



Corrigendum: Soft skills on entrepreneurial readiness behaviours: Evidence from university students



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In the published article, Strampe, S.A. & Rambe, P., 2024, 'Soft skills on entrepreneurial readiness behaviours: Evidence from university students', *Southern African Journal of Entrepreneurship and Small Business Management* 16(1), a778. <https://doi.org/10.4102/sajesbm.v16i1.778>, there was an error in the second author's affiliation, which was incorrectly presented.

Instead of:

Department of Entrepreneurship, Faculty of Management Sciences, Central University of Technology, Bloemfontein, South Africa

It should be:

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There was also an error with missing citations under the heading 'Entrepreneurial readiness behaviour' on page 3 of 13.

Instead of:

Although the dimensions of entrepreneurial readiness behaviour have been widely debated (three sources here), those most relevant to this study are venture creation, venture growth and innovative financing (Kirkley 2016; Mamabolo, Kerrin & Kele 2017; Rwigema & Venter 2004), and these will be elaborated in subsequent sections.

It should be:

Although the dimensions of entrepreneurial readiness behaviour have been widely debated (Belchiour & Lyons 2021; Rakićević et al. 2022; Ruiz, Soriano & Coduras 2016), those most relevant to this study are venture creation, venture growth and innovative financing (Kirkley 2016; Mamabolo, Kerrin & Kele 2017; Rwigema & Venter 2004), and these will be elaborated in subsequent sections.

There was also an error with the authors' contribution statement on page 11 of 13.

Instead of:

S.S. is the author who primarily writes the research study, investigates previous research, ensures that the questionnaires are distributed and does the project administration. P.R. is the supervisor of the project, sends relevant study material to the student and reviews and edits the work being done.

It should be:

S.A.S. conducted the original study, distributed the questionnaires and administered the project and wrote the article. P.R. was the main supervisor of the study, revised and edited multiple drafts of the manuscript and ensured the references' conformity to the journal's referencing style.

The authors apologise for these errors. The correction does not change the study's findings of significance or overall interpretation of the study's results or the scientific conclusions of the article in any way.

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Background: There is a growing body of literature on the contribution of hard skills to the enhancement of entrepreneurial behaviour. However, the role of acquiring soft skills in shaping entrepreneurial readiness is yet to be sufficiently comprehended.

Aim: This research sought to examine the significance of soft skills in shaping the entrepreneurial readiness behaviour of students at higher education institutions in South Africa. Specifically, the study investigated the effects of soft skills on the selected dimensions of entrepreneurial readiness behaviour namely venture creation, innovative financing and venture growth.

Setting: Students from the Central University of Technology (CUT) and the University of the Free State (UFS) participated in this study.

Methods: A descriptive, explorative cross-sectional design involving 300 students enrolled for entrepreneurship courses, was adopted. Cluster sampling was employed as the main sampling technique. The average variance extracted (AVE), linear regression and Cronbach's alpha coefficient were used as indicators of reliability and validity in the statistical package for the social sciences (SPSS) and Smart PLS software.

Results: The results suggest that soft skills exert a positive, and significant, effect on the entrepreneurial readiness behaviour of students.

Conclusion: This study provides critical insights into how entrepreneurial readiness behaviour can be explained through fostering soft skills, honing venture creation, innovative financing, venture growth and entrepreneurial activities of students.

Contribution: The study contributes to the Theory of Planned Behaviour (TPB) by demonstrating how soft skills create a germane context for the stimulating, exhibiting and actioning specific entrepreneurial behaviours among nascent entrepreneurs in South Africa.

Keywords: soft skills; entrepreneurial readiness behaviour; higher education institutions; venture creation; innovative financing; venture growth.

Introduction

Skills development has been postulated as a possible panacea to human capital development challenges, caused by the advent of the Fourth Industrial Revolution (4IR), and has the potential to influence the skillsets required for both the job market and entrepreneurship (Hou et al. 2021). While entrepreneurship research has proposed hard skills (Garcez, Silva & Franco 2022; Hägg & Gabrielsson 2019) and entrepreneurial skills (Akhmetshin et al. 2019; Pennetta, Anglani & Mathews 2023) as the most urgent competencies required for students to function in the knowledge-based economy, it remains unclear which combinations of soft skills have a bearing on engagement in entrepreneurship behaviours.

With regard to the contribution of soft skills to engagement in entrepreneurship, a wide range of skills have been proposed. While Pardo-Garcia and Barac (2020) present creative thinking, problem solving, communication, empathy, teamwork and the ability to build relationships as the most relevant set of soft skills that must undergird entrepreneurial pursuits, other researchers (Cambronero-Alonso 2021; Galanakis & Giourka 2017) have highlighted creativity, communication and social skills as vital to engagement in entrepreneurship. Furthermore, Deloitte (2018) identified privileged leadership, critical thinking, communication, creative thinking, teamwork, collaboration, social emotional learning, initiative, adaptability, self-confidence, empathy, cultural awareness and growth mindset as fundamentally important soft skills that enable students to engage in entrepreneurship. In view of these competing views on the range of soft skills that

activate the pursuit of entrepreneurial behaviours, a new line of inquiry is needed to enlighten scholars in this field.

Despite the growing literature that identifies soft skills as fundamental to engagement in entrepreneurial behaviour, most studies tend to emphasise serial entrepreneurs (Dabić et al. 2023; Eggers & Song 2015), mature enterprising firms (Da Rocha, De Almeida Moraes & De Mello 2019; Kallmuenzer & Peters 2018) and students situated in advanced economies (Farrell et al. 2022; Munir, Jianfeng & Ramzan 2019) as individuals in need of soft skills. As such, the role soft skills play in fostering and stimulating entrepreneurial behaviours among aspiring, nascent entrepreneurs (especially students), striving to found ventures for the first time in poor, and emerging contexts, such as those of South Africa, remains unclear. The need to investigate students located in emerging contexts is of paramount importance given the gaping institutional voids that persist in emerging economies (Simba, Wang & Del Olmo García 2023). These contexts may not be consistent with widely applied universal theories, often based on Western views to study varied entrepreneurial contexts, which risk missing the rich and unique features of emerging contexts (Simba & Rambe in press). The need for greater contextualisation of entrepreneurial behaviours will not only generate a proliferation of unique theories (which could include one for every context) but can also facilitate theory construction, promote testing and understanding of boundary conditions, enriching and accompanying a more profound understanding of entrepreneurship across its many forms (Baker & Welter 2020).

By integrating the theory of planned behaviour with the argument for the need to develop a contextualised understanding of entrepreneurship, a broad review of entrepreneurship literature and evidence from the respondents was employed to explore the interplay of soft skills and entrepreneurship. With the growing body of literature that presents entrepreneurial behaviours to encapsulate venture creation (Metallo et al. 2021; Parra, Valencia-Arias & Bermúdez-Hernández 2022), innovative financing (Konrad 2018; OECD 2015) and venture growth (Akinbinu & Chiloane-Phetla 2021; Donbesuur et al. 2023), this study sought to address the relationship between soft skills and entrepreneurial behaviours. Specifically, it addresses the following research question:

What is the role of soft skills on the entrepreneurial readiness behaviours (i.e. venture creation, innovative financing and venture growth) of university students?

The article contributes to the literature on entrepreneurship by pointing to the specific skills needed for the advancement of entrepreneurial behaviour. For instance, the skills that enable or constrain entrepreneurial behaviour are fundamental to entrepreneurship as a productive, innovative economic activity. As a venture creation enterprise, entrepreneurship represents the endeavours of innovative people and organisations in creative environments that

create opportunities for developing new products, services, firms and forms of policy making in different environments (Baker & Welter 2020). The economic enterprise also facilitates sustainable growth of economies and social development of communities.

The structure of this article will include the following: the role of entrepreneurial education (EE) in entrepreneurship skills development, theoretical development, soft skills, entrepreneurial readiness behaviour (venture creation, venture growth and innovative financing), control variables (age, gender, entrepreneurship education, field of study and exposure to EE), research methodology (research design and data collection procedure, data analysis procedure and ethical considerations), presentation of results (respondents' profile and reliability and validity), discussion, study implications for future research and recommendations, limitations and, lastly, the conclusion. These concepts will be further described and discussed.

Theoretical development

The role of entrepreneurial education in entrepreneurship skills development

The importance of EE has been recognised in literature; however, its contribution to skills development is still underestimated. On the one hand, the complexity of EE has resulted in disparities in its delivery in HEIs (higher education institutions) and the lack of clarity on the range of skills required in the field of entrepreneurship. On the other hand, the lack of relevant skills for actioning entrepreneurial activities contributes to the dissonance of pedagogical interventions and the generation of sustained venture growth. Therefore, it has been suggested that the formation of partnerships between ventures and the education system could be fundamental to the development of selected skills for improving entrepreneurial readiness behaviour (Grand-Clement 2017).

Even though the report of Roos and Botha (2022) highlighted a wide gap between entrepreneurial intention and entrepreneurial action, EE can be considered as an important determinant of entrepreneurial behaviour. For instance, EE is strongly associated with individuals possessing the ability to recognise new opportunities in uncertain environments (Kirkley 2017). Entrepreneurial education generates entrepreneurial behaviour, as it guides students to identify business opportunities (Hussain & Norashidah 2015) by learning the appropriate skills, which influence the growth of ventures (Acharya & Chandra 2019). Entrepreneurial education can contribute to the formation of entrepreneurial behaviour where knowledge takes centre stage in creating new ventures.

Specifically, the role EE plays in promoting the development of skills that shape entrepreneurial readiness behaviour is still to be clarified. Skills development for entrepreneurship

students has attracted much attention resulting in the increase of studies that have explored the effects of student skills on entrepreneurial readiness behaviour (Akter & Iqbal 2022; Farooq 2018). Despite this rising interest, the range of skills that lend students to developing entrepreneurial readiness behaviours remains patchy despite the growing studies that explore the connection between skills and student preparedness for workplace environment demands. Therefore, we seek to develop an understanding of the influence of soft skills development on different dimensions of entrepreneurial readiness behaviour.

Theory of planned behaviour

Given that entrepreneurship can be approached as a form of conscious behaviour, the theory of planned behaviour (henceforth TPB) provides a pertinent lens for exploring the connection between soft skills and entrepreneurial readiness behaviour. According to Bosnjak, Ajzen and Schmidt (2020), the TPB postulates that human behaviour is guided by three attributes, namely behavioural beliefs, normative beliefs and control beliefs. Behavioural beliefs determine positive or negative attitudes towards behaviour. Normative beliefs result in subjective norms, whereas control beliefs result in perceived behavioural control or self-efficacy.

The primary driver of this theory is an individual's willingness or intention to perform a particular behaviour. This intention is preceded by perceptions of the efficacy to engage in target behaviour, by attitudes regarding the outcomes arising from performance behaviour and by beliefs regarding the evaluation of the manner of that behaviour in a social setting (Constantini et al. 2019). Therefore, it is argued that TPB explains individuals' intentions towards entrepreneurship (Rehan, Block & Fisch 2019) and thus correlates with the findings of Bosnjak et al. (2020), where intention is considered as an immediate antecedent of entrepreneurial behaviour. Byrne, Weston and Cave (2018) propose TPB as a framework to explain that students' attitude towards learning professional skills results in skill development. In this context, the TPB framework permits the integration of soft skills in the understanding of prospective students' engagement in entrepreneurial behaviour.

Soft skills

Soft skills are defined as traits, attitudes, abilities and behaviours that allow an individual to work in a team, control the environment, perform optimally and achieve goals (Florea & Stray 2018). Soft skills can be defined as knowledge in our minds that are highly personal (Chen et al. 2018; Zebal et al. 2019), is difficultly formulated and divided naturally (Asher & Popper 2019; Wang & Liu 2019) in an orderly manner where transformation necessitates personal interaction (Lee 2019). Soft skills are distinguishable in an individual's experiences and actions, including their emotionality, idealism and values (Hartley 2018).

According to Cambronero-Alonso (2021), soft skills are divided into two groups, namely intrapersonal skills and

interpersonal skills. Intrapersonal skills involve abilities of an individual that are considered as internal strengths, for example, motivation, flexibility, adaptability and problem solving. On the other hand, interpersonal skills, such as teamwork, emotional intelligence, leadership, conflict resolution and communication, refer to an individual's ability to establish relationships with others. Hence, a combination of intrapersonal and interpersonal skills collectively comprises the possession of soft skills.

Although there are studies that measure the effects of skills on entrepreneurial readiness behaviour (Putra, Widiyanti & Nurhadi 2021; Rakićević et al. 2022), the concept of entrepreneurial behaviour is often identified as a unidimensional concept focusing on a specific behaviour, without sufficiently accounting for its multidimensional nature. As such, the next section addresses this aspect by considering the multifaceted nature of this construct.

Entrepreneurial readiness behaviour

This article proposes a framework for explaining nascent entrepreneurial readiness behaviour with a particular focus on innovative financing, venture creation and venture growth. Entrepreneurial behaviour is conceptualised as a facilitator for actions taken to create new ventures and manifest in an individual's intention to become an entrepreneur (Belchior & Lyons 2021). According to Rakićević et al. (2022), entrepreneurial behaviour encompasses entrepreneurial readiness, motives and intentions. By understanding entrepreneurial readiness as a personal competence pertaining to the potential for entrepreneurship, entrepreneurial intention is introduced as the execution of a personal decision to create a new venture (Rakićević, Ljamić-Ivanović & Omerbegović-Bijelović 2014). This potential can be further developed by acquiring skills needed for entrepreneurial readiness (Coduras, Saiz-Alvarez & Ruiz 2016). Although the dimensions of entrepreneurial readiness behaviour have been widely debated (three sources here), those most relevant to this study are venture creation, venture growth and innovative financing (Kirkley 2016; Mamabolo, Kerrin & Kele 2017; Rwigema & Venter 2004) and these will be elaborated in subsequent sections.

Venture creation

By identifying critical aspects in the gestation phase that facilitate the transition towards the development of new ventures, the impact of entrepreneurial readiness behaviour is investigated. Ruiz, Soriano and Coduras (2016) present entrepreneurial readiness as entrepreneurial traits and attributes required for creating ventures and encourage venture growth. Escorcia et al. (2022) conceive the creation of new ventures to underpin one's readiness to engage in entrepreneurial behaviour, and self-efficacy is deemed most influential in the development of such readiness. Through EE, soft skills can be developed that are capable of fostering attitudes and behaviours that make engagement

in entrepreneurial activities possible (Olugbola 2017). Consistent with this logic, as venture creation is identified as a dimension of entrepreneurial readiness behaviour, this article sought to determine the effect the soft skills exert on venture creation. This led to the postulation that:

H1: There is a statistically significant and positive relationship between soft skills and venture creation.

Venture growth

As such, new ventures promote entrepreneurship where the marketing of innovative ideas and original opportunities provides businesses with a competitive advantage (Iacono & Nagano 2017) to promote venture growth. A more comprehensive understanding of entrepreneurial readiness, and its relation to venture growth, is thus proposed to understand why ventures grow in different patterns. The need to promote venture growth is critical because nascent entrepreneurs face many challenges such as high risks of failure or limited growth when creating new ventures (Hallen, Bingham & Cohen 2014). To promote high levels of growth for new ventures, Shepard (2017) presents sustainable entrepreneurial support as one vehicle through which soft skills can serve as capabilities that reduce the risk of failure of new ventures. While values, mission and vision of a venture determine the quality of soft skills that facilitate the venture creation process (Ginting et al. 2020), the transferability and adaptability of such soft skills may vary depending on situations presented to the entrepreneur (Succi & Wieand 2019). To the extent that venture growth is identified as a dimension of entrepreneurial readiness behaviour, and soft skills are deemed fundamental to the materialisation of behaviours that support entrepreneurial readiness, the following hypothesis was postulated:

H2: There is a statistically significant and positive relationship between soft skills and venture growth.

Innovative financing

Another dimension of entrepreneurial behaviour is innovative financing. This term describes alternative funding instruments assisting entrepreneurs where traditional funding is insufficient, to provide more efficient and readily available financing (Gelil 2018). Diversified funding tools such as peer-to-peer financing, crowdfunding, business angels and investment venture capital (OECD 2015) are manifestations of a nascent firm's engagement in entrepreneurial readiness behaviour and capture the goal-orientated decisions or activities of entrepreneurs in sourcing funding (Feng & Chen 2020). Although these financial instruments are available to entrepreneurs in resource-constrained contexts where venture markets are small and scarce, it is challenging to draw on these instruments to support innovation and growth of ventures. Alternative sources of funding such as bootstrapping strategies are increasingly used to support entrepreneurial projects or activities and pave the way to mobilise entrepreneurial expertise and financial resources towards an innovative

approach to venture growth (OECD 2015). Literature suggests that soft skills developed through financial knowledge and university education are an indispensable tool for student entrepreneurs to improve financial literacy (Prouteau 2019), which may manifest in their ability to tap into different sources of innovative financing. As innovative financing is identified as a dimension of entrepreneurial readiness behaviour, this article sought to determine the effect soft skills have on innovative financing. Therefore, the following hypothesis was postulated:

H3: There is a statistically significant and positive relationship between soft skills and innovative financing.

Control variables

Based on the evidence in the literature, personal demographics and business demographics are used as control variables in this study.

Personal demographics

Age

Despite the increasing interest in the field of entrepreneurship, there remains a paucity of studies researching the relationship between age and entrepreneurship behaviours (Duhamel et al. 2016). The lack of satisfactory theoretical understanding of the effect of the entrepreneurs' age on entrepreneurial behaviour manifests in inconsistent empirical findings (DeTienne & Cardon 2012; Zhao et al. 2021). While previous research has found that it is less likely for persons in mature demographic ranges to engage in entrepreneurship (Duhamel et al. 2016; Tervo 2014), other studies affirmed the increases in the number of older persons entering the entrepreneurial domain (Biron & St-Jean 2019; Costa et al. 2020). For this study targeting youth, we expected these university students to demonstrate some significant levels of entrepreneurial behaviour.

Gender

According to Ward, Hernández-Sánchez and Sánchez-García (2019), the percentage of male entrepreneurs is much higher than that of females, although the gap has started to close the past few years. There is consensus in literature (Martin & Omrani 2019; Muntean & Ozkazanc-Pan 2015) that entrepreneurship remains a male-dominated field. Similarly, there is evidence to suggest an asymmetry in entrepreneurial mindset by gender (Hyams-Ssekasi et al. 2019; Ward et al. 2019). Given that both male and female students are exposed to entrepreneurial courses at university, we postulated that both males and females could demonstrate an inclination towards entrepreneurial readiness.

Entrepreneurship education

Entrepreneurship education is believed to promote innovation, creativity and economic growth. Therefore, HEIs must invest in EE to motivate students to embrace entrepreneurship (Nhleko & Van der Westhuizen 2022).

Given the lack of commitment to the entrepreneurial behaviours despite wider exposure to EE, there have been claims that the EE process will require restructuring and transformation to enhance development of skill sets that encourage entrepreneurship (Taatila 2010). There have also been claims that honing skills that meet the requirements of the changing work environment (Wijngaards-de Meij & Merx 2018) could also orient students towards the embrace of self-employment.

Field of study

Mbuya and Schachtebeck (2016) contend that research studies indicate conflicting results on the effect of the field of study on entrepreneurial intention. Several studies indicate that a comprehensive study offering that is not focused on EE can influence entrepreneurial intention (Abbas 2013; Solesvik, Westhead & Matlay 2014). In contrast, several research studies have indicated a direct relationship between EE and entrepreneurial intention (Fatoki 2014; Mbuya & Schachtebeck 2016). These studies concur with findings reported by Gerba (2012), Mbuya and Schachtebeck (2016) and Ibrahim et al. (2021) that students in business-related fields tend to have a higher inclination towards entrepreneurship.

Exposure to entrepreneurial education

Research conducted by Sun, Shi and Zhang (2023) indicates that exposure to EE has significantly improved the entrepreneurial mindset and intention of students. Cui, Sun and Bell (2021) agree that EE has the potential to promote the acquisition of entrepreneurial knowledge, skills and behaviours. Previous research (Hussain & Norashidah 2015) has indicated that EE generates entrepreneurial behaviour; therefore, students from different study fields should be exposed to EE.

Research methods and design

Research design and data collection procedure

A descriptive, explorative cross-sectional survey design was adopted for this study. Given the limited research conducted into the relationship between soft skills and entrepreneurial behaviour among university students in resource poor contexts, an exploratory approach was deemed ideal for this study. An online survey was conducted on students enrolled at two South African universities located in the Free State province. These universities operated in the same innovation and entrepreneurial ecosystem and had students in their final year of study enrolled for entrepreneurship courses.

The cross-sectional survey was administered using Google Forms, an online platform for handling questionnaires. The online questionnaire comprised closed-ended questions that solicited information on student demographics, soft skills and entrepreneurial readiness behaviour. These variables of soft skills were assessed using a 5-point Likert item scale (ranging from 1 – not important to 5 – extremely important). Soft skills scale comprised 13 items adapted from Deloitte (2018), namely leadership, critical thinking, communication,

creative thinking, teamwork, collaboration, social emotional learning, initiative, adaptability, self-confidence, empathy, cultural awareness and growth mindset. These variables of entrepreneurial readiness behaviour were assessed using a 5-point Likert item scale (ranging from 1 – strongly disagree to 5 – strongly agree). The Nieman (2006) scale which comprises the three dimensions, namely innovation financing, venture creation and venture growth, was used as the measurement scale. Students were requested to ascertain their extent of agreement with the statements covering soft skills and entrepreneurship behaviour.

Because universities, disciplines of study and academic levels of study formed clusters around which students could be sampled, cluster sampling was deemed appropriate and applied to the study.

Of the total of more than 2000 questionnaires distributed, 309 questionnaires were completed and returned. After eliminating the questionnaires with missing values, a total of 300 questionnaires were retained.

Data analysis procedure

Statistical Package for the Social Sciences (SPSS) and Smart PLS 3 were utilised for the data analysis to address the research questions. Cronbach's alpha, the average variance extracted (AVE) and linear regression were used to assess the measurement model and to test the relationship between dependent and independent variables.

Ethical considerations

Ethical clearance was obtained from the Faculty Research and Innovation Committees (FRIC) in view of the Central University of Technology (CUT) Research Ethics and Integrity Framework with reference number FMSEC22421. The principles of anonymity, voluntary participation, informed disclosure privacy and informed consent were applied during this investigation.

Results

Respondents profile

Of the total sample of 300 respondents, 149 (49.7%) were males, 150 (50%) were females and 1 other (0.3%). Most respondents aged between 18 and 25 (67%) years were enrolled in the Economics and Management Sciences field (43.7%) and had already obtained a bachelor's degree (29.3%). While 64.7% of them wanted to become an entrepreneur after completion of their studies, 44.7% believe they were not equipped enough by the HEI to become an entrepreneur.

Reliability and validity

The 13 measurements of soft skills were tested for construct reliability and validity before testing the proposed hypotheses. The AVE and Cronbach's alpha coefficient values for each construct are illustrated in Table 1 as indicators of reliability

and validity. Construct validity is confirmed when the factor loading for each measured construct's AVE is at least 0.5. When the Cronbach's alpha value of any construct is at least 0.7, acceptable reliability is confirmed.

All 13 items of soft skills had factor loadings that were greater than 0.5; the AVE was equal to 0.6220 and the Cronbach's alpha value was equal to 0.9491. No items were deleted or removed for this variable or from the scale. Therefore, the 13 measurement items for soft skills are considered as highly reliable and valid, with good internal consistency. The measurement items for entrepreneurship readiness behaviours comprised three dimensions, each containing four statements that are measured. The factor loading of each item of entrepreneurial readiness behaviour was greater than 0.5. The Cronbach's alpha of venture creation was the highest of the entrepreneurial readiness behaviour items, equal to 0.8116, and the AVE was equal to 0.6350. The Cronbach's alpha of innovative financing and venture growth were both 0.8043, while innovative financing had the highest AVE of the entrepreneurial readiness behaviour items, equal to 0.6411, while the AVE of venture growth was 0.6247.

The correlations are squared with AVE in the diagonal.

The Fornell-Larcker criterion measures the discriminant validity of this article. The square root of the AVE of each

TABLE 1: Reliability and construct validity of soft skills and entrepreneurship readiness behaviours.

Indicator	Factor loadings	Cronbach's alpha (α) (before)	Average variance extracted (AVE) (before)	Cronbach's alpha (α) (after)	Average variance extracted (AVE) (after)
Soft skills					
SS1	0.7872	0.9491	0.6220	0.9491	0.6220
SS2	0.8089	-	-	-	-
SS3	0.8176	-	-	-	-
SS4	0.7489	-	-	-	-
SS5	0.8217	-	-	-	-
SS6	0.7634	-	-	-	-
SS7	0.8127	-	-	-	-
SS8	0.8018	-	-	-	-
SS9	0.8456	-	-	-	-
SS10	0.8402	-	-	-	-
SS11	0.8088	-	-	-	-
SS12	0.6708	-	-	-	-
SS13	0.7046	-	-	-	-
Venture creation					
VC1	0.7959	0.8116	0.6350	0.8116	0.6350
VC2	0.8056	-	-	-	-
VC3	0.8038	-	-	-	-
VC4	0.7819	-	-	-	-
Innovative financing					
IF1	0.7864	0.8043	0.6411	0.8132	0.6411
IF2	0.8356	-	-	-	-
IF3	0.8014	-	-	-	-
IF4	0.7783	-	-	-	-
Venture growth					
VG1	0.7819	0.8043	0.6247	0.8132	0.6247
VG2	0.8245	-	-	-	-
VG3	0.7451	-	-	-	-
VG4	0.8145	-	-	-	-

construct is compared to the Fornell-Larcker criterion to identify the correlations between the different constructs. When the AVE is higher than the correlation of other constructs, the tested construct has a good discriminant validity. This suggests that the tested construct shares less variance with the indicators of other constructs than with its own indicators.

The Heterotrait-Monotrait (HTMT) ratio is utilised as an alternative measure of discriminant validity, opposed to the Fornell-Larcker criterion which has some limitations. The HTMT ratio divides the constructs' correlations by the square root of the AVE of each construct. A good discriminant validity is indicated when the HTMT ratio is less than 0.9. Based on the information of Table 2 and Table 3, all measured constructs had good discriminant validity.

Table 4 shows the results of the relationship between the 13 selected soft skills and venture creation. The result suggests a positive and significant relationship (0.1675; $p < 0.007$) between soft skills and venture creation after controlling for demographic variables, notwithstanding a small effect size. The hypothesis 'there is a positive and statistically significant relationship between soft skills and venture creation while controlling for demographic variables' is thus supported.

The result suggests that soft skills exert a positive and significant effect (0.3209; $p < 0.001$) on innovative financing, as the p -value was much lower than the significance level. The strength of the relationship was moderate judging from the effect size. The result suggests that the hypothesis 'there is a positive and statistically significant relationship between soft skills and innovative financing while controlling for demographic variables' is supported.

Soft skills had a positive and significant effect (0.2128; $p \leq 0.001$) on venture growth, as the p -value (> 0.001) was much lower than the significance level. The relationship between soft skills and venture growth had the largest positive and significant effect (same value as innovative financing), which suggests that the hypothesis 'there is a positive and statistically significant relationship between soft skills and venture growth while controlling for demographic variables' is supported.

TABLE 2: Fornell-Larcker criterion results.

Construct	Soft skills	Innovative financing	Venture creation	Venture growth
Soft skills	0.6220	-	-	-
Innovative financing	0.1140	0.6411	-	-
Venture creation	0.0192	0.1907	0.6350	-
Venture growth	0.0415	0.3165	0.2826	0.6274

TABLE 3: Heterotrait-Monotrait results.

Construct	Soft skills	Innovative financing	Venture creation	Venture growth
Soft skills	-	-	-	-
Innovative financing	0.3780	-	-	-
Venture creation	0.1572	0.5201	-	-
Venture growth	0.2182	0.6834	0.6694	-

TABLE 4: Soft skills predicting entrepreneurial readiness behaviour (venture creation) controlling for demographic variables.

Predictors	Model 1		Model 2		Collinearity	
	Standardised estimate	<i>p</i>	Standardised estimate	<i>p</i>	VIF	Tolerance
Age (years)	-	-	-	-	1.21	0.828
26–35 to 18–25	0.10340	0.545	0.0188	0.913	-	-
36–49 to 18–25	-0.00542	0.983	-0.0604	0.816	-	-
50+ to 18–25	-0.42991	0.377	-0.4989	0.301	-	-
Gender	-	-	-	-	1.13	0.882
Female – Male	0.10791	0.440	0.0570	0.682	-	-
Other – Male	1.90070	0.060	1.6776	0.094	-	-
Higher education institution (HEI)	-	-	-	-	1.29	0.776
University of the Free State (UFS) – CUT	-0.08709	0.632	-0.0392	0.828	-	-
Other – CUT	0.03696	0.837	0.0209	0.906	-	-
Field of study	-	-	-	-	1.11	0.898
Economic and Management Sciences – Education	-0.20511	0.300	-0.2248	0.251	-	-
Theology – Education	-0.79566	0.025	-0.9601	0.007	-	-
Health sciences – Education	-0.28010	0.237	-0.2672	0.254	-	-
Natural and agricultural sciences – Education	-0.60960	0.029	-0.6525	0.018	-	-
Humanities – Education	-0.27633	0.288	-0.3746	0.149	-	-
Other – Education	-0.39324	0.143	-0.3284	0.218	-	-
Considered an entrepreneurial career	-	-	-	-	1.12	0.890
No – Yes	0.23199	0.247	0.2566	0.195	-	-
Maybe – Yes	-0.22072	0.148	-0.2251	0.136	-	-
Entrepreneurial preparation by HEI	-	-	-	-	1.13	0.888
No – Yes	-0.11927	0.467	-0.1625	0.318	-	-
Maybe – Yes	-0.06289	0.693	-0.0889	0.573	-	-
Exposure to entrepreneurship education	-	-	-	-	1.28	0.782
No – Yes	-0.30074	0.035	-0.2459	0.085	-	-
Highest qualification	-	-	-	-	1.11	0.898
Certificate – Course	0.12255	0.571	0.1371	0.522	-	-
Diploma – Course	0.38348	0.154	0.4277	0.108	-	-
Advanced diploma – Course	0.28208	0.473	0.2808	0.470	-	-
Bachelor – Course	0.18385	0.395	0.2492	0.247	-	-
Honours – Course	0.09023	0.738	0.1812	0.500	-	-
Masters – Course	0.10651	0.722	0.2422	0.420	-	-
Doctoral – Course	-0.89369	0.075	-0.7754	0.120	-	-
Soft skills	-	-	0.1675	0.007	1.10	0.910
<i>R</i> ²	-	0.133	-	0.156	-	-
Change in <i>R</i>²	-	-	-	0.0232	-	-

Note: Model 1: F-value – F(25.274)1.68, *p* = 0.0025; Model 2: F-value – F(26.273)1.94, *p* = 0.005.
CUT, Central University of Technology.

The above-mentioned tables (Table 4, Table 5, and Table 6) all indicated that soft skills have a positive and significant relationship between all dimensions of entrepreneurial readiness behaviour while controlling the demographic variables. The tables introduced the relationship between soft skills and venture creation, innovative financing and venture growth.

Discussion

This article sought to explore the extent to which soft skills impacted entrepreneurial readiness behaviour. This was in response to the paucity of literature exploring the interplay between soft skills and entrepreneurial

behavioural dimensions, especially innovative financing, venture creation and growth. As Sambo (2019) rightly observes, the need to enhance soft competences cannot be overemphasised given its significance in developing sound programmes for supporting sustainable entrepreneurship activities. Consistent with this reasoning, Kuratko, Morris and Covin (2011) have lamented the paucity of soft skills such as innovation and creativity for most bureaucratic organisations and have prioritised the need for organisations to develop a creativity check inventory list to close innovation gaps and use innovation platforms as vehicles for sustaining innovation behaviours. Given the challenges of students from South African HEIs in securing employment

TABLE 5: Soft skills predicting entrepreneurial readiness behaviour (innovative financing) controlling for demographic variables.

Predictor	Model 1		Model 2		Collinearity	
	Standard estimate	<i>p</i>	Standard estimate	<i>p</i>	VIF	Tolerance
Age (years)	-	-	-	-	1.21	0.828
26–35 to 18–25	0.3390	0.045	0.17686	0.278	-	-
36–49 to 18–25	0.0905	0.726	-0.01488	0.952	-	-
50+ to 18–25	-0.2784	0.562	-0.41051	0.369	-	-
Gender	-	-	-	-	1.13	0.882
Female – Male	0.0512	0.710	-0.04638	0.725	-	-
Other – Male	1.5926	0.109	1.16532	0.218	-	-
Higher education institution (HEI)	-	-	-	-	1.29	0.776
UFS – CUT	0.0543	0.762	0.14601	0.394	-	-
Other – CUT	0.0357	0.840	0.00497	0.976	-	-
Field	-	-	-	-	1.11	0.898
Economic and Management Sciences – Education	-0.0774	0.691	-0.11513	0.535	-	-
Theology – Education	0.4335	0.213	0.11837	0.724	-	-
Health sciences – Education	-0.2792	0.232	-0.25447	0.252	-	-
Natural and agricultural sciences – Education	0.3618	0.187	0.27955	0.284	-	-
Humanities – Education	-0.3911	0.128	-0.57938	0.019	-	-
Other – Education	-0.5388	0.042	-0.41456	0.101	-	-
Considered an entrepreneurial career	-	-	-	-	1.12	0.890
No – Yes	0.1922	0.330	0.23942	0.202	-	-
Maybe – Yes	0.0810	0.590	0.07271	0.610	-	-
Entrepreneurial preparation by HEI	-	-	-	-	1.13	0.888
No – Yes	-0.1929	0.233	-0.27568	0.075	-	-
Maybe – Yes	0.0108	0.945	-0.03903	0.794	-	-
Exposure to entrepreneurship education	-	-	-	-	1.28	0.782
No – Yes	-0.1918	0.173	-0.08673	0.520	-	-
Highest qualification	-	-	-	-	1.11	0.898
Certificate – Course	0.2024	0.343	0.23016	0.256	-	-
Diploma – Course	0.1980	0.454	0.28266	0.262	-	-
Advanced diploma – Course	0.5738	0.139	0.57143	0.121	-	-
Bachelor – Course	0.0591	0.782	0.18420	0.366	-	-
Honours – Course	0.0799	0.764	0.25416	0.319	-	-
Masters – Course	-0.1952	0.509	0.06470	0.820	-	-
Doctoral – Course	-1.0400	0.036	-0.81346	0.085	-	-
Soft skills	-	-	0.32093	< .001	1.10	0.910
<i>R</i> ²	-	0.157	-	0.242	-	-
Change in <i>R</i>²	-	-	0.0852	-	-	-

Note: Model 1: F-value – F(25.274)2.04, *p* = 0.003; Model 2: F-value – F(26.273)3.36, *p* < 0.001.

UFS, University of the Free State; CUT, Central University of Technology.

opportunities, the assessment of their soft skills set is deemed critical to stimulating their entrepreneurship behaviours as alternative pathways to gainful employment. This is an underresearched topic in resource-constrained contexts such as those involving nascent entrepreneurs enrolled at South African HEIs.

The fact that soft skills positively and significantly impact entrepreneurship readiness behaviours, especially innovative financing, resonates with established literature. For instance, evidence suggests that soft skills such as the effective communication of vision and entrepreneurial actions are critical for the promotion of innovation ubiquity (Sambo 2019) in the sourcing of sustainable funding alternatives. Innovative

financing aims to raise funds for developments or optimise the usage of traditional funding resources, while narrowing the gap between the resources available and the resources required to achieve goals (Wielgórka 2020). Research has confirmed that soft skills are required when conducting financial activities (Collis & Hussey 2013). This article extends the research by introducing soft skills that affect innovative financing, as entrepreneurs' lack of necessary skills and expertise to manage the finance of ventures are detrimental to the growth of ventures (Nago 2020).

Soft skills were also found to have a positive and significant impact on entrepreneurship readiness behaviours, especially venture growth, which resonates with existing literature.

TABLE 6: Soft skills predicting entrepreneurial readiness behaviour (venture growth) controlling for demographic variables.

Predictor	Model 1		Model 2		Collinearity	
	Standard estimate	<i>p</i>	Standard estimate	<i>p</i>	VIF	Tolerance
Age (years)	-	-	-	-	1.07	0.935
26–35 to 18–25	0.3290	0.025	0.2700	0.061	-	-
36–49 to 18–25	0.0562	0.789	0.0766	0.710	-	-
50+ to 18–25	-0.4935	0.240	-0.4707	0.253	-	-
Gender	-	-	-	-	1.13	0.887
Female – Male	-0.2035	0.139	-0.2739	0.045	-	-
Other – Male	1.5701	0.111	1.2443	0.199	-	-
Higher Education Institution (HEI)	-	-	-	-	1.23	0.815
UFS – CUT	-0.2684	0.107	-0.1710	0.300	-	-
Other – CUT	0.0173	0.918	0.0313	0.849	-	-
Field	-	-	-	-	1.09	0.917
Economic and Management Sciences – Education	-0.0333	0.861	-0.0457	0.807	-	-
Theology – Education	-0.4638	0.167	-0.7150	0.034	-	-
Health sciences – Education	-0.1725	0.453	-0.1553	0.490	-	-
Natural and agricultural sciences – Education	-0.0230	0.932	-0.0927	0.727	-	-
Humanities – Education	-0.4816	0.059	-0.6138	0.015	-	-
Other – Education	-0.1551	0.556	-0.0695	0.788	-	-
Considered an entrepreneurial career	-	-	-	-	1.10	0.913
No – Yes	0.5185	0.007	0.5531	0.003	-	-
Maybe – Yes	0.0480	0.745	0.0305	0.833	-	-
Entrepreneurial preparation by HEI	-	-	-	-	1.11	0.902
No – Yes	0.0211	0.894	-0.0387	0.804	-	-
Maybe – Yes	0.0492	0.753	0.0147	0.923	-	-
Exposure to entrepreneurship education	-	-	-	-	1.24	0.804
No – Yes	-0.4564	< 0.001	-0.3832	0.005	-	-
Soft skills	-	-	0.2128	< 0.001	1.08	0.928
<i>R</i> ²	-	0.132	-	0.172	-	-
Change in <i>R</i>²	-	-	-	0.039	-	-

Note: Model 1: *F*-value – *F*(18.281)2.38, *p* = 0.002; Model 2: *F*-value – *F*(19.280)13.2, *p* < 0.002.

UFS, University of the Free State; CUT, Central University of Technology.

The importance of soft skills has become more significant for venture growth than other skills, such as hard skills (Mabe & Bwalya 2022), as hard skills tend to be administrative and technical skills while soft skills being more human and interpersonal skills (Bak et al. 2018). Lok, Cheng and Choong (2021) support this notion by asserting that communication, teamwork, problem solving and adaptability are vital soft skills for venture growth.

The positive connection between soft skills and entrepreneurship readiness behaviours, especially venture creation, resonates with evidence reported in advanced countries. Studies suggest that the instilling of soft skills in academia such as empathy, including ‘ways of thinking, doing, feeling, seeing, communicating, organising and learning things’ (Gibb 2010), business networking, leading and persuading others, and opportunity seeking and grasping are integral to realising venture creation behaviours (Cooney 2012; Gibb 2010). However, specific soft skills may differ depending on the vision, mission and values of the created venture (Ginting et al. 2020).

Study implications for future research and recommendations

This article indicates the impact of soft skills on the materialisation of entrepreneurial readiness behaviour of students at two HEIs. Although the study illuminated understanding on the significance of soft skills in shaping behaviours that make entrepreneurial readiness tenable, a larger student sample from HEIs across South Africa will be needed to draw solid conclusions regarding the relationship between soft skills and venture creation. Hence, future research should engage a larger student population at different HEIs, distinguishing between the different dimensions of entrepreneurial readiness behaviour.

Although the South African government has recognised the problem of youth unemployment and has put policy interventions in place towards encouraging youth economic participation, these programmes should be streamlined to promote entrepreneurial readiness behaviour. While the Department of Small Business Development (2014) is a direct response to this call instituted by the National Youth Policy

to contribute towards economic empowerment of young entrepreneurs, targeted programmes to enable venture creation should be put into place. Selected soft skills should be introduced to enable young entrepreneurs to recognise opportunities leading to new venture creation.

Herrington and Kew (2018) state that entrepreneurial activity in South Africa is average, when compared to other emerging economies such as Indonesia, Morocco and Egypt. Factors that explain the low entrepreneurial behaviours include the lack of quality education, entrepreneurial training and funding (Celliers, Schachtebeck & Diniso 2021). Furthermore, the study recommends the formation of partnerships between ventures and EE institutions to develop soft skills of nascent entrepreneurs that will allow them to navigate and make sense of their complex entrepreneurial journeys. Higher education institutions should systemically evaluate the import and relevance of their EE programmes to determine the different pathways that can significantly improve entrepreneurial readiness behaviour of nascent entrepreneurs.

One of the major challenges in South Africa as an emerging economy is the lack of funding for aspiring entrepreneurs. Access to funding is one of the obstacles for entrepreneurial activity in South Africa (Herrington, Kew & Mwangi 2017). Zachary and Mishra (2013) have suggested venture capital funding for entrepreneurs as an alternative to traditional sources of funding. According to Jones and Mlambo (2013), perceived lack of soft skills is among entrepreneurs' main reasons for their inability to raise financial capital from potential venture capital investors. To the extent that venture capital investors consider personal qualities of entrepreneurs as key elements of good opportunities and potential venture growth (Celliers et al. 2021), soft skills must serve as building blocks of these perceived personal qualities required for entrepreneurial readiness behaviour (Chen et al. 2018; Zebal, Ferdous & Chambers 2019). Therefore, soft skills such as deal negotiation, pitching, collaborative networking and stakeholder management, which facilitate the breaching of information asymmetry between investors and entrepreneurs and facilitate the signalling of relevant information available to investors, should be enhanced among nascent entrepreneurs. These skills together with those already examined in this study such as growth mindset, critical thinking, initiative and self-confidence should serve as vital competencies in the armoury of entrepreneurs to increase accessibility of funding from future investors.

Most entrepreneurs find it difficult to sustain existing ventures. Jaimes-Acero et al. (2022) suggest that there have not been enough studies that focus on the necessary soft skills that are required to improve entrepreneurship to support entrepreneurial ventures. There is a notable gap between the required skills developed by an entrepreneur and those necessary in a venture. To overcome this gap in venture growth, personal development and training is considered as the most sufficient manner to increase growth. Furthermore, the soft skills in undergraduate programmes

and soft skills needed in entrepreneurship are considered as significant and should be developed. It is recommended that further research should investigate the required soft skills that focus on creating infrastructure and relationships necessary for creating and growing ventures.

Limitations

This article concentrated on the relationships between soft skills and the dimensions of entrepreneurial readiness behaviour. There is scope for future studies to include other skill types such as technical skills and entrepreneurship skills and ascertain their effects on specific dimensions of entrepreneurial readiness behaviour in the context of emerging economies. Future studies need to broaden the concept of entrepreneurship preparedness behaviours by including other dimensions such as entrepreneurship propensity and intensity.

Because entrepreneurship readiness behaviours are not the preserve of university students alone, future studies should include students in high schools and vocational training institutions to widen the perspective on this matter. This is critical to promoting sustainable entrepreneurship behaviours in view of the growing calls to include wider audiences in the provision of support that generate such behaviours in recent literature (Mahola, Aberibigbe & Chimucheka 2019).

While an emphasis on students in their third year was consistent with the level at which entrepreneurial courses were taken at the universities studied, widening the pool of participants to cover students in first year and second year would provide a more compelling picture of the interaction between soft skills and entrepreneurial readiness behaviours. Moreover, the use of longitudinal studies could capture a long-term perspective of how such behaviour progressed over time.

Conclusion

This research study explored the relationship between soft skills and entrepreneurial readiness behaviour, specifically innovative financing, venture creation and venture growth. While there is an abundance of literature traversing the effect of soft skills of entrepreneurship, there is at the same time a lack of evidence pertaining a link between the relationship from the perspective of the dimensions of the entrepreneurial readiness behaviours and soft skills. The empirical analysis supports the TPB and previous research on entrepreneurship on the interaction between soft skills and entrepreneurial readiness behaviour. The results show strong and reliable relationship between soft skills and innovative financing, venture creation and venture growth, and soft skills are strong predictors of student engagement in entrepreneurial readiness behaviour. In summary, the results support the recommendations that students must integrate soft skills through EE to promote entrepreneurial readiness behaviour.

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Competing interests

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Authors' contributions

S.S. is the author who primarily writes the research study, investigates previous research, ensures that the questionnaires are distributed and does the project administration. P.R. is the supervisor of the project, sends relevant study material to the student, and reviews and edits the work being done.

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Data availability

Data were stored on: https://docs.google.com/forms/d/1m0XAxg0PbHqJjY9Qi3CEBFN1_1VIP83pJHfHKrbsbwg/edit. Data were captured on: https://docs.google.com/spreadsheets/d/1qrfXcX1a96UBSRTX79gsmx_fjQ8O4YrXiuOg9hkDIY/edit?resourcekey&pli=1#gid=1486369168.

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