participants what, as they saw it, was/were the goal(s) of entrepreneurship development at their institution. The basic and most primary goal of institutional entrepreneurship development is educating students on the theory of entrepreneurship, delivering modules that provide a basic knowledge and understanding of entrepreneurship. However, only 23 universities reported this as a goal for entrepreneurship development at their institutions. Ninety-eight percent of universities reported both the importance of delivering entrepreneurship teaching through the use of principles and characteristics to grow the entrepreneurial mind-set, as well as providing skills, knowledge and tools to entrepreneurs to start and grow their business. Two interesting elements came to light as a result of this question. Firstly, all respondents from one newly established university were in absolute agreement that the goal of entrepreneurship development at their institution was about delivering the principles and characteristics of entrepreneurship to develop student mind-sets (risk-taker, problem seeker, problem solver, and innovator, amongst other things). However, they stated (during a focus group) that they did not currently have any formal structures in place around entrepreneurship delivery. Secondly, another newly established institution reported that its goal was not to provide a baseline understanding or even to develop the entrepreneurial mind-set, but went straight to actively supporting the development of entrepreneurs and spin-out of businesses. In this regard, it only provided two activities to its students (Enactus and a course within an undergraduate programme) and no additional support activities such as incubators, technology transfer offices or commercialisation to make this possible.

> 98% of universities reported both the importance of delivering entrepreneurship teaching as well as providing skills, knowledge and tools to entrepreneurs.

Processes and Approaches

Well-defined and well-crafted policies and strategies around entrepreneurship demonstrate an institution's commitment towards entrepreneurial endeavours and also provide guidance for those engaging with entrepreneurship within those institutions. Respondents from all 26 institutions reported some knowledge of entrepreneurship policies and strategies within their institutions.

Policies and strategies

More respondents reported that their institutions had strategies rather than policies on entrepreneurship; 69% reported that their institutions had university-wide strategic documents; and 80% reported that their universities had strategic documents which were department-wide. Sixty-two percent reported that their institutions had a faculty-wide strategic document.

Reporting on entrepreneurship policies within their institutions, 46% of institutional respondents reported that there were university-wide policies on entrepreneurship, while 53% stated that there were department-wide policies governing entrepreneurship. Only 9% identified faculty-wide policies regarding entrepreneurship.

In contrast, 73% of institutional respondents recorded that there were no definite policies or strategies on entrepreneurship at their universities, while 62% said they did not know if their institutions had either a policy or strategic document on entrepreneurship. One respondent did acknowledge that entrepreneurship, while not specifically included in the teaching and learning policy or the institutional development plan, was dealt with predominately by individuals.

The actual number of policies and strategies received from the institutions does not match the number reported in the survey. Of the 26 institutions, only one came forth with policy documents specifically aimed at student entrepreneurship.

> The objective of the Student Entrepreneurship Policy is to boost job creation and economic prosperity in South Africa through the development of entrepreneurial skills and the promotion of commercially viable start-ups and social enterprises at the institution. The Policy is intended to facilitate the creation of an enabling and practical environment whereby students present business proposals, receive structured mentorship, establish start-up companies and learn and apply basic entrepreneurial skills to facilitate enterprise development across all disciplines, including humanities, law and management, the sciences and engineering-related enterprises.
>
> **(Institutional Student – Entrepreneurship Policy)**

Of the 20 strategic documents retrieved, 16 made reference to the word 'entrepreneurship' or 'entrepreneurial', one was more of a report than a strategy, one referred solely to commercialisation rather than entrepreneurship (others did mention commercialisation, but also entrepreneurship itself) and only one made a deliberate and dedicated statement outlining the university's commitment to innovation and entrepreneurship.

During each focus group, the participants were asked the question 'What entrepreneurship strategies and policies does your institution have?' to support the same survey question asked, and tying that into the question 'Where does the strategic responsibility for entrepreneurship development sit within your institution?'

Participants surveyed stated that there was an overall lack of awareness of any strategic documentation/policies at institutional level, but many recognised this as an important matter. In many institutions there is no official strategy or none identified within the institution. Others have more policies than strategies and these govern things like third stream income, commercialisation and intellectual property. The siloed nature of the work extends to the policy sphere where a technology transfer manager stated in a focus group that 'we have so many policies that it is daunting, but the policies don't fit together well'. In another case, it was stated in a focus group that they 'want to introduce a campus-wide policy/approach where entrepreneurship is in all modules across all faculties, but at the moment, what is there now is mostly linked to the business faculty'.

Where institutions have centres for entrepreneurship or strong departmental or faculty-led entrepreneurship development activities, they create their own plans, policies and strategies to guide their work, but this does not apply or translate at an organisational or institutional level.

> We don't have any really fixed policies on the higher level; on the faculty and department level. If you think about policies, the Centres and the TTO will have their own way of working.
>
> **(Support professional – Focus group)**

In many cases, participants reported that policies exist, but stated that:

- They are not enforced but we do support them, but we don't understand them;
- There are so many that it is daunting, have lots of written things on it, but not cohesive;
- Policies happen organically and work for the area of work (department, centre, etc.);
- There are no explicit policies or strategies, but in one of the goals of the university as third stream income, it is implied in that but not clear, for faculty to be entrepreneurial but nothing regarding students; and
- Not entirely aware of this or what the policies are but understand that there is a policy in place but don't have too much detail on it.

Institutional approach and philosophy

Focus group participants were asked how they, or their organisations, defined success in entrepreneurship development delivery to see if their goals were in line with what they were delivering; and the extent to which monitoring and evaluation existed around entrepreneurship development. As expected, the responses where split between support professionals and academic staff as to how they saw this element within entrepreneurship development.

Academic staff reported that the most common success indicators for entrepreneurship development were not linked to any indicator other than how many of their students completed their degree. The difficulty here is that not only do the indicators in place not accurately measure what they should, but there is no unified definition of what entrepreneurship development success actually is. Assessing the learning outcomes of modules and programmes for success in entrepreneurship activity delivery is harder to do, as many academics see the creation of an entrepreneurial mind-set as an achievement which is tangibly difficult to measure because no baseline studies are conducted with students before they engage in any interventions. Additionally, it would be too difficult to fully attribute impact to the intervention of any one single entrepreneurial activity unless it was stated explicitly by the entrepreneur.

> If a student arrives at a university entrepreneurial by nature and if that same student leaves the university entrepreneurial by nature, then in terms of training and development, the university has done nothing for that student? We can only take credit for students that arrive non-entrepreneurial and leave entrepreneurial; but I don't think universities are doing that.
>
> **(Academic – Focus group)**

The issue of monitoring and evaluation of entrepreneurship from the perspective of a support professional 'is not so much about the number of jobs/companies that have been created; it is more about how did we encourage a culture of entrepreneurship and allow students the ability to fail in a safe space and build and develop them accordingly. We (as centre managers) are driven by the question "did we manage to convince students who had never engaged in this that it is a viable option?"'

The incongruence around success indicators also comes from the polarising nature of measuring output in research versus practical learning. This dichotomy is illustrated when an institution is looking at results of how many people have started businesses, but also bases success on the number of research papers published. This highlights the push and pull between academia and the practical nature of entrepreneurship as 'academics measure their worth on publications'.

> What universities don't understand is that it is a long game situation when monitoring and evaluating entrepreneurship development. Our role (as academics) is to change the mind-set, the fact that they started should be seen as a one of the KPIs for measuring success before we start looking at profitability and how many people are employed.
>
> **(Academic – Focus group)**

This disconnect is highly visible when looking at how support professionals denote the success indicators and monitoring and evaluation for entrepreneurship development within their institutions. Where support professionals are responsible for work within centres, incubators or technology transfer offices, there are clear monitoring and evaluation frameworks which mostly consist of the number of patents and spin-out companies as well as growth and profitability.

> For universities, it is how much money they (centres, entrepreneurs, sponsors) bring to the institution, there isn't any other measure. But now they are gravitating at commercialisation and IP that is developed by students through research. [I] don't know if this would be seen as the university's success or a measure of success for entrepreneurship, because commercialisation is a component in the entrepreneurship development – whether the institution is looking at the money they are going to get or looking at the entrepreneur being drawn into it and develop the business – the definition is not clear.
>
> **(Centre Manager – Focus group)**

Success in this context centres on value for money as these units are seen as cost centres rather than contributors because they do not attract research grants which typically support academic provision. Whereas academics can translate publications and knowledge into funds, support professionals (depending on the structure of their units) might not see returns on investment with entrepreneurs for a number of years.

Systems and Processes

Internal support and processes

Respondents were asked where the locus of control regarding strategic responsibility for entrepreneurship development sat within their organisation. The majority of the responses (31%) indicated that strategic responsibility rested with senior administration (deputy vice-chancellors), followed closely by departmental heads (27%) and vice-chancellors and faculty members at 18% and 19% respectively. The remaining 5% of responses were either unsure of where the responsibility lay or found there was no clear articulation around whose responsibility it was.

Support professionals indicated their internal processes as quite favourable in supporting entrepreneurship development, but this was not reflected further in the survey comments. While responsibility reportedly resided with senior management, the level of support varied from very good to very little. Respondents from one institution reported that within their institution there are 'innovation champions in every faculty, and curriculum development incorporates entrepreneurship'. Participants from that same institution echoed that sentiment, saying that 'the institutional vision strongly supports innovation and entrepreneurship by focusing on producing quality social and technological innovations on socio-economic development. The university has policies, such as the IP strategy, which clearly advocate the generation of third-stream income, also as part of staff key performance areas'. This approach clearly helps to inculcate entrepreneurial thinking into the mainstream.

Another respondent acknowledged, 'although there is room from improvement, the university has an established Innovation Office for invention-based entrepreneurial ventures and also has an established technology business incubator which encourages and supports entrepreneurship'. Responsibility in this instance is shared with the student affairs department which 'supports those students who work in traditional businesses. Even though this is currently in its infancy, there is commitment from the university to enable the support provided under this programme and to grow it over time'.

Other respondents indicated that their institutions provided effective support for entrepreneurship development through things like the establishment of centres which channel all entrepreneurial activities together to provide external capacity for training and development in addition to providing internal capacity development through international and government funds. In one case, respondents saw their centre 'as places to bridge the gap between business and education'.

Academic staff also felt supported in how they delivered entrepreneurship development, stating that they 'have a lot of freedom on how they deliver and, with the new curriculum, it will be more practical'. Other practitioners agreed that their institutions offered lots of support and buy-in by top management as they understand this to be a priority because of where they are based in the country. They see it as part of their responsibility to their learners because 'when students finish, they don't get jobs, so entrepreneurship is seen as an avenue for them to create jobs'. One interviewee praised their institution for the support given to practitioners to develop their skills both locally and internationally through conference attendance. They felt that their institution's senior management 'embedded entrepreneurship activity in their daily work and modules' with a high level of engagement.

Other respondents were equally vocal about what they felt was a lack of support in regard to the delivery of entrepreneurship development within their institutions. Key amongst these was the over-reliance on a single person to deliver and coordinate entrepreneurship activities, lack of trained staff (with entrepreneurship experience), lack of funding and most importantly, a lack of understanding of the value of entrepreneurship to the curriculum.

As noted previously, the responsibility for design and delivery falls predominantly to academic staff members, and in both small and large institutions this is often reported to be one person or one small unit within the institution. As one academic staff member stated, 'individuals are constantly working to make things go' and as it comes from more of a personal angle, institutions are not as supportive, meaning knowledge exchanges occur outside of the institution as they are not given adequate training or development. A support professional participant remarked that while they feel there is support, it is 'not being done well enough or consistently' a sentiment that was echoed by another who stated 'there is a kind of support; the idea of entrepreneurship is supported, but that is where it stops, everything else we create ourselves'. Staff also recognised that 'internal processes are not supportive of entrepreneurial activities because there is a lot of bureaucracy and this causes delays in achieving targets for entrepreneurship delivery and development'. Another participant added that 'although there is institutional support, the internal policies are too rigid for entrepreneurship'. The director of a technology transfer and commercialisation unit stated that there 'is still a lot of red tape and tendency towards over-centralisation. There is a tendency to focus on the structure and not on the strategy, and on creating structure and not programmes and processes. The process itself does not allow for the creativity as it tends toward a Jacobean approach, which is certainly not viable for a large institution'.

One support professional respondent added that in their institution, 'there is no strategic objective around entrepreneurial

development/activities. There is no unit or division assigned to bolster student entrepreneurship like in other institutions. Academics are not encouraged to be entrepreneurial and the institution doesn't have an entrepreneurial mind-set or resolve to become one'.

The lack of coherence on what entrepreneurship is and how it fits into wider academia was also an issue for respondents. This matter was echoed in a focus group session where a participant stated, to much agreement:

> One of the reasons for so many stumbling blocks is that we are just a small group. There is not enough critical mass of people to influence [anything around entrepreneurship]. People outside this sphere are here saying that this [entrepreneurship] is useless; [we] had an operations manager who didn't understand what was going on and wanted it shut down. We don't have support. For us who have entered at the beginning, we are like the freedom fighters for entrepreneurship; constantly fighting and always trying to convince someone.
>
> **(Lecturer – Focus group)**

The participant continued that most colleagues do not 'understand entrepreneurship in itself very well, this is why there needs to be some money invested in getting all departments having people trained to understand how entrepreneurship fits into their space; how to socialise it or better yet institutionalise it into their space so that everyone learns that it fits into all our spaces'.

In terms of support, academic staff survey participants were asked if their work in entrepreneurship development was recognised by their universities and how this was done.

Of the 71 responses, over half the respondents agreed that their work in entrepreneurship was recognised, with the majority stating that this was done through annual performance measurements. Some were allowed to pilot projects on campus or modify the curriculum to better suit the needs of teaching entrepreneurship, while others received funding to attend conferences and seminars or had their fees for journal publications paid for. However, when asked about staff training opportunities, 40 of the 68 respondents said their institutions provided little to no staff training in this regard.

Findings

The qualitative responses to the survey, focus group and interview questions underpin the findings of this report for the universities, EDHE, USAf and DHET. What is evident from the research gathered is that there is considerable entrepreneurship development activity under way in most institutions; however, it is largely un-coordinated; lacks dedicated resources and overall support; and is at odds with the traditional role of the research/ publication rewards-based culture of universities. What has been revealed is not a completely negative view of what is currently being delivered, but highlights what has been done in the face of challenges and constraints that, while significantly limiting the potential output, has led to noteworthy strides in the area of entrepreneurship development in higher education. In a sector where evidence-based decision making is celebrated, there is little measurement and proof in place to deal with entrepreneurship, and greater awareness and appropriate measurement tools are required.

Responses were curated from groups of engaged scholars and support professionals who were engaged in entrepreneurship development, therefore the appetite for and understanding of the area of work was apparent. The timing allocated to the project and the scope of it did not allow for data to be gathered from those who were not directly involved in delivering entrepreneurship activities within universities. Had this been possible, the opportunity to find those who (reportedly) were resistant to the development of entrepreneurship in higher education would have been greater.

Role of universities

A fundamental question that surrounds this work is whether 'higher education is the best place for delivering entrepreneurship development?' given that their inherent structures and funding models put entrepreneurship education and training in a constrained position. Unsurprisingly, the majority of the responses were positive:

> As universities, we have a critical role to play in the socio-economic set-up in our country; we should be the drivers in making sure that we look at the long-term prospects of the socio-economic situation; we need to be the ones making the changes; [we] should be upfront, because we are the thinking institutions.
>
> **(Centre Manager – Focus group)**

> Higher Education is crucial in developing this. If we aren't going to do this at student level, how will it happen once people graduate? Economic growth in South Africa is not coming from big business but from entrepreneurs.
>
> **(Centre Manager – Interview)**

> Yes, these youth are mature enough, you can't teach young ones because they will see it as playing, you need university students to understand the financial management side of it as it is highly conceptual.
>
> **(Academic – Interview)**

> That is a contentious question, but yes, it is. Higher education is supposed to lead the way in skills development. Teaching is exposure to the processes, it may not make them go into it, but even someone who has that entrepreneurial spirit will still need support. If higher education can get this right, they will [make] a lot of impact; the challenge is how to get it right.
>
> **(Academic – Interview)**

> Higher education is the right space. Universities are in a better space to connect individuals with industry and opportunities that are out there.
>
> **(Academic – Focus group)**

Not only is higher education best placed for this, participants reported, but it should be happening at every level of education. As voiced by a centre manager, there is a need for 'training within early childhood education curricula through sponsoring teacher development as well as creating a pipeline of entrepreneurial development, from junior school to high school all the way through to universities'. An academic respondent acknowledged that while 'other institutions should have done it (exposed students to entrepreneurship) before students get to university, they have not done this'. More broadly they added, 'we cannot expect parents and communities to socialise their children in this space' because 'parents themselves are not familiar with the concept, so universities often become the first point where they can do this'. Another respondent echoed that sentiment saying 'until it is done in basic education, and communities, and councillors and chiefs understand it and can socialise it, then universities are the most important places' for entrepreneurship development to happen.

The biggest challenge for entrepreneurship development within the university sector is the primacy of academic research and research output over the acknowledgement of practical application, which is at odds with the applied nature of entrepreneurship. The emphasis of the reward system in higher education is incongruent with how entrepreneurship development is measured.

> The PhD has not changed since 1910; it is still in the same format. We haven't evolved around developing the PhD; we use the same methodology to deliver and assess it – we haven't adjusted. However, we still say that a lecturer's relevance is based on presenting and research. What we need to be more focussed on are our learners as the basis for promotion.
>
> **(Academic – Interview)**

The conflict for the 'academic entrepreneur' is that they feel they are perceived by staff as entrepreneurs who are trying to be academics and are frowned upon as this takes away from what the university prioritises – research. Because research is what brings in the majority of the funds, it serves to show where institutional priorities lie. As one academic put it:

> You will find that the priority is not for me to be running around and delivering entrepreneurship initiatives when at the end of the day 'people' are going to ask 'what is your research output?'. It is a tricky one to deal with. There is an inherent clash with traditional university structure and the need for practical delivery of entrepreneurship.
>
> **(Senior Lecturer – Interview)**

As funding and grants are tied to academic outputs of universities, moving entrepreneurship to the forefront is difficult, if not impossible. The pressure for academics to conduct research is an obstacle, as they are required to spend a lot of time on research as well as 'balance a teaching load. It is often difficult to get someone who is just teaching and not distracted by publishing'.

> Entrepreneurship was mainstreamed around five years ago and we work in 150-year-old bureaucracies; it takes time for it to change direction. What is driving it is this new world of work and the role model that Silicon Valley has become.
>
> **(Lecturer and Course Convener – Focus group)**

There is a clash between the traditional role of a university and the need to support entrepreneurship on a more fundamental level, thereby linking research to practice. Responses from interviews and focus groups highlighted the opinion that universities were critical to the development of the entrepreneurship agenda in South Africa but this, in turn, revealed a disconnect between a traditional teaching model and the need for disruptive approaches to innovation. As one Acting Director outlined in an interview, 'there are two challenges to entrepreneurship development in the university context. One, faculties and schools have a set curriculum. When they are asked to bring in entrepreneurship they don't know where it is going to fit? Is it credit bearing or not? And who is going to teach it if people see it as extra work? Two, students want to know where it sits within their degree. Is it added work? What is the purpose of it? How will it help me? There is still a long way to go to normalise entrepreneurship development in the institutions'.

Further challenging is how entrepreneurship fits into newly established institutions that are trying to deal with surviving the day-to-day while providing quality research, teaching and learning. How important entrepreneurship development is to their institution, how they engage with it and where it will be housed within the institution are difficult questions when many of these institutions have more pressing issues around finding staff, recruiting students and building infrastructure.

> We had to look at what we are doing and say, 'where does entrepreneurship fit into our university? Where can it make the most impact – as we are a specialist university? Then from my side, I had to think, well how do we support these students? So, we used a third-party provider with online learning platform, so that those who are interested in entrepreneurship can have some sort of training. We are a fairly new institution and need to also establish other structures and policies.'
>
> **(Academic – Focus group)**

There is a clash between the traditional role of a university and the need to support entrepreneurship on a more fundamental level, thereby linking research to practice.

In newly established universities, entrepreneurship development is not seen as paramount to their advancement when they are still surviving off governmental grants.

Innovative delivery

Although respondents highlighted the structural impediments to effective entrepreneurship development within universities, there is also much to laude about the delivery of entrepreneurship development in higher education. Table 3 provides a selection (not exhaustive) of innovative entrepreneurship delivery activities.

Table 3: *Innovative delivery of entrepreneurship development*

Type of intervention	Descriptor
Honours Level Course (full year)	Focuses on developing outstanding business leadership and management skills in a highly entrepreneurial context. Candidates are required to set up and run their own business. They are expected to apply the leadership and management theory in an intensive action-learning environment.
Open Online Course (10 weeks)	Free course available to all students as an introduction to entrepreneurship awareness. This helps students decided whether entrepreneurship is really for them or not.
Bootcamp	Using 'lean start-up' methodology for developing businesses and products which aims to shorten product development cycles and rapidly discover if a proposed business model is viable. This is achieved by adopting a combination of business-hypothesis-driven experimentation, iterative product releases, and validated learning.
Undergraduate Module	Technology and Innovation Course with module on the use of innovation and technology within entrepreneurship (1st of its kind in South Africa)
Graduate Module	Nanoscience Course with module focussed on moving lab-based findings to commercially marketable projects/businesses.
Business School	Will focus on the growth phase of business (MBA for transitioning SMMEs; 50 M ZAR and above).
Digital Incubation HUB	Where the incubation of digital entrepreneurs, commercialisation of research and the development of high-level digital skills for students, working professionals and unemployed youth takes place.
PTY Ltd	Separate arms of the universities who provide training programmes and short courses as well as research and advisory services for the community within and outside of the university. They facilitate connection between start-up, industry and funders.
Centres for Entrepreneurship (social entrepreneurship and/or innovation)	Centres that help coordinate activity and provide additional resources outside of the academic sphere. They provided more hands-on, more in-depth training and development, taking the 'learning about entrepreneurship' and moving it to 'learning for entrepreneurship'. More often than not, they are also externally focused (but not exclusively).
Technology Transfer And Commercialisation Offices	Offer workshops, incubation, business seminars, seed funding, competitions and many initiatives to support students in business.
Career Service Centres	Support and grow campus base-level entrepreneurship through incubation and acceleration of start-ups, and direct support to new and existing base-level entrepreneurs [alumni, students, academics/staff, post-docs]. The objective is to support the establishment and growth of an entrepreneurship eco-system including, but not limited to, an entrepreneurship village, funding and strategic events within the university and contribute to a positive culture of entrepreneurship, and through these objectives to support the long-term strategy of advancing entrepreneurship careers as alternatives.
Post-Graduate Diploma	Year-long programme that links student to the insights, ideas, networks and people who can help turn a passion for innovation into reality. It is an innovative entrepreneurship-focussed curriculum aimed to equip young graduates with the skills requisite for a changing and challenging business environment. It is an intensive, true-to-life simulation (complete with funding calls) driven primarily by a group-based action-learning philosophy.

What challenges innovative delivery (and the development of entrepreneurship in higher education) is the siloed delivery, lack of coordination, poor structures (including clear and relevant policies and strategies) and insufficient trained staff.

The bureaucracy of 'misaligned' silos, has created a 'fragmented entrepreneurship effort' causing 'faculties … to be too siloed to form cohesive initiatives across the board. There is too much monument building by individuals and not enough value creation'. Participants point to comatose senior management 'who are unwilling to take risks. There is an academic mind-set with entrepreneurship crippled by institutional bureaucracy'.

As the responsibility for entrepreneurship is spread across a number of functions and departments, what it leads to is a number of disparate activities happening across the same institution (and sometime the same department or faculty) where one hand does not know what the other hand is doing. This leads to duplicate efforts, all of which ultimately contribute to the siloed approaches seen within and across institutions in South Africa. The structures that support the academic aims of the institutions are not necessarily the ones that support the growth and development of entrepreneurship. From outdated technology, rigid curriculum structures and lack of institutional direction, universities now need to demonstrate that they are dynamic enough to lead the charge for entrepreneurship development.

> Our systems and processes are so old, when we do introduce these programmes, it has to go up and down for approval. By the time it comes back, the people who were pushing have moved on or given up.
>
> **(Lecturer – Focus group)**

> Decision making is too long, especially with leadership; there is a need for checks and balances, but if we are looking to become an entrepreneurial university we need to change how we think altogether. Some people need to be brave and take risks and go out there and do what needs to be done.
>
> **(Centre Manager – Focus group)**

Fundamentally, the biggest challenge to innovative delivery is the human resource element. A significant percentage of institutional activity is driven by individuals; a risk-heavy and high-variable dependent. The quality and level of staff who are not only trained in entrepreneurship delivery, but are themselves entrepreneurs within the universities, are rare. As noted by one lecturer, 'not many academics are in the entrepreneurship space. The people who are truly entrepreneurial are few and far between; across the country, there are enough staff'. In some cases, there are staff members who run their own businesses, but with little or no incentive from the university to engage in or share with students, they refuse to engage.

Strategic implementation

Universities need a vision of how entrepreneurship will be implemented at an institutional level and how this will be supported and communicated. There is the tendency for a heavy reliance on centres and incubators to provide the solution to the non-academic delivery model. This is flawed when the centres operate as silos without clear central engagement or support. There are clear capacity issues at play here too – when people have to be pulled in from other departments this causes delivery issues and constraints. Where there are multiple campuses without full presence or coordinated activity, this can be even more challenging for students and staff.

Funding

Funding is a considerable challenge. Institutions rely on external funding sources through grants, foundations and private donors to supplement their work. Funding from local, national and international governments is used to expand internal capacity as well as provide business incubation centres and outreach programmes. As one participant highlighted in the survey 'few intuitional resources are pointed to our centre and thus we rely mostly on external funding'. More established universities have banded together to create a wider fund that supports entrepreneurs within their region.

Many institutions provide small, tiered grant support, or limited starting funds for students but this funding is largely externally driven. However, the large majority of universities link students looking for funds with external funders such as SEFA (through the Department of Small Business Development), the Technology Innovation Agency and other foundations. What institutions find difficult is understanding who is responsible for funding what in terms of government agencies and how best to access these funds.

Other training providers

The emphasis on entrepreneurship development by national government means that there are an increasing number of training providers who offer programmes for the full range of entrepreneurs. Many of these providers offer specialist training and funds, in addition to practical and theoretical applications that most universities lack due to their rigid structures and over-emphasis on theoretical knowledge. These training providers also offer structured development programmes; opportunities for local, national and international exposure; as well as the all-important social capital needed for entrepreneurs to connect and succeed. The Aspen Network of Development Entrepreneurs (ANDE) list for the South African Entrepreneurship Ecosystem lists hundreds of providers for entrepreneurs (ANDE website).

A number of large foundational entrepreneurship development organisations, such as the Tony Elumelu Foundation (TEF), have streamlined programmes which all focus on developing the next generation of African leaders and entrepreneurs. These providers are backed by large capital investors, and have sector-specific mentors and advanced technological tools and equipment, in addition to providing broad learning environments.

The TEF's overarching aim is to promote entrepreneurship throughout the African continent, with a special focus on young and emerging entrepreneurs. Its mission is to 'catalyse economic and social development in Africa'. (TEF website) The programme is committed to identify, train, mentor, and empower 10,000 African entrepreneurs over a ten-year period. TEF's programme includes a start-up tool kit, online mentoring, online resource library, meet-ups, entrepreneurship forum, access to seed capital and most importantly an active alumni network.

While not a fully fledge programme like the TEF, the MasterCard Foundation (MCF) has set out an ambitious goal that by 2030, it will have worked to enable 30 million young people in Africa to create and find secure employment as a pathway out of poverty (MCF website a). MCF works with partners to address issues such as the lack of relevant curricula leading to a skills mismatch for the job market, the lack of formal jobs and the difficulty of starting and growing a business. It also provides access to appropriate financial services, including capital and support for young entrepreneurs (MCF website b).

While universities have the advantage of a captive audience, entrepreneurs who do not find the support, guidance, learning and opportunities through higher education will find a way to succeed without the university. An excellent example of this is Sandras Phiri of the Africa Trust Academy. Phiri saw the opportunity to engage youth around leadership, financial literacy and entrepreneurship while he was still a student. He found that the process of creating his venture within the university structure was just too slow, so struck out on his own. The Africa Trust Academy provides entrepreneurship development training which includes access to the Start-Up Grind, helping aspiring and early stage entrepreneurs to launch and grow their start-ups through training and investment opportunities (Africa Trust Academy website).

In addition to the face-to-face support available in the country, there are a number of online providers that offer basic courses in entrepreneurship such as LinkedIn Learning, Future Learn, Udemy and Cisco NetAcad. While there is a charge to most of these programmes, Cisco NetAcad (used by a newly established university in South Africa) is free to users who subscribe to the self-guided learning programme.

Third-party providers

Third-party providers occupy a slightly different space as they work with universities to deliver their content to students. From this research, it appears there are three major providers operating in this space in South Africa; the Wadhwani Foundation, STEP, and Enactus. The Wadhwani Foundation's primary mission is 'to accelerate economic development in emerging economies by driving large-scale job creation through entrepreneurship, innovation and skills development'. Charging no fees for their programme, the Wadhwani Foundation has the advantage of working within institutions that are looking for a cost-effective solution, rather than a labour-intensive way of scaling up entrepreneurship development provision (Wadhwani website). Working with institutions to craft their entrepreneurship development activity, the advantage this has over other third-party providers is that the university contributes very little in the way of funding, but must be committed to make the programme work at their institutions. Where some institutions see this as a threat to what they are looking to deliver internally in the entrepreneurship development space, others see it as complementary to what is being provided within the university to add value to the students themselves. As the Wadhwani Foundation programme is practical in nature, it is more useful than some of the basic activities delivered in higher education currently. Three universities reported using this third-party provider.

Two institutions reported using the Student Training for Entrepreneurial Promotion (STEP) Programme, supported by UNESCO SA and Leuphana University of Lüneburg, as a third-party delivery partner. STEP develops young people's skills, knowledge, and confidence to pursue an entrepreneurial career. In the training, students learn step-by-step to start their own businesses. This provides them with an effective means of creating jobs for themselves and other people in the community. Through the training, the students become more proactive and independent, which supports them in overcoming the extreme unemployment rates among the youth in many developing countries (STEP website).

Enactus is a global student experiential learning platform dedicated to developing entrepreneurial leaders and social innovators (Enactus website). Students are encouraged to use innovation and business principles to improve the world. The impact of the Enactus program is intended to advance enterprise and supply chain

development in communities, while supporting entrepreneurial mindset development among students. From the survey, it has emerged that Enactus is present at all 26 universities in South Africa and are recognised as part of the entrepreneurship development ecosystem. Enactus serves as the primary driver of student entrepreneurship delivery in at least two newly established universities. Students work in teams, are guided by educators and supported by business leaders. Teams conduct needs assessments in communities, identify potential solutions to issues and implement community impact projects. Although Enactus aims to produce registered start-ups with equity investment, thus benefiting both student members and communities, the data indicated that there might be some ambiguity about the primary benefits of Enactus membership for students. Some interview participants understood Enactus to be project-based, prioritising leadership development, including ideation and presentation skills.

Impact

There is no conclusive standard for measuring the impact of entrepreneurship development in higher education. Where changing mind-sets is the goal, no baseline has been established and no data have been gathered to reflect the actual change in mind-set or behaviour of students receiving the training and support, nor of the people delivering these activities.

What is apparent is that it is very hard to measure impact beyond the numbers of course attendants or companies created (and how long they have survived) from within centres and incubators. Phone interview and focus group evidence suggests that there is activity in this regard, with processes in place in some cases to keep track of participants and to see how many create and develop businesses post engagement. It was fully acknowledged that this is a labour-intensive process and one that does not yield comprehensive responses by any means.

> The measurement of impact is still very much in the early stages of providing access and exposing students to activity in this area. Less attention is paid to the number of jobs/ companies that have been created and more to how did an institution encourage a culture of entrepreneurship and let students fail in a safe space and build and develop accordingly. [It is] driven by questions: did we manage to convince students who had never engaged in this that entrepreneurship is a viable option?
>
> **(Taken from a phone interview)**

> Knowing this, and being able to show that they (academics) actually contributed to the development of the learners, what is the added value of what you are teaching the students? We need to add value to the curriculum – if you have a fixed curriculum then nothing will change.
>
> **(Academic – Interview)**

As previously indicated, many institutions define success of the entrepreneurship activity based on through-put of learners. While some universities use indicative measures to assess practitioner outcomes through key performance indicators and productivity units, support professionals within specialised units (such as centres for entrepreneurship, technology transfer offices and incubators) are measured on how much money they bring into the institution, not on the number of student entrepreneurs that are created.

> Why is it that we are just ticking boxes and counting the number of students who come in and out? There are so many strategies out there, but no follow up. Can we really justify spending resources on measuring students who are no longer there? We need to ensure that we aren't just creating knowledge but something that can be re-invested for some time, renovate them and learn from failure, then develop new strategies and try and merge it with what the university wants.
>
> **(Tutor – Focus group)**

Overall, beyond participation, institutions lack a formal reporting mechanism for measuring success or impact as many do not know what denotes success. There are instances where monitoring and evaluation have recently been embedded in new programmes and this includes the transition from ideation to completion. There is also evidence (drawn from interviews and focus groups) that incubators and centres for entrepreneurship employ their own monitoring and evaluation processes with post-intervention engagement. While this represents an example of good practice, it is a largely isolated response according to the data collected.

Recommendations

Entrepreneurship in higher education has gained increasing prominence in South Africa and around the world as institutions look to add value not only to their academic offerings, but as a way to encourage economic participation in their young people. With an increase in youth unemployment and the rising number of young people entering the higher education system, universities are finding that the traditional narrative – that having a degree means that you are instantly employable – is losing its validity.

Entrepreneurship is seen as an engine of economic growth and a source of employment to alleviate socio-economic challenges through the promotion of business formation. Education is seen as an important factor in stimulating entrepreneurial activity. Self-employment is now promoted (and seen) as a viable career option for those with the right mind-set, opportunities and abilities.

This report provides a baseline study of entrepreneurship development within the 26 public universities in South Africa. While not a benchmarking exercise, it showcases actual activities as well as perceptions of what is happening within this space. South African universities vary greatly in size, funding structures and communities served. It would therefore not do any justice to categorise institutions or compare them on the basis of what is or is not happening at each institution. Rather, this report has looked at responses in the aggregate, stressing the importance of the growth of the sector and EDHE's role in being the 'tide that lifts all boats'.

What the recommendations of this report cannot do is discern good practice in entrepreneurship development where there is little to no overarching proof of its effectiveness in creating the kind of widespread, long-term change the literature seeks around the creation of more entrepreneurs and how they are shaping the economic landscape. This would require a more longitudinal study to outline the goals and effectiveness of entrepreneurship development within South African universities. As those engaged are scattered throughout their institutions, not everyone who is engaged in entrepreneurship development and delivery has contributed to the survey, focus groups and interviews.

In light of the findings of this report, DHET and USAf (through EDHE) should look to support institutions through the development of specific policies and strategies, aligned to international best practice, in order for universities to engage students in entrepreneurship activities. Continued collaborations with international partners such as the British Council should facilitate exchanges of knowledge, know-how, and best-practice between universities in South Africa, the UK and other parts of the world. Development of future institutional strategies should highlight how an institution will, or has, grown to develop their current provisions along the spectrum of teaching 'about', 'for' and 'through' entrepreneurship. Future strategies should also reward and showcase innovative delivery of entrepreneurship activity and reflect where an institution is on its journey to becoming an entrepreneurial university.

The set of recommendations following is based on the data gathered and represents learning that can be used as the basis for the development of a national policy framework, not only for higher education institutions in South Africa, but also for those who are looking to grow entrepreneurship development wherever they are. What is needed is a benchmarking tool which allows for the assessment of the characteristics and challenges of an entrepreneurship development system against a set of key criteria (as indicated below) and will then enable comparison of approaches between other, similar universities.

Audit of entrepreneurship development

First and foremost, EDHE must encourage an internal audit of entrepreneurship activities within each of its member institutions. What has been apparent from the outset of this project is that entrepreneurship activities are siloed and isolated from one another, making a full and comprehensive picture of entrepreneurship development unattainable. Three institutions are currently evaluating their entrepreneurship activities and programmes with the intention of streamlining and centralising responsibilities. In this regard, EDHE should work to create an in-depth internal audit of activities. This would not only support the lack of communication aspect, but also provide centralisation for a more coordinated and measured approach to establish how well programmes and activities are delivering on their objectives.

One of the inherent weaknesses highlighted in the study is that many of the entrepreneurial activities are led and managed by individuals and undertaken within faculties, departments and specialist units which do not interact with each other. The success of entrepreneurship development in higher education will need to be achieved through a concerted effort, with USAf (through EDHE), DHET and the Department of Small Business Development, working together. The design and delivery of an EDHE-owned framework for entrepreneurship development must take into account the varying level of engagement on the topic across the universities.

1. Using an established and agreed upon EDHE framework, universities should **commission an internal audit of their entrepreneurship development activities.** This should include outline staffing and funding received. It should evaluate

effectiveness in order to increase communication within the silos and present areas for collaboration between academic staff and support professionals within the institution.

Creating an enabling environment for an entrepreneurial university

Strong entrepreneurial universities need supporting structures and most importantly strong senior leadership. Moving towards a more entrepreneurial university requires leadership with the foresight to see beyond the traditional methods of teaching and learning to create an entrepreneurial ecosystem 'by providing spaces for entrepreneurial teams to meet with each other, other entrepreneurial teams, mentors and other companies' (Eisenberg, Gann and Yoon, 2019).

Even though each institution has some level of entrepreneurship activity, there is little sense of this being embedded in the foundational core of the universities. From the limited number of institutions that have meaningfully incorporated entrepreneurship into their strategies, it is clear that EDHE and stakeholders must work more closely to help universities communicate the role each university can play in developing entrepreneurs.

Universities also need distinct policies around how entrepreneurship development works within their institutions as well as coherent and measurable strategic outputs that address how entrepreneurship activities (in the aggregate) will provide the skills, competences and attitudes needed to develop entrepreneurs. In addition, policies should address what support the universities can offer students in regard to research, commercialisation, ideation, innovation and support from the wider community. By building a framework, universities can monitor their progress which can be used to showcase success beyond the initial activities.

2. EDHE, in collaboration with the EDHE Communities of Practice, should work with universities to appoint a 'senior management' level **champion for entrepreneurship to consolidate responsibility for entrepreneurship development** within their portfolio.
3. **The role of the EDHE Communities of Practice within institutions should be bolstered** to provide an internal support structure, as well a direct line to the 'senior management' level champion.
4. Universities should work with EDHE to **create clear and widely distributed strategies** that specify their institutional objectives in entrepreneurship development.
5. Institutions should aim to have a **dedicated, well-resourced team with strategic oversight for entrepreneurship development activities**. This means an allocation of funds, job descriptions, titles and objectives that align with the universities' positions on entrepreneurship development.
6. EDHE policy should look to work with universities to create **opportunities for students to engage** in entrepreneurship on campus.

Curriculum design

Entrepreneurship development is multifaceted and requires the delivery of entrepreneurial mind-set skills integrated into course designs. EDHE should position itself as the broker to enable the provision of diverse informal learning opportunities and experiences to stimulate the development of entrepreneurial mind-sets and practical skills delivery at its member institutions.

7. EDHE should work with the Council on Higher Education to create pedagogically suited Training of Trainers programmes (by general subject area) to **integrate entrepreneurship thinking into curriculum design** outside traditional business faculties and departments.
8. EDHE should use its position in USAf as the representative organisation of universities in South Africa to **establish partnerships with foundations** (Tony Elumelu Foundation, MasterCard Foundation) and **delivery partners** (LinkedIn Learning, Get Smarter) to strengthen the entrepreneurship activities within the universities.
9. Through the Communities of Practice, EDHE should encourage institutions to **assess and explore their entrepreneurial culture abilities through the use of the HE Innovate tool** (https://heinnovate.eu/en).

Teaching and learning provision

It cannot be ignored that the starting place for entrepreneurship development has to be the provision of teaching and learning to support its growth and acceptance into the mainstream. Teaching and learning entrepreneurship in higher education embraces the idea that entrepreneurship is a teachable skill with the ability to give students (who are unfamiliar with it) a basis from which to understand what it is, how it works and how they can choose to engage with it. From the point of view of DHET, USAf, EDHE and its member universities there are three primary perspectives which need to be understood and acted upon: policy, practice, and mind-set (Branch, Horsted, Nygaard and Paalzow, 2017). In an environment where assessments and marks are paramount, rather than skills development and mastery, universities need to provide spaces and opportunities for their students to explore, succeed and most importantly fail.

Engaging front-line delivery staff in entrepreneurship will require engagement through performance management indicators and appraisals of staff. Questions can be asked relating to the impact of particular incentives/funding to engage in entrepreneurial activities. This also provides an opportunity to explore issues relating to the success or failure of delivering on the entrepreneurial objectives and why. In particular, the organisational design and decision-making structures can be explored to understand the extent to which they impact on the ability of personnel to achieve their set objectives (HE Innovate).

10. USAf should design a **skills audit to assess the institutional development needs** for developing and implementing

the entrepreneurship agenda. This can be an additional pillar for performance management through key performance indicators and productivity units.

11. The British Council should consider expanding its support towards the EDHE Programme by partnering with DHET and USAf to design and implement activities that seek to build the capacity of emerging student entrepreneurs at South African universities, thus making a meaningful contribution in the graduate outcomes space.
12. USAf should **seek funds** designed to support institutions **to allow staff to engage in non-conflicting entrepreneurial pursuits**.

Funding specifically for entrepreneurship development

Based on the creation of an entrepreneurship development framework, funding bodies should create a subsequent reward system which gives strategic funds to further increase the pace and quality of entrepreneurship development at universities that ranked highly in their ability to deliver. The sustainability and replicability of entrepreneurship development in higher education requires financial commitment set for the long-term, with measurable indicators to allow for a well-resourced approach. EHDE should work with institutions to ensure that they have the monitoring and evaluation systems in place to make them attractive to external funders. In the same way that universities receive and document research funding, so too should any additional funds for entrepreneurship development be scrutinised.

13. DHET should work with government funding agencies like SEDA, SEFA and the NYDA to **set aside funding for entrepreneurship development** tied to an institution's ability to meet key performance indicators as set out in the EDHE framework. This should be based on a scale of engagement to avoid disadvantaging smaller institutions.

Conclusion

As evidenced from this report and its findings, there is considerable activity taking place in South Africa in the field of entrepreneurship. What is also evident is that this activity is disjointed and would benefit from increased levels of communication, support and direction. This report has highlighted areas of good practice and areas for improvement for EDHE and its funding partners. While the data returned is representative, rather than comprehensive, it does show a pattern of engagement and activity that is to be commended. Where there are recommendations for action and development, as listed above, these are most commonly in the form of improving upon existing practice; developing processes; or supporting people and positioning. EDHE has a role to play in delivering and supporting public institutions with the knowledge and frameworks to better their provision of entrepreneurship activities and increase awareness and acceptance of this in universities.

There is a clear role for universities to play, but this needs to be coordinated and properly managed internally. Given the diversity of South African higher education institutions, a single approach makes little sense, but a coherent framework that provides support and possible collaboration opportunities would be highly relevant. Universities should be there as co-creators in entrepreneurship development. They are a place where there are people who can be complementary to what is being done. Universities should be seen as incubators for entrepreneurship and talent development. They need not have all the answers, nor should they seek to fully control every aspect of the process; rather, they should provide a supportive and transparent environment that makes full use of all available resources in the pursuit of supporting youth engagement and output. The objective should be to facilitate a process of project design and development, led by entrepreneurship experts, to support innovation in a relevant aspect of the entrepreneurship system. Each institution should be allocated a budget that can be used to put together a technical assistance or capacity building project to bring its activities in line with the framework standards.

This report has demonstrated varying levels of activity and engagement across the higher education sector and provides an opportunity for further growth and collaboration. A process to establish the practice of training the trainers would add support to a pattern of cascaded learning. This would involve making full use of all human resources; engaging external stakeholders but also promoting internal expertise (particularly through student participants sharing lived experiences). There is much to be leveraged from existing experience and much that is largely under-reported and unknown. This research found less public evidence of activity than internal discussion would suggest, so there is clearly an avenue for developing communication techniques; highlighting existing good practice; and demonstrating impact.

This report has shown that success in this arena is not a binary process. Development in this space is an ongoing endeavour. As experiences and opportunities shift, so will expectations and activity. In order to remain constant and relevant, and in order to provide valuable evidence supporting impact, regular reviews should be undertaken and the findings properly disseminated and acted upon. This will ensure that the material and delivery techniques are fit for purpose and are providing the most relevant skills and opportunities to the youth of South Africa. As curricula are reviewed, so too should the delivery of entrepreneurship be reviewed.

The findings and recommendations of this report acknowledge that there is no one-size-fits-all policy that can be created. As shown from the self-reported data collected in the surveys, universities have a high degree of freedom in designing their entrepreneurship activities. With that freedom comes the responsibility for ensuring that the activities fit with the institutional ethos, organisation and allocation of available resources.

South Africa and its public universities have an excellent opportunity to seize control of the narrative and ensure coherent and comprehensive development in the field of entrepreneurship. This requires an understanding of current practice and fundamental objectives and expectations. Where EDHE and other stakeholders can provide the necessary support is in creating an embedded and supported system that promotes integration and collaboration; is regularly monitored and reviewed; and will provide the foundation for sustainable activity moving forwards. There is an absence of data, of understanding, and of communication and these are all easily fixable. A clear path ahead is possible and evident from the current levels of activity and engagement. It is also fully supported and desired. Universities cannot succeed alone, nor can governmental institutions. By working together to create a contextually relevant framework and ongoing system of support and review, USAf, through EDHE and its funding and delivery partners, will afford South Africa's youth more meaningful opportunities, and impact will be more readily visible and understood.

Changes to bring entrepreneurship development into the mainstream of the traditional public institutions will not happen overnight. A step-by-step process is required that EDHE, and those committed to using entrepreneurship as means of providing graduates with ways of economic participation, should agree is worth pursuing. This is especially true if they believe that entrepreneurship will provide the gateway for a generation of youth that is capable of solving some of the very real, grand challenges facing our society and our planet today.

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Annexures

The following annexures were provided on delivery of the research report. Only the Focus Group Questions are included as Annexure 1:

- SA Universities Website Review;
- SA Universities Entrepreneurship Activity;
- Milestones Summary Report; and
- Focus Group Questions.

Annexure 1: Focus Group Questions

1. How is entrepreneurship development delivered at your institution?
2. Do you feel your universities support practitioners in enhancing the delivery of entrepreneurship development?
3. Do you feel entrepreneurship development is effective within your institution?
4. Is there any monitoring and evaluation (on the impact of) entrepreneurial development programme delivery? Do you (or can you find) numbers on participation/completion?
5. How do you or your institution define success in entrepreneurship development delivery?
6. Does your institution have policies and strategies on entrepreneurship development? If so, is it at an institution, department or faculty level?
7. Which institutions, in your opinion, are providing the effective entrepreneurship development? What is it about their work that stands out?
    - What is stopping the successful implementation of entrepreneurship development at your institution?
8. Does your institution assist entrepreneurs to find funding? Additionally, does your institution have funds to support entrepreneurs?
9. What are the main (obstacles, challenges or problems) you and your colleagues face in teaching entrepreneurship in the university context?
    - Follow up Question: What do you need in order to overcome those obstacles?
10. Is higher education best placed to provide entrepreneurship development, why or why not?
11. Is a national policy on entrepreneurship development necessary? What would optimise its effectiveness?

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