

# Internships enhancing entrepreneurial intent and self-efficacy: Investigating tertiary-level entrepreneurship education programmes

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**Background:** Entrepreneurship education interventions are deemed effective when they enhance interns' entrepreneurial intent (EI) and entrepreneurial self-efficacy (ESE). Notwithstanding the emergence of internship as an experiential learning approach in entrepreneurship education, evidence about their potential to foster EI and ESE lacks systemisation.

**Aim:** The aim of this study was to determine whether internships enhance EI and ESE. Furthermore, to what extent South African tertiary institutions include internships in their entrepreneurship and management curricula and the obstacles to such inclusion.

**Setting:** South Africa has made a concerted effort to insert an entrepreneurship component across tertiary curricula. The evolution of this entrepreneurship component to experiential learning approaches is, however, unclear.

**Methods:** A qualitative research approach was followed. Firstly, it reviewed empirical evidence for the positive relationship between internships and EI and ESE. Secondly, it conducted a survey of entrepreneurship and business management programmes at all 23 South African tertiary institutions and content analysed the retrieved information to determine whether such programmes include internships. Finally, 10 experts were interviewed to unveil the constraints inhibiting the inclusion of internships in tertiary curricula.

**Results:** The results revealed empirical support for the positive influence of internships on both EI and ESE. Significant lack of inclusion of internships in tertiary curricula in South Africa emerged, owing mainly to administrative issues, curriculum re-design challenges, and lack of mentoring capacity.

**Conclusion:** Tertiary-level entrepreneurship education programmes should include an internship component. The paper suggested that tertiary institutions pilot-test the inclusion of internships with a small number of students and a selected cohort of small business owners.

## Introduction

The impact of entrepreneurs, entrepreneurship and small business on economic growth and development is well researched and documented (Kibassa 2012:158; Mlatsheni & Leibbrandt 2011:120; Thurik *et al.* 2008:673). For the economic potential of entrepreneurship to materialise, however, entrepreneurship has to be encouraged, by motivating individuals to become entrepreneurs and equipping them with the right skills to turn ideas into opportunities, and opportunities into successful ventures (Peltier & Scovotti 2010:515; Volery *et al.* 2013:429). Fostering of entrepreneurship has therefore become an accepted wisdom in both economic management and government resolutions (Peltier & Scovotti 2010:514; Vanevenhoven & Liguori 2013:316).

Research has shown that universities play an important role in fostering entrepreneurship (Viviers, Solomon & Venter 2013:2). Education is essential, not only to shape the mindsets of the youth but also to provide the skills and knowledge that are central to developing an entrepreneurial culture. A central premise of these statements is that entrepreneurship is not an innate characteristic but a phenomenon. Experience and the influence of teachers, parents, mentors and role models all play a role in shaping the development of entrepreneurs (Peltier & Scovotti 2010:515; Volery *et al.* 2013:429).

Vanevenhoven and Liguori (2013:316) emphasise that individuals should be exposed to entrepreneurship education. These scholars found evidence across 70 countries that

entrepreneurship graduates have significantly higher degrees of entrepreneurial motivation than non-entrepreneurship graduates (Vanevenhoven & Liguori 2013:322).

The turbulent environment in which small businesses and entrepreneurs operate, however, requires universities to find hands-on, or experiential, learning approaches to prepare the entrepreneurs of the future (Nabi, Walmsley & Holden 2013:1–2). Experiential learning is the process whereby knowledge is created through the acquisition and adaptation of experience: thus knowledge that results from the combination of acquiring and transforming experience (Radu Lefebvre & Redien-Collot 2013:370). There has been increasing consideration of new approaches to curriculum pedagogy in universities, particularly in the form of work-integrated learning opportunities that aim to incorporate the workplace setting as a component of higher education (Alpert, Heaney & Kuhn 2009:36; Anderson *et al.* 2012; Wan *et al.* 2013).

Alpert *et al.* (2009:37) highlight the fact that internships provide an experience of 'learning by doing' in a real business situation, but with guidance and support. Students with internship experience gain career advantages in the form of more job offers, less time spent looking for the right job after graduation and increased monetary compensation (Gault, Leach & Duey 2010:85). Universities and colleges have been using internships as a means of providing business students with practical experience and preparing them for their future careers (Moghaddam 2011:287; Viviers *et al.* 2013:2). However, there seems to be a lack of South African tertiary institutions providing internships to their entrepreneurship students.

Despite the growing interest in internships by businesses, government and universities, limited scholarly research has been dedicated to the subject of internships in the entrepreneurship field (Alpert *et al.* 2009:37; Peltier & Scovotti 2010:515). Conversely, a considerable number of studies have been conducted on what predicts entrepreneurial behaviour. In this research stream, there is widespread consensus that the construct of entrepreneurial intent (EI) is one of the best predictors of entrepreneurial behaviour (Ajzen 1991:181; Davidsson 1995:2; Krueger & Carsrud 1993:196). A branch of this research stream has also investigated the antecedents, or triggering factors, of EI. Entrepreneurial self-efficacy (ESE), understood as the belief individuals have in their capabilities to perform entrepreneurial tasks and activities (Hmieleski & Corbett 2008:486), has consistently been found to be an antecedent of EI (Kickul *et al.* 2008:329; Wilson, Kickul & Marlino 2007:397). ESE may also mediate the relationship between other antecedent variables and EI (Zhao, Seibert & Hills 2005:1270), and at the same time act as a moderator of these relationships (BarNir, Watson & Hutchins 2011:287; Prabhu *et al.* 2012:573).

## The research problem

There is consensus that entrepreneurially inclined individuals are more likely to start a business and that ESE further

contributes to the formation of EI (Fayolle & Liñán 2014:665; Kautonen, Van Gelderen & Fink 2013:668; Sequeira, Mueller & McGee 2007:288). Devising more effective entrepreneurship educational programmes requires a better understanding of the dynamics behind business start-up decisions (Liñán, Rodríguez-Cohard & Rueda-Cantuche 2011:196). Given that the focus in entrepreneurship education is shifting towards experiential learning methods such as internships (Fayolle 2013:696), the question arises of whether or not internships enhance EI and ESE. To date, studies examining internships as antecedents of EI and ESE have been scarce in number and conducted in isolation. Taking the EI and ESE literature as point of departure, it is postulated that if internships do not increase the level of EI and ESE in individuals, then internship-based entrepreneurship education programmes have not been effective. In this paper, entrepreneurship education is broadly defined to include both education and training, which deal with knowledge transfer and skills transfer, respectively.

The aim of this paper is to conduct qualitative research by examining the empirical literature on whether or not internships enhance interns' levels of EI and ESE. In order to ground the present study in a South African context, it also conducts a survey approach whereby the information on university-level programmes in South Africa is content analysed. This is done to identify which tertiary institutions offer internships as part of their entrepreneurship and business management programmes. (In this paper, 'tertiary institutions' in South Africa are narrowly defined as South African universities and universities of technology or Technikons). The consideration of both entrepreneurship and business management programmes was dictated by the awareness that entrepreneurship education can also be offered as part of a business management programme (Martínez *et al.* 2010:23). Since very few entrepreneurship and business management education programmes at tertiary-level in South Africa include an internship component, this paper contributes to entrepreneurship education practice by highlighting the role of internships in fostering EI and ESE, based on the empirical findings of previous studies. Reasons for the exclusion of internships are highlighted and possible solutions are presented.

This paper sets off by providing a brief overview of the supporting literature and then formulates research propositions. Thereafter, the research methodology is described and the empirical findings presented. The findings and their implications are discussed. Lastly, the limitations of the study are presented and recommendations for future research are highlighted.

## Literature review

### Experiential learning in entrepreneurship education

Notwithstanding the novelty that entrepreneurship represents in the sphere of higher education, it is one of the fastest growing tertiary-education fields, with the number of entrepreneurship degrees and courses multiplying every

year (Peltier & Scovotti 2010:515). Recently, providing entrepreneurship education and enhancing interest in and understanding of small businesses have been of increasing interest in higher education (Varghese *et al.* 2012:358). Previous studies have examined factors influencing EI, which include intrinsic personality traits, perceived barriers and support, and the socio-political-economic context of entrepreneurship (Fayolle, Gailly & Lassas-Clerc 2006:702).

In the entrepreneurship education field, the belief that traditional classroom-based teaching methods are inadequate to equip students with the necessary tools and skills to start and run their own business ventures is gaining increasing consensus (Varghese *et al.* 2012:361). As a consequence, traditional teaching methods must be complemented by innovative ways of thinking, diverse skills and new modes of behaviour to develop fully entrepreneurial approaches to education (Alpert *et al.* 2009:36; Peltier & Scovotti 2010:515; Zhao 2013:444). Conversely, some studies have observed that experiential internship programmes can have an effect on students' understanding, attitudes, perceptions, and intentions with regard to entrepreneurship and small businesses (Varghese *et al.* 2012:358; Volery *et al.* 2013:431).

From the above discussion, it is evident that traditional teaching methods are not adequate in fostering students' entrepreneurial behaviour. Entrepreneurship education specifically necessitates collaboration between traditional and new innovative approaches to education, one of which is the experiential element offered by internships.

### **Internships as a form of experiential learning**

Much has been written about the value of experiential learning (Martínez *et al.* 2010:11; Mason & Arshed 2013:457). Experiential learning theory posits that effective learning occurs when students are actively involved with an experience and then reflect on that experience. The activities involved in experiential learning help students integrate theory and real-world practice (Peltier & Scovotti 2010:515; Pittaway *et al.* 2011:48).

An internship, as mentioned before, is a form of experiential learning. An internship may be defined broadly as a temporary work position with an emphasis on education rather than employment (Weible 2009:59). There are varying definitions of internships (Moghaddam 2011:287; Zhao 2013:445), but they all concur on some core characteristics. For the purposes of this study, an internship is defined as structured and career-relevant work in an external organisation, occurring in a controlled experiential environment, where a student receives academic credit and/or applicable knowledge.

'Learning by doing', 'action learning' and 'gaining experience' are seen to be some of the main benefits that students gain and are often judged by students to be superior forms of learning when compared with traditional forms experienced in the curriculum (Chen & Shen 2012:35; Pittaway *et al.* 2011:53).

According to Alpert *et al.* (2009:37), the many benefits of internships have been well documented in several studies. For students, an internship provides an experience of 'learning by doing' in a real business situation, but with guidance and support. Internships bridge the gap between theory and practice and between classroom education and real-industry life. They provide a more valuable learning experience, enhance the meaning of the academic programme and create feelings of personal and social efficacy (Alpert *et al.* 2009:37; Daugherty 2011:470).

According to Kim and Park (2013:72), an internship can provide participants with the opportunity of learning what the industry offers, which may be different from what they learn in the classroom and can certainly influence a student's career choice in either a positive or negative manner (Chen & Shen 2012:30; Daugherty 2011:470). More specifically, internships in an entrepreneurial venture or small business may foster the intern's decision to pursue an entrepreneurial career. The experience in this type of internship is likely to have a significant impact on whether students decide to join the organisation and if they eventually aim for a career in that direction (Nabi *et al.* 2013:3; Zhao 2013:445).

### **Entrepreneurial intent and entrepreneurial self-efficacy**

The attempt to explain the decision to start a business venture has given rise to a body of research that has investigated the factors triggering this decision. One of the most widely reported factors is the construct of EI.

EI may be defined as a conscious awareness and conviction by individuals that they intend to set up a new business venture and plan to do so in the future (Buelens & Izquierdo 2008:219; James & Bell 2013:96). A great part of the research on EI has been derived from early works in the psychological field that focused on understanding human behaviour, such as Ajzen's (1991) Theory of Planned Behaviour, which advances intention as a robust predictor of behaviour. Early works in the field of entrepreneurship were also grounded in the construct of EI, such as Shapero and Sokol's (1982) Entrepreneurial Event Model, Bird's (1988) EI Model and Boyd and Vozikis' (1994) Model of Entrepreneurial Intentionality, to name a few.

Intention-based models have attracted much attention from researchers, as they offer an opportunity to increase our understanding of and predictive ability for entrepreneurship (James & Bell 2013:96). Studies in the area of student propensity (intentionality) have ranged considerably between narrow personality-trait perspectives to broader perspectives taking into consideration social and environmental influences (De Clercq, Honig & Martin 2012:653–654).

According to Buelens and Izquierdo (2008:219), developing of attitudes and intentions towards entrepreneurship is paramount in business start-up behaviour. Business start-up has been viewed as intentional and as best predicted by EI (Gird & Bagaim 2008:719). Business start-up activities are

not necessarily restricted to one or the other motivational categories but, in their intentionality dimension, constitute a combination of both the push and pull factors. The journey to entrepreneurship is not a function of a single motivating factor but a combination of them (Nabi *et al.* 2013:9). However, there is evidence that entrepreneurial behaviour is preceded by EI, which is influenced by an individual's entrepreneurship education (Sánchez 2013:448).

Within the field of research on university students' business start-up decisions, there is an over-abundance of studies that indicate a relatively high level of EI in the student population. There is still little consensus, however, on how this intention is formed, and research has revealed that different contextual factors may be related to university students' motivation to start their own businesses, such as formal aspects (higher education courses) or informal ones (family and significant others). The aforementioned formal and informal elements are pivotal regarding business start-up, pulling graduates by affording education and support, as well as pushing graduates by forcing them to consider venture creation in the absence of traditional organisational jobs or high graduate unemployment (Nabi *et al.* 2013:8).

James and Bell (2013:99), for instance, found that between 30% and 40% of participants in an entrepreneurship education programme had no desire to start a business immediately after completing the programme, whereas 70% of them wished to start a business within 5 to 10 years after the programme. Similarly, Viviers *et al.* (2013:10) indicate that there is a shift in favour of entrepreneurship as a career choice 5 years after graduation. These findings indicate that individuals undertaking entrepreneurship education develop EI, but they wish to start a business only in the medium term. It can be postulated that between completing the entrepreneurship education course and starting a business they want to gain some experience, knowledge and confidence. As discussed earlier, internships may successfully provide students with this learning experience before they embark on their own business.

In sum, students' EI is linked to their behavioural attitudes (one of which is wanting to gain experience before starting up), and the internship experience could enhance individuals' self-confidence and maturity (Kim & Park 2013:77), fostering students' EI. By doing this, students become more independent, ambitious and focused on becoming entrepreneurs (Daugherty 2011:470; Volery *et al.* 2013:431). These considerations lead to the first proposition.

**Proposition 1:** Internships as a form of experiential learning enhance students' EI.

A considerable number of studies within the EI literature have investigated the antecedents of EI, or the factors that foster the development of the intention to start a business. The approaches followed by different authors are varied. Some authors have focused on the impact on EI of personal characteristics and contextual factors, such as personal traits

(De Pillis & DeWitt 2008), learning orientation and passion for work (De Clercq *et al.* 2012), family business background (Drennan, Kennedy & Redfrow 2005; Zellweger, Sieger & Halter 2011), role models (Van Auken, Fry & Stephens 2006), peer influence (Falck, Hebllich & Luedemann 2012) and different types of entrepreneurial or other experiences (Drennan *et al.* 2005; Quan 2012). Other authors (Liñán *et al.* 2011) have based their work on the Theory of Planned Behaviour, also in an educational context (Do Paço *et al.* 2011), and have confirmed the validity of this theory in examining how EI is developed.

One of the most commonly cited antecedents of EI is ESE. Self-efficacy is a construct first devised by Bandura (1977) in the psychological field, and is understood as the strength of people's convictions of their own effectiveness in executing the behaviour required to achieve certain outcomes (Bandura 1977:79). People with a high level of self-efficacy tend to set challenging goals, persist even in the face of failure and approach difficult tasks as challenges to be mastered rather than issues to be avoided (Kibassa 2012:161). In an entrepreneurship context, ESE is defined as the belief individuals have in their capability to perform entrepreneurial tasks and activities (Hmielecki & Corbett 2008:486). Many authors have devoted their research efforts to the investigation of the relationship between EI and ESE (see for example: BarNir *et al.* 2011; Boyd & Vozikis 1994; Kickul *et al.* 2008; Prabhu *et al.* 2012; Wilson *et al.* 2007; Zhao *et al.* 2005), and have found ESE to relate to the development of EI, as well as to function as both mediator and moderator of the effect of other variables on EI. Individuals with higher ESE are thus expected to have higher EI.

As to the understanding of how ESE is developed, it is worth mentioning that Bandura (1977:80–83) advocates that self-efficacy can be developed through performance accomplishments and vicarious experience, among other factors. The former refers to a person experiencing success in performing certain behaviour, whereas the latter is concerned with a person's observation of other people succeeding at a difficult task. Both factors strengthen self-efficacy by helping individuals to have a stronger belief in their ability to perform certain tasks successfully.

It can be postulated that both performance accomplishments and vicarious experience are enabled by internships, thus allowing for the development of interns' ESE. In fact, internship opportunities, especially in the small or start-up business sector, can benefit students by providing a rich learning experience that models future work environments and allows them to develop valuable skills that will prove beneficial in a variety of professional endeavours (Narayanan, Olk & Fukami 2010:62; Varghese *et al.* 2012:357). Moreover, entrepreneurship internships provide a good opportunity to follow an entrepreneur and learn essential skills in starting and running a new business (Nabi *et al.* 2013:3; Zhao 2013:445). Research has shown that the opportunity to acquire skills and

experience achievement through applied internships reinforces ESE, which in turn influences EI (Narayanan *et al.* 2010:62; Varghese *et al.* 2012:358).

Based on the above discussion, this paper investigates whether internships enhance interns' levels of ESE. This leads to the formulation of the second proposition.

**Proposition 2:** Internships as a form of experiential learning enhance students' ESE.

The variables included in the present investigation, and the propositions linking internships to EI and ESE, are graphically represented in Figure 1.

The South African government currently spends large sums earmarked for the development of youth entrepreneurship (Herrington & Kew 2014:47). However, the government initiatives put in place since 1994 have not achieved the desired results, partly because of a widespread lack of awareness among the target population of these initiatives (Herrington, Kew & Kew 2015:40). Contextualising the present study in South Africa, and based on the above literature review, it can be postulated that internships should be included in entrepreneurship and business management programmes at South African tertiary institutions, as an experiential learning component of entrepreneurship education at tertiary-level education.

**Proposition 3:** Internships as a form of experiential learning are included in entrepreneurship and business management programmes of South African tertiary institutions.

The following section describes the research methodology adopted by the present study, whereby information from the South African tertiary institutions was investigated to verify proposition 3.

## Methodology

This paper follows a pragmatist philosophical paradigm, as it is concerned with the practicality of internships with a view to enhancing EI and self-efficacy (Saunders & Tosey 2012:58). Although the pragmatic approach is more used in mixed-method research, the researchers have adopted 'the scientific notion that social inquiry was able to access the "truth" about the real-world solely by virtue of a single scientific method'

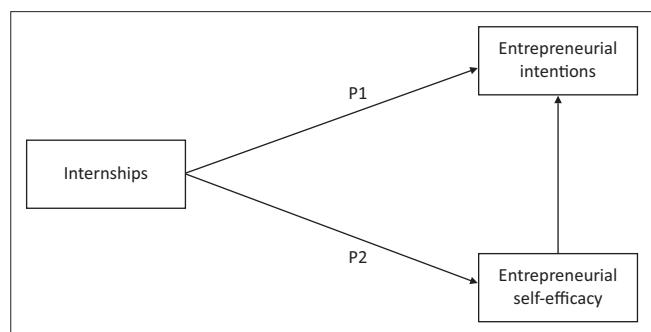


FIGURE 1: Conceptual framework of the relationships between internships, EI and ESE.

(Mertens 2005:26). The relevance of including internships as a component of entrepreneurship and business management curricula at tertiary institutions is only justified by the verification from experience in research of the value of internships in fostering EI and ESE.

In order to verify the above propositions, this paper followed a qualitative research approach, laid out in three consecutive steps. Firstly, it reviewed empirical research to find support for the positive relationship between internships and the constructs EI and ESE, using the major online databases for the discipline of entrepreneurship. Secondly, it carried out a survey of entrepreneurship and business management programmes at South African tertiary institutions, using publicly available information and telephone communication. The retrieved information was then content analysed to determine whether such programmes include internships in their curricula. Finally, 10 experts in the field of entrepreneurship education at tertiary institutions were interviewed in order to understand, (1) the extent to which they were aware of the positive relationship between internships and the development of EI and ESE; (2) why internships were included in tertiary-level entrepreneurship education programmes, or if not, why not and (3) what constraints they perceived to exist that might prevent their including internships in tertiary-level entrepreneurship education programmes.

The review of empirical literature pertaining to the relationships between internships and EI and ESE was conducted through the major online databases for the discipline of entrepreneurship: EBSCOhost, ProQuest, Emerald and Google Scholar. The search was set to find sources dating from 2008 to 2014. The choice of conducting the literature review over the past six-and-a-half years of research was dictated by the decision to situate the present study within the most recent discussions about internships as a form of experiential learning in entrepreneurship education. The keyword combinations used in the search were the following: 'internship' and 'entrepreneurial intent'; 'internship' and 'entrepreneurial self-efficacy'; 'work experience' and 'entrepreneurial intentions'; and 'work experience' and 'entrepreneurial self-efficacy'. In order to limit the search to works pertaining to internships, EI and ESE specifically, while not restricting the search excessively, the search used the above-mentioned keywords in the 'abstract' field. Thereafter, 25 sources were deemed to pertain to the subject matter of investigation and were retrieved for further analysis. Of these, 18 were journal articles, one was a doctoral thesis, two were conference papers and four were working papers. These data were content analysed to identify whether or not they empirically supported the propositions of this paper.

The survey approach entailed a content analysis whereby the entrepreneurship and business management programmes offered at all 23 South African tertiary institutions were investigated. This investigation was performed in order to

identify which tertiary institutions include internships as a component of their entrepreneurship and business management curricula. The data was content analysed to substantiate the relevance of internships for entrepreneurship education practice in South Africa. University-level entrepreneurship and business management programmes up to Master's level were analysed by referring to online web-based programme brochures. When these were insufficient, telephone interviews were conducted. MBA programmes were excluded from the investigation, since they provide education to individuals already in management positions, thus rendering the inclusion of internships redundant.

For the interview part of this study, all 23 South African tertiary institutions were contacted. The researchers requested an interview with the person in charge of entrepreneurship and business management curriculum development, or another expert involved in curriculum design, in order to obtain possible reasons for internships not being included in their curricula at their institutions.

The trustworthiness of the present qualitative research was guaranteed by (1) the use of precise search criteria in the review of empirical literature; and (2) the adoption of a survey approach whereby the data on university degrees was content analysed; namely, the assessment of whether entrepreneurship and business management degrees include internships in their curricula. These procedures minimised the level of researcher bias present in this paper, thus implementing one of the validation strategies used in qualitative research (Creswell 2013:251).

## Findings

### Review of empirical literature

The review of empirical studies that provide support for the relationship between internships and interns' levels of EI and ESE is summarised in Table 1. Eleven sources of the 25 originally identified were discarded, as further analysis revealed that they did not pertain to the present investigation or had not conducted empirical analyses. This led to 14 studies being included in this investigation, all empirically supporting Proposition 1 and Proposition 2.

As shown in Table 1, out of the 14 studies in support of either or both Proposition 1 and Proposition 2, 13 studies report a positive influence of internships on the development of EI and six studies support the influence of internships on ESE.

### Survey and content analysis of entrepreneurship and business management programmes

The survey of the content of entrepreneurship and business management programmes, which used publicly available information and telephone communication, successfully retrieved the content of such programmes for all 23 South African tertiary institutions. A comprehensive reading list of the sources of this survey is available in Appendix 2.

The survey performed a content analysis of the data relating to the internship component of South African tertiary institutions' entrepreneurship and business management programmes. The results of this content analysis are outlined in Appendix 1. The results reveal that Durban University of Technology is the only tertiary institution that has a programme including internships as part of its curriculum.

### Interviews with experts in the field of entrepreneurship education

The next step involved interviews (personal, telephonic or via email) with the relevant academics in the field of entrepreneurship at the various tertiary institutions in South Africa. Ten experts in the field of entrepreneurship education at tertiary-level were interviewed; they were affiliated with the following tertiary institutions: Central University of Technology, Stellenbosch University, University of Johannesburg, University of Pretoria, University of the Free State, Vaal University of Technology, and Walter Sisulu University. The experts were identified according to the following process:

- Step 1: All 23 South African universities and universities of technology were considered.
- Step 2: A telephonic and Internet-based search of the lecturers specialising in entrepreneurship at these tertiary institutions was performed, and 109 entrepreneurship educators were listed.
- Step 3: At least three entrepreneurship educators from each tertiary institution were contacted and asked to participate in an interview on the potential of internships in tertiary-level entrepreneurship and business management programmes to foster EI and self-efficacy.
- Step 4: Ten experts agreed to be interviewed.

The interviews covered the following aspects, as previously mentioned: (1) the extent to which they are aware of the positive relationship between internships and the development of EI and ESE; (2) why internships were included in university-level entrepreneurship education programmes, and if not, why not and (3) what constraints they perceived to exist that might prevent their including internships in university-level entrepreneurship education programmes. Academics at the Durban University of Technology were not, however, available for interviews to provide reasons why they are including internships and the advantages of internships for their students.

Eight experts acknowledged that they were aware of the positive role played by internships in fostering interns' EI and ESE.

As for the reasons why internships are not included in entrepreneurship and business management programmes, interviewee D and interviewee F referred to the lack of a sufficiently vast network of businesses in their geographical area to enable the inclusion of internships in their programmes. (Some institutions, despite facing the same

**TABLE 1:** Literature-based empirical support for propositions.

Author(s)	Purpose of study	Proposition supported	Findings in support
Backes-Gellner & Moog 2008	To study people's EI depending on their composition of human and social capital, based on an extension of the Jack-Of-All-Trades Theory (Lazear 2005).	P1	Internships have a positive impact on EI for individuals who have a balanced set of human and social capital.
Basu & Virick 2008	To explore entrepreneurial intentions and their antecedents among university students, based on the Theory of Planned Behaviour (Ajzen 1991).	P1, P2	Prior experience of starting a business is significantly related to positive attitudes toward an entrepreneurial career [i.e. EI] and greater ESE. This implies that internships in new ventures may contribute to higher degrees of ESE and EI.
Kickul <i>et al.</i> 2008	To examine the role of leadership experience, work experience, parental role models and ESE in fostering EI, with the focus on gender differences.	P1, P2	Previous work experience, which may be gained through internships, has a positive direct impact on ESE. It also has a positive influence on EI, mediated by its effect on ESE.
Cruz <i>et al.</i> 2009	To assess the effectiveness of educational programmes on innovation and business success aimed at entrepreneurs.	P1	Entrepreneurs with more accumulated work experience show themselves to be more innovative (innovation constituting the essence of entrepreneurship). It is recommended that individuals work in internship positions while studying for a degree.
Lucas <i>et al.</i> 2009	To explore the relative influence of a range of experiences in the workplace on university students' entrepreneurial and technology self-efficacy.	P2	Work experience through internships raises students' entrepreneurial and technology self-efficacy, when the internship is in line with students' field of study. Performance feedback is given and students have a high consideration of their performance at work.
Walter & Dohse 2009	To investigate how the effect of entrepreneurship education on EI is (1) contingent on the mode of education (active vs. reflective), (2) contingent on the regional context, and (3) complemented by role models and work experience.	P1	Active modes of education, encompassing business simulations, directly raise students' EI. Work experience, which may be in the form of internships, influences EI through its impact on the Theory of Planned Behaviour variable 'perceived behavioural control'.
Dohse & Walter 2010	To assess the extent to which entrepreneurship education at tertiary-level influences students' EI in three study fields: computer science, electrical engineering, and business.	P1	Entrepreneurship education contributes to motivating students to become entrepreneurs, while internships at start-up firms contribute to students' perceived entrepreneurial competences. Both positively influence students' EI.
Dutta, Li & Merenda 2010	To explore how prospective entrepreneurs benefit from both specialised entrepreneurship education and a diversified educational experience.	P1	Specialised entrepreneurship education, encompassing internships in one or more entrepreneurial ventures, has a positive impact on the likelihood of future venture creation and, thus, on EI.
Keat, Selvarajah & Meyer 2011	To examine the relationship between university students' EI and entrepreneurship education, entrepreneurial internship programmes, role models, family business background and demographic variables.	P1	Students with working experience gained through internships display higher EI.
Maina 2011	To explore the role that colleges can play in enhancing EI among the youth.	P1, P2	College students' previous entrepreneurial experience, through either family business or employment in small-scale businesses (which can be seen as a proxy for internships), positively influences their ESE, which in turn impacts on their EI.
Wang & Verzat 2011	To compare the development of EI between students of two prestigious engineering schools.	P1	Students studying at the tertiary institution whose curriculum included longer internships and international internships had higher levels of EI.
De Grez & Van Lindt 2012	To investigate the impact on ESE and EI of entrepreneurship education that encompasses learning-by-doing.	P1, P2	Learning-by-doing programmes, which include internships as part of experiential learning, successfully raise students' ESE. They also increase EI, but not significantly.
Varghese <i>et al.</i> 2012	To study the process of student learning in a small business internship programme.	P1, P2	The internship programme contributed to students' higher ESE and EI. It was also beneficial to students in terms of knowledge acquisition, ability to situate their learning in the business, acquisition of important professional skills and the ability to see how they contributed directly to the company.
Bignotti 2013	To investigate the factors relating to high school students' entrepreneurial-career-choice intention (EI).	P1	The study found that EI is related to a number of factors, including work experience in the family business or in the form of part-time or holiday jobs. It is recommended that students be offered the opportunity to be exposed to work experience, such as that acquired during internships.

EI, entrepreneurial intent; ESE, entrepreneurial self-efficacy.

challenge, have redesigned their programmes to include compulsory 'work-integrated learning', as stated by interviewee C.) Interviewee D also mentioned the administrative challenge of finding internships for a large number of students, while interviewee J admitted the lack of enough knowledge to warrant the inclusion of internships and the management thereof. Additionally, interviewee G and interviewee I mentioned small business owners' lack of time and financial resources as major obstacles. Lack of administrative and other resources is also a constraint, as stated by interviewee H. It appears from the interviews that some universities – such as Stellenbosch University and the University of the Free State – support internships, but on an ad-hoc basis. They encourage students to find internships and they support them in securing these positions. The initiative, however, is taken by the students, usually at post-graduate level. Finally, interviewees A, B and G highlighted other experiential learning components in their programmes,

which are meant to produce the same results – in terms of skills and knowledge development – as internships. These other forms of experiential learning range from having lecturers who have a vast experience in entrepreneurship and business, to creative problem-solving and effectuation learning techniques. From the perspective of students, interviewees E and G attested to an unsatisfactory experience on the part of students who managed to secure an internship.

With regard to possible constraints hindering universities from including internships in tertiary-education programmes, most experts mentioned the university's lack of resources to manage and control internships, issues of curriculum redesign and academic credits, labour legislation constraints, and the lack of willingness and capacity of small business owners to mentor interns. Interviewees H, I and J also mentioned that whereas internships in large companies are more readily available, internships in small businesses are

not easily found and are essentially different. According to them, the challenge lies in identifying the right internships, which ultimately means knowing which entrepreneur profile is most suited to accommodate an intern successfully.

## Discussion of findings

The review of empirical literature conducted in this paper reveals that there is support for the proposition that internships as a form of experiential learning enhance students' EI (P1). It appears, therefore, that when entrepreneurship education programmes include internships in their curriculum, participants are more likely to develop the intention to start a business. Some of the studies analysed in this paper reported empirically about the positive relationship between internships and EI, even outside an entrepreneurship education context. In other words, people who have an internship experience appear to have higher EI, even though they are not part of a formal entrepreneurship education intervention. This is in line with previous research about the impact of previous work experience on start-up intentions and activities (Gabrielsson & Politis 2012; Kemelgor, D'Souza & Henley 2011).

The review of empirical literature also provides evidence for the support of the proposition that internships as a form of experiential learning enhance students' ESE (P2). This means that the hands-on experience gained during internships helps students to have a higher level of confidence in their capabilities to start and run their own business. This finding confirms the argument that internships are an effective learning method whereby participants acquire a greater knowledge of and confidence in the professional field underlying the internship experience (Kuijpers, Meijers & Gundy 2011:26).

Moreover, as can be noted in Table 1, most of the studies that empirically support the positive role of internships for the formation of ESE also give empirical evidence for the positive influence that internships have on EI. This finding can be attributed to the fact that ESE does not lead to entrepreneurial behaviour – such as business start-up activities – directly, but it influences entrepreneurial behaviour through its impact on EI (Kickul *et al.* 2008; Wilson *et al.* 2007; Zhao *et al.* 2005).

The implication for theory of these findings is that internships should be included in EI- and ESE-based models of entrepreneurial behaviour as one of the factors influencing these two constructs. As this paper's review of empirical literature reveals, few studies have analysed the influence of internship on the development of EI and ESE (Alpert *et al.* 2009:37; Peltier & Scovotti 2010:515).

The relevance of internships for enhancing EI and ESE in a South African context was corroborated by the university-level entrepreneurship- and business management education survey whereby the data was content analysed in this paper. The results reveal that only one tertiary institution, the Durban University of Technology, includes internships as

part of its curriculum. Proposition 3 is thus only supported in the case of the Durban University of Technology, one out of 23 South African tertiary institutions. There is a significant lack of inclusion of internships as a form of experiential learning in South African tertiary-level entrepreneurship and business management education programmes. For practice, these findings imply that entrepreneurship- and business management education programme administrators at South African tertiary institutions should devise an experiential learning module based on an internship experience. From a student's perspective, the findings of this study suggest that a more effective acquisition of EI and ESE can be gained in university programmes that include an internship as part of the curriculum.

The interviews conducted with experts in the field of entrepreneurship education at tertiary-level revealed that there is widespread awareness of the positive role played by internship in enhancing interns' EI and ESE. In light of this, the prevalent lack of inclusion of internships in university entrepreneurship and business management programmes seems contradictory. However, a number of reasons for this lack emerged from the interviews, pertaining mainly to administrative and conceptual difficulties. Administrative issues include: tertiary institutions' lack of sufficient internal resources – human and financial – to scout, manage and control internships; difficulty in finding internships for all enrolled students due to lack of enough small businesses; and challenges related to curriculum redesign. Conceptual reasons for not including internships pertain mainly to some experts' belief that there are other experiential learning curriculum components that are at least as effective as internships and easier to administer.

The constraints that were mentioned by the experts attest to the difficulty – mainly administrative – in successfully integrating internships into university programmes. Another considerable constraint is small business owners' lack of capacity to mentor interns successfully. One possible solution to administrative challenges would be to pilot-test the inclusion of internships in a university programme with a manageable number of students. In this way, finding a number of suitable internships corresponding to the number of students would be more achievable. Moreover, such an initiative would not require significant investment in terms of academic staff and time. Finally, this solution would allow for establishing a stable relationship with a few, carefully selected, small business owners. This pilot-test inclusion of internships could be scaled up once it was established and had produced the intended results.

## Conclusion

The understanding of how EI can be fostered lies at the heart of research in the entrepreneurship field. Following the first steps in the psychological study of human behaviour by Ajzen (1985) and Bandura (1977), many entrepreneurship scholars have studied entrepreneurial behaviour and, more specifically, business start-up decisions from the perspective

of intention. Within this branch of entrepreneurship research, EI is widely viewed as a robust predictor of the decision to start a business venture, with ESE being one of the most cited antecedents of EI.

Entrepreneurship education offers another angle from which the promotion of business venture start-up can be examined. The number of entrepreneurship education programmes has multiplied in recent years (Peltier & Scovotti 2010:515) based on the realisation that entrepreneurship can be taught (Kuratko 2005:580). The focus in this field, as in other educational fields, has shifted to experiential learning methods, including internships, which, because of the first-hand experience and exposure to entrepreneurship they provide, are believed to be effective in enabling and encouraging people to start their own businesses (Zhao 2013:445).

Bringing together the intention-based and entrepreneurship education perspectives, this paper addressed one specific aspect of the formation of business start-up decisions, namely, whether or not internships enhance interns' EI and ESE levels. It conducted a review of empirical literature and investigated the results of empirical studies on the relationship between internships, on the one hand, and EI and ESE on the other. Thereafter, it followed a survey approach which content analysed the information on which South African universities offer entrepreneurship and business management programmes up to Master's level, and whether they include internships in their curricula. Finally, it conducted interviews with experts in the field to assess the level of awareness about the potential of internships to raise interns' EI and ESE, understand the reasons why internships are or are not included in university programmes, and to explore the possible constraints faced when considering including internships in university curricula.

The findings of this qualitative research are that there is empirical support for the positive influence of internships on the development of interns' EI and ESE. It was also found that there is a significant lack of inclusion of internships in South African tertiary institutions' entrepreneurship and business management programmes. The reasons for this lack of inclusion of internships pertain mainly to tertiary institutions' administrative capacity issues; difficulties in scouting, managing and controlling internship programmes for students; issues with curriculum redesign; and small business owners' lack of capacity to mentor interns. In the light of the results of this paper, it is recommended that university-level entrepreneurship education programmes in South Africa include internships as part of their curricula. It is suggested that tertiary institutions pilot-test the inclusion of internships with a small number of students and a selected cohort of carefully selected small business owners.

## **Limitations and future research**

As for all qualitative research studies, the findings of this paper should be interpreted taking into account certain limitations. Firstly, the literature review methodology

employed could have excluded some empirical studies, owing to the search criteria that were utilised. Some studies may also have been overlooked on account of some degree of subjectivity on the part of the researchers in retrieving studies that were deemed relevant to the present analysis.

The relatively small number of empirical studies on the topic of internships and their impact on interns' EI and ESE that were found in this study gives an indication of the research gap that exists in this field. There is a need to conduct more empirical investigations into the positive role that internships play in fostering EI and ESE. This recommendation stems from the results of the literature review (Table 1) conducted in this paper, which encompassed the global domain of entrepreneurship and thus affects the entire body of research on the topic of this paper. A meta-analysis could be conducted on all the studies on this topic to test the relationship between internships, EI and self-efficacy even further.

More specifically, research on this topic needs to move forward to the investigation of what internship components make internships more effective in promoting the formation of EI and ESE. This would encourage research that could contribute to the understanding of how to devise internship experiences that effectively increase interns' levels of EI and ESE. More evidence on the positive influence of internship experiences on the formation of EI and ESE would corroborate the earlier conclusion that internships should be part of entrepreneurship education programmes.

Bearing in mind that EI and ESE do not always translate into entrepreneurial behaviour in the form of starting a business venture (Ajzen 1985:11; Boyd & Vozikis 1994:70), future research should investigate the possible mechanisms according to which internships may contribute to people's start-up activities. For this type of analysis to take place, it is necessary that longitudinal studies be conducted, measuring both the development of EI and ESE in the short term and business start-up activities in the long term.

In order to situate the analysis of the role of internships in enhancing levels of EI and ESE in the context of entrepreneurship education at university-level, future research could compare the levels of EI and ESE of students enrolled in internship-inclusive entrepreneurship programmes with those of students enrolled in traditional entrepreneurship programmes.

Finally, with the objective of identifying and sharing best practices in the inclusion of internships in university programmes, future research could conduct case study investigations of the tertiary institutions – in South Africa and outside of South Africa – that have successfully integrated internships in their curricula.

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The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

## Authors' contributions

The authors collaborated during the literature-study, analysis and article-writing phases of this paper. M.B. was the project leader, formulating the concept and devising the structure of the paper. A.B. was responsible for the review of empirical literature and survey approach. Both authors conducted interviews with experts in the field of entrepreneurship education.

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## Appendix 1

**TABLE 1-A1:** Survey results of South African tertiary institutions' entrepreneurship and business management programmes

Tertiary institution	Entrepreneurship and Business Management programmes analysed	Findings	Sources
Nelson Mandela Metropolitan University	<ul style="list-style-type: none"> <li>• Higher Certificate in Business Studies</li> <li>• National Diploma (Management) new curriculum</li> <li>• National Diploma (Management) Extended Programme</li> <li>• National Diploma (Management)</li> <li>• BCom (Business Studies)</li> <li>• BCom (General: Business Management)</li> <li>• BCom (General: Business Management) Extended</li> <li>• BTech Business Administration (BBA) BA Honours (Business Management)</li> <li>• Postgraduate Diploma In Business Administration</li> <li>• Postgraduate Diploma in Business Administration (PDBA) - Part-Time</li> <li>• Postgraduate Diploma in Business Administration (PDBA) - Full-Time</li> <li>• BCom Honours (Business Management)</li> <li>• Master Of Technology: Business Administration</li> <li>• Master Of Technology: Entrepreneurship</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• Nelson Mandela Metropolitan University (n.d.)</li> </ul>
North-West University	<ul style="list-style-type: none"> <li>• BCom Entrepreneurship and Business Management</li> <li>• Hons Entrepreneurship and Business management</li> <li>• MCom Entrepreneurship</li> <li>• MCom Business Management</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• North-West University (2014a, 2014b, n.d.)</li> </ul>
Rhodes University	<ul style="list-style-type: none"> <li>• BSc Business Science</li> <li>• BCom General</li> <li>• Bachelor of Commerce with Honours</li> <li>• Master of Commerce (by full thesis)</li> <li>• Master of Commerce (by coursework and thesis)</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• Rhodes University (2014a, 2014b)</li> </ul>
Stellenbosch University	<ul style="list-style-type: none"> <li>• BCom (General)</li> <li>• BCom Hons (Business Management)</li> <li>• MCom (Management Sciences), also with focus on Entrepreneurship and Innovation Management</li> <li>• MCom (Business Management)</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• Stellenbosch University (n.d.a, n.d.b)</li> <li>• Telephone interview with Francis, Master's programme specialist, 25 July 2014</li> <li>• Tel: +27 21 918 4288</li> </ul>
University of Cape Town	<ul style="list-style-type: none"> <li>• Bachelor of Commerce specialising in Management Studies</li> <li>• Postgraduate Diploma in Business Administration</li> <li>• Postgraduate Diploma in Management (Entrepreneurship)</li> <li>• Bachelor of Commerce Honours: no specialisation in Business Management or Entrepreneurship</li> <li>• Master of Commerce: no specialisation in Business Management or Entrepreneurship</li> <li>• Master of Philosophy: no specialisation in Business Management or Entrepreneurship</li> <li>• Graduate School of Business Postgraduate Diploma in Business Administration</li> <li>• Graduate School of Business Associate in Management Programme</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• University of Cape Town (2014a, 2014b)</li> <li>• University of Cape Town Graduate School of Business (2014)</li> </ul>
University of Fort Hare	<ul style="list-style-type: none"> <li>• BCom (General)</li> <li>• BCom (Management)</li> <li>• BCom Hons</li> <li>• MCom</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• University of Fort Hare (n.d.)</li> <li>• Telephone interview with Faculty Secretary, 23 July 2014</li> <li>• Tel: +27 43 704 7236</li> </ul>
University of Johannesburg	<ul style="list-style-type: none"> <li>• National Diploma (Management)</li> <li>• National Diploma (Retail Business Management)</li> <li>• National Diploma (Small Business Management)</li> <li>• Extended National Diploma (Management)</li> <li>• Extended National Diploma (Small Business Management)</li> <li>• BTech (Business Administration)</li> <li>• BCom (General)</li> <li>• BCom (Intrapreneurial Management)</li> <li>• BCom Hons (Strategic Management)</li> <li>• MCom (Business Management)</li> <li>• MPhil (Business Management)</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• University of Johannesburg (2014)</li> </ul>
University of KwaZulu-Natal	<ul style="list-style-type: none"> <li>• Bachelor of Administration (Westville)</li> <li>• Bachelor of Business Administration (Pietermaritzburg and Westville)</li> <li>• Bachelor of Commerce (Extended Curriculum) (Pietermaritzburg and Westville)</li> <li>• Bachelor of Business Science (Pietermaritzburg and Westville)</li> <li>• Postgraduate Diploma in Entrepreneurship</li> <li>• Postgraduate Diploma in Management</li> <li>• BCom Honours (Small Business Development Studies)</li> <li>• BCom Honours (Management)</li> <li>• Master of Commerce (Entrepreneurship)</li> <li>• Master of Commerce (Management)</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• University of KwaZulu-Natal (2009, n.d.a, n.d.b, n.d.c, n.d.d, n.d.e)</li> <li>• Telephone interview with Faculty Secretary, 23 July 2014</li> <li>• Tel: +27 33 260 5908</li> </ul>
University of Limpopo	<ul style="list-style-type: none"> <li>• BCom Business Management</li> <li>• BCom Hons Business Management</li> <li>• MCom Business Management</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• University of Limpopo (2013)</li> <li>• Telephone interview with Head of Department, 24 July 2014</li> <li>• Tel: +27 15 268 2646</li> </ul>
University of Pretoria	<ul style="list-style-type: none"> <li>• BCom (General)</li> <li>• BCom Business Management</li> <li>• BCom Entrepreneurship</li> <li>• BCom Supply Chain Management</li> <li>• BCom Hons Business Management</li> <li>• Postgraduate Diploma in Entrepreneurship</li> <li>• MCom Business Management</li> <li>• MPhil in Business Management</li> <li>• MPhil in Business Management (Option: Supply Chain Management)</li> <li>• MPhil in Entrepreneurship</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>• University of Pretoria (n.d.a, n.d.b)</li> </ul>

Appendix table continued next page →

Tertiary Institution	Entrepreneurship and Business Management programmes analysed	Findings	Sources
University of South Africa	<ul style="list-style-type: none"> <li>Higher Certificate in Economic and Management Sciences</li> <li>National Diploma: Entrepreneurship</li> <li>National Diploma: Management</li> <li>Baccalaureus Technologiae: Business Administration</li> <li>Baccalaureus Technologiae: Management</li> <li>Bachelor of Business Administration</li> <li>Bachelor of Commerce (Generic)</li> <li>Bachelor of Commerce (Entrepreneurship)</li> <li>Bachelor of Commerce (Management)</li> <li>Bachelor of Commerce in Business Management</li> <li>Bachelor of Commerce Honours in Business Management</li> <li>Honours Bachelor of Administration in Business Management</li> <li>Honours Bachelor of Commerce in Business Management</li> <li>Magister Technologiae: Business Administration (Coursework)</li> <li>Master of Commerce in Business Management (Full Dissertation)</li> <li>Master of Business Administration (Coursework)</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>University of South Africa (n.d., n.d.b)</li> </ul>
University of the Free State	<ul style="list-style-type: none"> <li>BCom (General)</li> <li>BCom (Entrepreneurship)</li> <li>BCom (General) extended programme</li> <li>BCom (General Management)</li> <li>BCom (General Management) extended programme</li> <li>BCom Hons Business Management</li> <li>MCom Business Management</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>University of the Free State (2014a, 2014b, 2014c)</li> <li>University of the Free State Business School (2014)</li> </ul>
University of the Western Cape	<ul style="list-style-type: none"> <li>BCom (General)</li> <li>Advanced Diploma in Management</li> <li>BCom (Hons) in Business Administration</li> <li>MCom in Management</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>University of the Western Cape (2013a, 2013b)</li> <li>Telephone interview with Faculty Secretary, 23 July 2014</li> <li>Tel: +27 21 959 3900</li> </ul>
University of the Witwatersrand	<ul style="list-style-type: none"> <li>Bachelor of Commerce</li> <li>Postgraduate Diploma in Management</li> <li>BCom Hons in Management</li> <li>MCom in Management</li> <li>Master of Management in Entrepreneurship and New Venture Creation</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>University of the Witwatersrand (n.d.a, n.d.b)</li> <li>Wits Business School (2014)</li> <li>Telephone conversation with Faculty Officer, 23 July 2014</li> <li>Tel: +27 11 717 8003</li> </ul>
University of Venda	<ul style="list-style-type: none"> <li>Bachelor of Commerce in Business Management</li> <li>Bachelor of Commerce Honours in Business Management</li> <li>Master of Commerce (MCOM) in Business Management</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>University of Venda (n.d.)</li> <li>Telephone conversation with School Administrator, 24 July 2014</li> <li>Tel: +27 15 962 8869</li> </ul>
University of Zululand	<ul style="list-style-type: none"> <li>BCom (General)</li> <li>Bachelor of Commerce (Honours)</li> <li>Master of Commerce</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>University of Zululand (n.d.b)</li> </ul>
Walter Sisulu University	<ul style="list-style-type: none"> <li>BTech Management</li> <li>BTech Business Administration</li> <li>Bachelor of Commerce (General)</li> <li>Honours in Bachelor of Commerce (Business Management)</li> <li>Master of Commerce</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>Walter Sisulu University (n.d.)</li> </ul>
Cape Peninsula University of Technology	<ul style="list-style-type: none"> <li>ND: Entrepreneurship</li> <li>ND: Entrepreneurship (Extended)</li> <li>ND: Management</li> <li>ND: Management (Extended)</li> <li>ND: Retail Business Management</li> <li>BTech: Business Administration</li> <li>BTech: Management in Entrepreneurship</li> <li>BTech: Management</li> <li>BTech: Project Management</li> <li>BTech: Retail Business Management</li> <li>MTech: Business Administration (Research-Based)</li> <li>MTech: Business Administration (Course-Based)</li> <li>MTech: Business Administration in Project Management (Course-Based)</li> <li>MTech: Business Administration in Entrepreneurship (Research-Based)</li> <li>MTech: Business Administration (Entrepreneurship)</li> <li>MTech: Retail Business Management</li> </ul>	None of the degrees analysed includes internships in its programme.	<ul style="list-style-type: none"> <li>Cape Peninsula University of Technology (n.d.)</li> </ul>
Central University of Technology	No degrees in Business Management or Entrepreneurship	N.A.	<ul style="list-style-type: none"> <li>Central University of Technology (2014, n.d.)</li> </ul>
Durban University of Technology	<ul style="list-style-type: none"> <li>National Diploma: Management</li> <li>Bachelor of Technology: Management</li> <li>Bachelor of Technology: Business Administration</li> <li>Master of Technology: Business Administration</li> </ul>	The National Diploma in Management includes internships in its curriculum. Students have to find an internship and work in the industry for 3 months before the diploma can be awarded.	<ul style="list-style-type: none"> <li>Durban University of Technology (2014, n.d.a, n.d.b, n.d.c)</li> <li>Telephone conversation with Faculty Secretary, Nonhlanhla Mdakane, 25 July 2014</li> <li>Tel: +27 31 373 5147</li> <li>Mangosuthu University of Technology (n.d.)</li> </ul>
Mangosuthu University of Technology	No degrees in Business Management or Entrepreneurship	N.A.	
Tshwane University of Technology	<ul style="list-style-type: none"> <li>National Diploma: Entrepreneurship</li> <li>National Diploma: Entrepreneurship (Extended curriculum with foundation provision)</li> <li>National Diploma: Management</li> <li>National Diploma: Management (Extended curriculum with foundation provision)</li> <li>Baccalaureus Technologiae: Business Administration</li> <li>Baccalaureus Technologiae: Management</li> <li>Magister Technologiae: Entrepreneurship</li> </ul>	<ul style="list-style-type: none"> <li>None of the degrees analysed includes internships in its programme.</li> <li>The National Diploma in Entrepreneurship has an experiential learning module in 3rd year, but it is project-based training.</li> </ul>	<ul style="list-style-type: none"> <li>Tshwane University of Technology (n.d.a, n.d.b, n.d.c, n.d.d, n.d.e, n.d.f, n.d.g)</li> <li>Telephone conversation with Department of Management Administrator, 25 July 2014</li> <li>Tel: +27 12 382 5732</li> </ul>
Vaal University of Technology	No degrees in Business Management or Entrepreneurship	N.A.	<ul style="list-style-type: none"> <li>Vaal University of Technology (2014)</li> </ul>

Appendix 2 starts on the next page →

## Appendix 2

### Sources of survey of university programmes

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