AOSIS

Navigating on the precursors of work readiness amongst students in Johannesburg, South Africa

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Orientation: Research has been conducted regarding work readiness in a various contexts. However, there are deficiencies in studies that have focused on the precursors of work readiness in an African context.

Research purpose: The primary objective of this study was to determine the impact of career self-efficacy (CSE), career exploration (CE) and self-perceived employability (SPE) on work readiness (WR) of students in the South African context, particularly in the Gauteng Province.

Motivation for the study: There is an unequivocal gap between what educational institutions teach as well as what the South African labour market requires, highlighting a misalignment and one of many reasons graduates struggle to find work.

Research approach/design and method: To close the research gap, the current study used a quantitative approach using the cross-sectional survey research design. A structured questionnaire was administered to 254 randomly selected students. The collected data were analysed using structural equation modelling.

Main findings: The hypotheses testing results revealed that the WR was influenced significantly and positively by CSE, CE and SPE.

Practical/managerial implications: The present research provides implications from which managers of institutions of higher learning can benefit. For instance, ensuring that experiential learning is involved in all the programmes. This will be more advantageous to students who would like to evaluate themselves to determine if they are work ready.

Contribution/value-add: This study adds fresh understanding regarding the precursors that stimulate work readiness among students in a South African context.

Keywords: work readiness; career self-efficacy; career exploration; self-perceived employability; students.

Introduction

In today's post-modern era, youth or graduate unemployment is a major issue in South Africa, particularly for black youth, who face unfavourable living and social conditions (Mmesi, 2015; Oluwajodu, Blaauw, Greyling, & Kleynhans, 2015). Young graduates are not equipped with the required competence in terms of skills, abilities and experience that will enable them to enter and establish themselves in the turbulent world of work (Van Aardt, 2012). Furthermore, young adults are unequipped with the ability to adjust to constant change and need to obtain more than just degree-specific skills and information (Froehlich, Beausaert, Segers, & Gerken, 2014).

Graduates who enter the world of work today face a number of challenges, such as decreasing employment opportunities and job security, fast-changing technology and an increasing personal responsibility for continual up-skilling and lifelong learning – as well as keeping up with changes in their fields of knowledge (Potgieter & Coetzee, 2013). According to Martinez, Baker and Young (2017), students from traditionally under-represented groups face academic, accessibility and affordability barriers that impede career readiness. Therefore, private organisations, foundations and public agencies have sought to develop interventions that will help such students overcome these barriers (Martinez et al., 2017).

The changing relationship between universities, students and employers is highlighted by Boden and Nedeva (2010) and points to employers now seeking to employ work-ready graduates rather than to train new workers. However, Masole and van Dyk (2016, p. 70) point out that 'some graduates appear to be insufficiently prepared for the world of work and this dissatisfaction by

employers with graduates' work readiness (WR) performance highlights two important issues'. Firstly, field-specific knowledge and technical skills on their own are not sufficient to label graduates as 'work ready', and secondly, there is a need for graduates to develop certain capacities beyond their qualifications that would enable them to deal with the stressful nature of the work environment (Masole & van Dyk, 2016).

Notably, most international studies have focused on WR of graduate students in various contexts such as focusing on the WR of Master of Information Systems international students at an Australian university (Mackrell, 2009); enhancing students' career readiness through peer counselling programme in Hong Kong (Wong, Chui, Chan, Ting, & Lam, 2016); the WR of final-year civil engineering students at Victoria University in one of the developed countries, Australia (O'Brien, Venkatesan, Fragomenin, & Moore, 2012); perceived job readiness of business students at the institutes of higher learning in Malaysia (Wye, Lim, & Lee, 2012) and models for the development of work-readiness skills for students in Vietnamese universities (Tran, 2017).

Based on the above-mentioned prior studies, it can be recognised that they have been largely conducted in developed countries and therefore little is known about the same from developing parts of the world such as African countries, especially South Africa. Therefore, it would be naïve to presume a priori that results from developed countries or even newly developed Asian countries apply in Africa. Research on the nexus between career self-efficacy (CSE), career exploration (CE), self-perceived employability (SPE) and WR in the African context could perhaps yield different results from other parts of the world, given the differences in socio-economic contexts. Such a study relating to WR in Africa is obviously long overdue and requires empirical inspection to confirm or disconfirm the results of previous studies conducted elsewhere in the world.

It is also imperative to note that, given the theoretical contributions made by many international scholars on WR, it appears that little scholarly attention has been paid in the context of South Africa to comprehensively understand the background that influences the readiness of students to work in South Africa. Raftopoulos (2009) also concurs that the concept of WR has been extensively researched in the international context, and it is, however, disappointing to note, that although WR programmes have been run in South Africa, research in the South African context is limited. Researchers in South Africa have previously examined graduate students in various contexts such as increasing employability by implementing a Work-Integrated Learning partnership model in South Africa (Taylor & Govender, 2017); specific factors that contribute to poor academic achievement amongst undergraduate students at a tertiary institution (Fakude, 2012); the development of co-curricular interventions to strengthen female engineering students' sense of self-efficacy and to

improve the retention of women in traditionally male-dominated disciplines and careers (Lourens, 2014); perspectives on graduate unemployment in South Africa in the banking sector (Oluwajodu et al., 2015); adaptation challenges faced by recent graduates in South African multinational organisations (Mmatli, 2015) and an evaluation criteria for a science access program at a South African university (Engelbrecht, Hardin, & Potgieter, 2017).

Therefore, in light of the aforesaid void in research, important contributions will emanate from examining the direct relationships in the vocational behaviour and industrial psychology literature by seeking to enhance a nuance understanding of the variables under investigation. Precisely, the focal purpose of the current research is to investigate the direct effect of CSE, CE and SPE on WR of students. To bridge the research gap, the following three empirical objectives are brought to the fore:

- To investigate the impact of CSE on WR of students.
- To examine the impact of CE on WR of students.
- To assess the impact of SPE on WR of students.

Broadly speaking, the results of this study are expected to contribute new knowledge to the current body of literature on vocational behaviour, industrial psychology and management of education by accentuating the discrepancies between what is taught at tertiary level and what it actually takes to be preferable for industry employment to assist in preparing graduates better for the world of work.

The composition of this article is structured as follows: literature review includes the theoretical grounding, empirical review, conceptual model and hypotheses development of the research. Subsequent to this are the methodology section, the findings, and then the conclusions and recommendations.

Theoretical lens

The study adopted the self-efficacy theory and *social cognitive career theory* (SCCT) as the theoretical grounding for this research. These two theories serve as points of departure to develop and justify the research initiative. 'Overview of the self-efficacy theory' and 'Social cognitive career theory' sections highlight the underpinning theories.

Overview of the self-efficacy theory

Self-efficacy refers to the sense of trust a person has in his or her ability to conduct a particular behaviour in a variety of circumstances (Bandura, 1986, 1997). Bandura indicated that the commitment and actions of a person towards specific behaviour are closely linked to his or her self-efficacy level. The personal perception of efficacy may further determine the type of activities chosen, the effort to be expended and the degree of persistence in the effort (Bandura, 1977; Eysenck, 1978). A key part of self-efficacy theory is that the stronger the individual's belief in his or her ability to perform a set of actions, the more likely he or she will be to initiate and persist

in the given activity. Ferris, Johnson and Sedikides (2017) stated that several previous studies that used meta-analysis reliably uncovered a positive link between self-efficacy and related outcomes such as work performance, athletic performance and academic accomplishment. Relatively more recent research also used meta-analysis and depicted an adverse finding which implies that despite a strong observable effect of self-efficacy on specific variables, certain other more measurable constructs significantly diminish the strength of the effect that self-efficacy has on work-related and other pertinent outcomes such as satisfaction and students' expectancy-value beliefs (Doménech-Betoret, Abellán-Roselló, & Gómez-Artiga, 2017). Moreover, deducing from the aforementioned recent corroborated studies, it is imperative to note that they have demonstrated relationships but introduced boundary conditions that impacted on them.

Social cognitive career theory

One of the recent cognitive approaches used in understanding and predicting career behaviours is SCCT. This theory was firstly proposed by Lent, Brown and Hackett (1994) to understand career behaviours and developmental processes from a cognitive perspective. Lent et al. (1994) suggested a social cognitive framework to understand three aspects of career development, which included the development of career interests, selection of career options, and performance and permanence in educational and occupational work. This theory is based on the General Social Cognitive Theory proposed by Bandura (1986), which emphasises the complex interaction between people, behaviour and environment. According to Bandura's theory, SCCT focuses on human agency, as the capacities of individuals have from shaping their own career behaviour (Baglama & Uzunboylu, 2017). In addition, Baglama and Uzunboylu (2017) pointed out that this theory emphasises three individual variables that are important in career development, namely self-efficacy beliefs, outcome expectations and personal goals. *Social cognitive career theory* argues that performance goals are considerably affected by individuals' self-efficacy beliefs and outcome expectations (Baglama & Uzunboylu, 2017). Swanson and Fouad (2015) implied that individuals often gravitate towards careers for which their life experiences and career development exposure have largely prepared them, which often renders them more prepared and effective in their vocations. The aforementioned authors also opine that no matter how great the extent of such exposure to a particular career, a lack of self-efficacy can pose as encumbrance to one's successful assimilation into that career. Particular mention is also made of graduates struggling to successfully launch their careers because of a deficiency in self-efficacy (Swanson & Fouad, 2015).

Empirical literature

After a search on scholarly online databases and search engines, the literature was reviewed around this study's variables. This section looks at literature on the research variables under investigation, namely CSE, CE, SPE and WR.

Career self-efficacy

According to Li, Ngo and Cheung (2019), CSE refers to the degree of confidence of a person that he or she can successfully complete the tasks necessary to make career decisions. Career self-efficacy influences decision-making attitudes and behaviours, wherein high CSE enables individuals to overcome career obstacles (Cheng, Tsai, & Kao, 2016) and adapt to the pressures of career decision making (Chan, 2018). Career self-efficacy is the most crucial factor affecting university students' career decision making and is positively correlated with career satisfaction (Chan, 2019). Moreover, as a domain-specific self-efficacy, this construct has been found to be related to some career-related outcomes, such as career decidedness (Lent, Ezeofor, Morrison, Penn, & Ireland, 2016), career optimism (Garcia, Restubog, Bordia, Bordia, & Roxas, 2015) and career commitment (Chung, 2002).

Career exploration

Complementary to CSE in nature, this exploratory behaviour involves individuals actively considering opportunities for the development and constitution of their self-identity as they navigate their associated environments (Abu-Rayya, 2006). By engaging in exploratory processes or behaviours, individuals actively question, experiment with and weigh various identities before deciding about the values, beliefs and goals that they will pursue (Crocetti, Sica, Schwartz, Serafini, & Meeus, 2013). In the field of careers, Jiang, Newman, Le, Presbitero and Zheng (2019) described CE as a process characterised by exploratory behaviours and cognitions that relate to vocational development. This process involves four aspects: '(1) where one explores, (2) how one explores, (3) how much one explores and (4) what one explores (i.e. the focus of exploration)'. Consequently, Jiang et al. (2019, p. 338) referred to CE as purposive behaviour and cognitions that afford access to information about occupations, jobs and organisations that were not previously in the stimulus field. Moreover, CE is the gathering of information relevant to the progress of one's career (Zikic & Klehe, 2006). Deducing from the aforementioned explanations, it can be noted that participation in career exploratory activities can help students learn more about themselves and the work environment, choose occupations to pursue and develop effective job search skills.

Self-perceived employability

According to Udayar, Fiori, Thalmayer and Rossier (2018), SPE is defined as the characteristics needed to secure a job that corresponds with one's interests and goals. Self-perceived employability is also commonly defined as a person's observed likeliness to secure employment in the labour market (Philippaers, De Cuyper, Forrier, Vander Elst, & De Witte, 2016). This notion has a specific tone in the framework of the loss of job security as it encourages employees to ensure their own livelihood (Direnzo &

Greenhaus, 2011). Self-perceived employability is similarly pertinent in the context of work as it is presumed to enhance an employees' work performance (e.g. De Cuyper, Van der Heijden, & De Witte, 2011); employers appear keener on attracting and keeping exceptionally skilled employees who believe in themselves (De Cuyper et al., 2014).

Work readiness

Work readiness is a relatively new concept that has emerged in the literature as a selection criterion for predicting graduate potential (Caballero, Walker, & Fuller-Tyszkiewicz, 2011). However, making use of jargons, such as 'graduate employability, workforce readiness, graduations and work preparedness' and many others to denote the degree to which graduates are appraised to be work ready is one of many grounds for the confusion that exists in encapsulating what it actually means to be work ready (Hart, 2008). Thus, WR can be defined as the extent to which graduates are perceived to possess the attitudes and attributes that make them prepared or ready for success in the work environment (Caballero & Walker, 2010). Work readiness is related to the propensity of the student to know what skills they have developed and matched to the criteria for a desired job (Cavanagh, Burston, Southcombe, & Bartram, 2015). Work readiness thus encompasses a sense of 'self-directedness' or the ability to recognise one's 'personal agency' in acquiring and keeping employment (Coetzee, 2012; Fourie & De Jager, 2014).

Conceptual model and hypothesis development

The conceptual model developed for the current study was structured into two categories: the predictor variables and the outcome variable. The predictor variables comprised CSE, CE and SPE. The outcome variable was WR. Figure 1 shows the conceptual model.
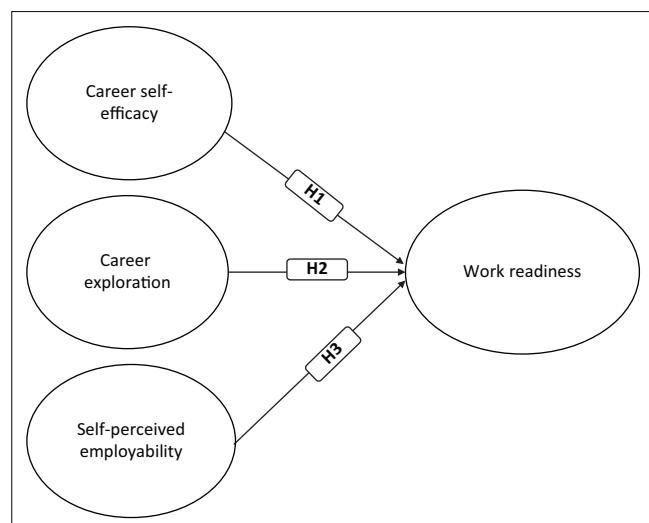

FIGURE 1: Conceptual model.

Career self-efficacy and work readiness

There is literature on the connection between CSE and WR; however, the literature is still in its infancy and hence the need for the present empirical study to fill in the gaps on this relationship in the literature. It has, however, already been noted in the literature that self-efficacy is related to employability, the individual's self-confidence in their capabilities for obtaining employment (Coetzee & Oosthuizen, 2012), although this study hopes to specifically bring out the aspect of actual preparedness of graduates for the world of work. Career self-efficacy beliefs promote favourable career outcome expectations and encourage career choice actions or career behaviours and CE that are necessary to make progress towards career goals (Makki, Salleh, Memon, & Harun, 2015). In addition, Anthony (2005) found out that there is a statistically positive significant relationship between perceived employment self-efficacy and WR. Moreover, Bandura's (1977) pioneered self-efficacy theory, which aids in interpreting the proposed conceptual model, points out that a person's self-efficacy has the sense of faith in his or her capacity to perform a particular action under a number of circumstances. Therefore, with that view and in the context of this research, it can be suggested that CSE considers the confidence and how prepared an individual is for the world of work, thus, WR. Therefore, concluding from the above-mentioned statements, it can be hypothesised that:

> **H1:** Career self-efficacy has a positive impact on work readiness of students

Career exploration and work readiness

It should be noted that there are gaps in studies regarding the relationship between CE and WR. However, there are studies that have tried to explore this or closely related relationships. For instance, Jepsen and Dickson (2003) established CE as a precursor to career establishment. Makki, Salleh and Harun (2015) found out that there is a positive and a significant association between CE and WR amongst engineering graduates in Malaysia. The authors believe that this is representative of how numerous graduates in South Africa are misaligned in terms of their vocational strengths and their actual occupations. Godbey and Gordon (2019) described how graduates who do not receive sound career guidance are often in for a shock upon entering the industry, which sometimes leads to depression because of feelings of lacking accomplishment. According to LeGrand (1992), CE has also been found to help individuals develop more realistic job expectations, leading to greater job satisfaction, longer tenure and less intention to leave the job. In addition, LeGrand (1992) suggested that individuals who proceed without the benefit of exploration are less likely to participate in successful career decision-making and job implementation behaviours, because of the fact that decisions are made impulsively when comprehensive avenues are unexplored, thus increasing the likelihood of inferior options being chosen over other existing yet unchartered superior ones. Moreover, the SCCT pioneered

by Lent et al. (1994) should be embraced to explain the conceptual model suggested, as it points out the connection between individuals, actions and the environment to understand the world of work. With that view and in the context of this study, this identified theory is in line with what CE entails, which is generally the process of studying, analysing and learning through contact about current job opportunities. Therefore, drawing from the aforementioned elucidations, it can be hypothesised that:

H2: Career exploration has a positive impact on work readiness of students

Self-perceived employability and work readiness

Because of the magnitude of qualified yet often unemployable graduates, it is essential to discuss the nexus between SPE and WR. Mitra (2019) noted that little has been done to assess the learners' perception of their own employability in terms of being confident that the skills they study to acquire knowledge will ultimately be pertinent to the work they are expected to fulfil once they enter the industry. Notwithstanding, employers often relate employability to new graduates' WR or their possession of the essential knowledge, skills, attributes and attitudes that would ensure that, once employed, they would be able to contribute to management's objectives (Mason, Williams, & Cranmer, 2009), which is why the authors believe it is important to determine the extent to which graduates consider themselves to be employable and whether this increases their chances of thriving in the workplace. To make an empirical deduction in light of the above-mentioned theory, the authors pose the following hypothesis:

H3: Self-perceived employability has a positive impact on work readiness of students

Research design and methodology

Our ontological assumption in an objective manner was that CSE, CE and SPE are all instrumental in determining WR. Therefore, from the ontological perspective of objectivism of the research, this investigation adopted a positivist paradigm and deductive reasoning, as it seeks to discover a link between the variables presented for this analysis and the use of measurement instruments for gathering data. Therefore, a quantitative approach was applied as it improves accuracy of findings using statistical analysis. The design was suitable to solicit the required information relating to CSE, CE, SPE and WR. Being quantitative in nature, the measurement instrument was compiled from several existing scales that were adapted to suit the purpose of the study. Once scale reliability and validity were established, structural equation modelling (SEM) was used to test the model fit, followed by the hypotheses testing and path modelling. Structural equation modelling was performed using AMOS 25 software and the descriptive statistics were obtained through Statistical Package for the Social Sciences (SPSS 25) software.

Sample and data collection

This research was performed amongst students from the Regenesys Business School in Sandton, Johannesburg, which is within the Gauteng province of South Africa. At the moment of data collection, the students included in the sample had to be active, registered students. A primary identifier of this criterion was the student card holding the name and year of enrolment of each student. With respect to the sampling frame, a list of registered students was used as a sampling frame in the database of Regenesys Business School. This study therefore used a simple random sampling technique because each element of the population had an equal and known chance of being selected as part of the sample (Weideman 2014), for example, where each name in the list of registered students had an equal chance of being selected. The questionnaires made it clear that the respondents' anonymity would be assured and that the research was for educational purposes only. The sample size Raosoft calculator was used to calculate the sample size (Raosoft Inc., 2004). The calculation considered the total student population enrolment of approximately 745, a 5% margin of error, 95% confidence interval and the recommended 50% distribution, and returned a minimum sample size of 254 respondents. Of the 254 questionnaires distributed, 195 questionnaires returned were usable, resulting in a response rate of 76.7%.

Data analysis

Initially, preliminary analysis of the data was conducted using the statistical software SPSS, version 25.0. Thereafter, an SEM procedure was applied to perform the hypotheses testing using the AMOS (version 25.0) package.

Measuring instrument

For the purpose of this study, a self-administered questionnaire was used for collecting the necessary data. A questionnaire refers to a device used for securing answers to questions in a definite order by using a form that respondents fill in by themselves (Chandra, Gayatri, & Devi, 2017). The questionnaire was divided into six sections, namely, Sections A–E. Section A comprised questions pertaining to the respondents' demographic factors such as the participants' gender, age, current year of study, occupation and ethnicity. Section B assessed CSE and comprised four items adapted from Tsai, Hsu and Yang (2017). Section C measured CE with six items adapted from the scale used by Forstenlechner, Selim, Baruch and Madi (2014). Section D assessed SPE with seven items adapted from Rothwell, Jewell and Hardie (2009). Moreover, Section E measured WR, using a 13-item scale adapted from Rose, Perks, Fidan and Hurst (2010). Responses for Sections B, C, D and E were measured by a five-point Likert scale, denoting, 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree/neutral, 4 = agree and 5 = strongly agree.

Biographical information of the sample

Demographic information specifies socio-economic descriptors of the partakers involved in the survey, which is mentioned as the cataloguing of data (Malhotra, 2010). Section A of the feedback form provides a view of the demographic information of the total sample, which is gender, age category, year of study and ethnicity of the participants. Each of these features is presented in Table 1.

Table 1 demonstrates the participant's representation. The respondents were asked to report their demographic data including gender, age, year of study and ethnicity. The respondents were mainly females (58.5%). Most of the respondents were between the ages of 28 and 35 years, representing 33.8%. In addition, in terms of the level of study, most of the respondents were third-year students, representing 59.5% of the total sample. Moreover, with regard to ethnicity, the majority of the respondents (71.8%) revealed that they are Africans. A comprehensive representation of the biographical details is presented in Table 1.

Ethical consideration

The study was conducted after an ethical clearance had been granted by the Ethics Review Committee of the Regenesys Business School. Informed consent was obtained from all participants, and participation was on a voluntary basis. In addition, anonymity of respondents was ensured so as to protect them from victimisation.

TABLE 1: Demographic profile of the respondents.

Characteristics	Frequency	%
Gender		
Male	81	41.5
Female	114	58.5
Total	195	100.0
Age		
18–27 years	56	28.7
28–35 years	66	33.8
36–43 years	27	13.8
44–51 years	30	15.4
52–59 years	16	8.2
Total	195	100.0
Year of study		
First year	11	5.6
Second year	28	14.3
Third year	116	59.5
Fourth year	28	14.4
Postgraduate study	12	6.2
Total	195	100.0
Ethnicity		
African	140	71.8
Mixed race	29	14.9
White	9	4.6
Indian	17	8.7
Total	195	100.0

Research results

The results section focuses on the results of confirmatory factor analysis (CFA), hypothesis tests performed through SEM and discussions. The CFA is a unique type of factor analysis used to assess whether a construct's measurements are compatible with that construct's nature (Kline 2011). The SEM method is used to evaluate interactions between variables that are latent (unobservable) such as dependent and independent constructs (Bagozzi & Yi, 2012; Mafini & Loury-Okoumba, 2018).

Psychometric properties of measurement scales

The assessment of the measurement scales' psychometric properties was performed through a CFA to determine the constructs' reliability, validity and model fit. Table 2 presents the outcomes of the CFA assessment.

Reliability

In terms of reliability, the results provided in Table 2 indicate the range of the Cronbach σ obtained (0.807–0.912). These results exceeded the suggested reliability cut-off threshold of 0.70 suggested by Nunnally (1978), and in all cases, the results exceeded 0.80 across all the reported values on Cronbach's σ coefficient, which Bryman et al. (2017) posit as being a signal of acceptable internal consistency reliability.

TABLE 2: Psychometric properties of measurement scales.

Research construct	Variable	Cronbach's test		Factor loading	CR	AVE
		Item total	α value			
CSE	-	-	0.807	-	0.83	0.56
	CSE1	0.667	-	0.850	-	-
	CSE2	0.597	-	0.828	-	-
	CSE3	0.565	-	0.585	-	-
	CSE4	0.657	-	0.688	-	-
CE	-	-	0.912		0.81	0.46
	CE2	0.924	-	0.731	-	-
	CE3	0.901	-	0.572	-	-
	CE4	0.548	-	0.676	-	-
	CE5	0.922	-	0.770	-	-
	CE6	0.873	-	0.614	-	-
SPE	-	-	0.898	-	0.85	0.46
	SPE1	0.679	-	0.696	-	-
	SPE2	0.708	-	0.727	-	-
	SPE3	0.675	-	0.739	-	-
	SPE4	0.695	-	0.588	-	-
	SPE5	0.681	-	0.698	-	-
	SPE6	0.719	-	0.616	-	-
	SPE7	0.745	-	0.651	-	-
WR	-	-	0.904	-	0.92	0.53
	WR1	0.726	-	0.634	-	-
	WR3	0.742	-	0.720	-	-
	WR4	0.768	-	0.776	-	-
	WR5	0.775	-	0.719	-	-
	WR6	0.697	-	0.748	-	-
	WR7	0.712	-	0.603	-	-
	WR8	0.692	-	0.763	-	-
	WR9	0.745	-	0.711	-	-
	WR10	0.759	-	0.886	-	-

CSE, career self-efficacy; CE, career exploration; SPE, self-perceived employability; WR, work readiness; SD, standard deviation; CR, composite reliability; AVE, average variance extracted.

Table 2 shows the loading of each item on their particular construct. The lowest value for each respective item loading for the research constructs is 0.572. Therefore, all the individual item loadings exceeded the recommended value of 0.5 (Anderson & Gerbing, 1988). This indicates that all the measurement instruments are acceptable and reliable because all the individual items converged well and with more than 50% of each item's variance shared with its respective construct (Fraering & Minor, 2006).

Composite reliabilities (CRs) and average variance extracted (AVE) for each construct were also computed using the formulae proposed by Fornell and Larcker (1981, p. 22), that is:

$$CR\eta = (\Sigma\lambda yi)^2 / [(\Sigma\lambda yi)^2 + (\Sigma\varepsilon i)] \qquad \text{[Eqn 1]}$$

Where CRη is the CR, $(\Sigma\lambda yi)^2$ is the square of the summation of the factor loadings and $(\Sigma\varepsilon i)$ is the summation of error variances:

$$V\eta = \Sigma\lambda yi^2 / (\Sigma\lambda yi^2 + \Sigma\varepsilon i) \qquad \text{[Eqn 2]}$$

Where Vη is the AVE, $\Sigma\lambda yi^2$ is the summation of the square of factor loadings and $\Sigma\varepsilon i$ is the summation of error variances.

As shown from the results in Table 2, the lowest CR value of 0.81 (for the CE scale) is well above the recommended threshold of 0.6 (Hair, Jr., Black, Babin, & Anderson, 2018). Furthermore, Hair, Sarstedt, Hopkins and Kuppelwieser (2014, p. 106) concur with Fornell and Larcker (1981, p. 46) in stating 'an AVE of 0.5 or higher is a good rule of thumb suggesting adequate convergence'. As depicted in Table 2, CSE and WR had AVE values 0.56 and 0.53, respectively. This reflected the presence of convergent validity. An AVE of less than 0.5 indicated that, on average, more error remains in the items than variance explained by the latent factor structure imposed on the measure (Fornell & Larcker, 1981). Therefore, taking a strict interpretation, the AVE for CE and SPE falls below the 0.5 threshold. However, Cheung and Wang (2017) argued that convergent validity is supported when AVE is not significantly less than 0.5 and standardised loadings are not significantly less than 0.5. By and large, these results provided evidence for acceptable levels of research scale reliability (Chinomona & Chinomona, 2013; Chinomona & Mofokeng, 2016). Apart from confirming convergent validity, the correlation analysis further served to confirm the association and direction of the association between constructs. As shown in Table 3, the inter-construct correlations were positive and significant, ranging from $r = 0.337$ to $r = 0.761$. This result demonstrates that when the intensity of one construct increases, positive increases can be expected in the other constructs, and the reverse is also true. However, this result does not imply that the constructs predict each other; hence, the need to test the hypotheses using the path analysis technique.

Model fit analysis

According to Anderson and Gerbing (1988), model fit analysis is a process that assesses how well the data represent the model. In this study, model fit was tested using the following indices: chi-square/degrees of freedom, comparative fit index (CFI), incremental index (IFI), Tucker–Lewis index, normative fit index (NFI), goodness of fit (GFI) and random measure of standard error approximation (RMSEA). The acceptable thresholds should be equal to or higher than 0.90 for CFI, IFI, RFI, NFI, GFI and AGFI (Lysons & Farrington 2012). For chi-square/degrees of freedom a ratio of 3:1 or less is recommended, and RMSEA value should be equal to or less than 0.08 (Lysons & Farrington 2012). The general model fit indices for both the CFA and SEM models are presented in Table 4.

Outcome of Hypotheses testing

In this study, Hypothesis testing was determined by values of the path coefficient, as well as the p-values for the structural model. To determine the construct relationships, the researchers assessed the path coefficient values which are depicted from the structural model in Figure 2 and Table 5. Hypotheses are examined on the basis of those coefficients.

Outcome of testing Hypothesis 1

Hypothesis 1 states that 'career self-efficacy has a positive impact on WR of students'. Based on the results of the final model testing, the relationship between CSE and WR is statistically significant ($\beta = 0.318$, $p < 0.01$). This evidence shows that Hypothesis 1 is supported.

Outcome of testing Hypothesis 2

Hypothesis 2 asserts that 'career exploration has a positive impact on WR of students'. The final structural model

TABLE 3: Correlation matrix.

Research variables	CSE	CE	SPE	WR
CSE	1.000	-	-	-
CE	0.391**	1.000	-	-
SPE	0.764**	0.377**	1.000	-
WR	0.750**	0.337**	0.744**	1.000

CSE, career self-efficacy; CE, career exploration; SPE, self-perceived employability; WR, work readiness.
**, Correlation is significant at the 0.01 level (two-tailed).

TABLE 4: Model fit statistics.

Fit indices	Acceptable fit indices	CFA (measurement model)	SEM (structural model)
Chi-square/degrees of freedom (df)	< 3.0	1.425	1.391
Incremental fit index (IFI)	> 0.90	0.953	0.932
Tucker–Lewis index (TLI)	> 0.90	0.943	0.945
Comparative fit index (CFI)	> 0.90	0.959	0.969
Normative fit index (NFI)	> 0.90	0.921	0.951
Goodness of fit (GFI)	> 0.90	0.912	0.924
Root mean square error of approximation (RMSEA)	< 0.08	0.041	0.039

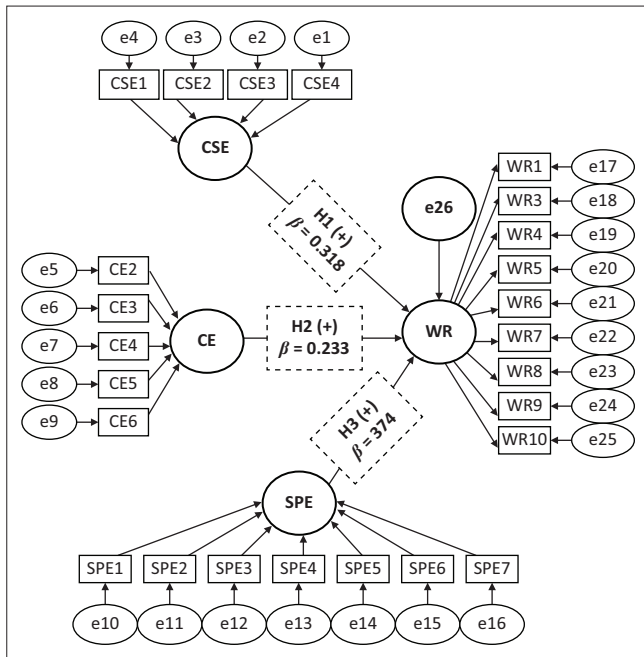CFA, confirmatory factor analysis; SEM, structural equation modelling.

FIGURE 2: Structural model.

TABLE 5: Summary of hypotheses testing.

Relationships	Hypothesis	Path coefficient	*p*	Remarks
WR ← CSE	H1	0.318	***	Supported
WR ← CE	H2	0.233	***	Supported
WR ← SPE	H3	0.374	***	Supported

CSE, career self-efficacy; CE, career exploration; SPE, self-perceived employability; WR, work readiness.

***, significance level *p* < 0.01.

presents a statistically significant path between CE and WR results (β = 0.233, *p* < 0.01). Thus, Hypothesis 2 is supported.

Outcome of testing Hypothesis 3

Hypothesis 3 states that 'self-perceived employability has a positive impact on WR of students'. Based on the results of the final model testing, the relationship between SPE and WR is statistically significant (β = 0.374, *p* < 0.01). This evidence shows that Hypothesis 3 is supported.

Discussion on findings

The results generated in this study led to several crucial findings. The association between CSE and WR was found to be positive and significant. The results of this study are also consistent with literature. For instance, Coetzee and Oosthuizen (2012) have described that self-efficacy is related to employability, the individual's self-confidence in their capabilities for obtaining employment. In addition, Niles and Sowa (1992) have alluded that CSE provides pertinent information in understanding the complex career development process. Niles and Sowa (1992) also supported the relationship between self-efficacy and WR, arguing that CSE has been found to be one of the best predictors of many beginning career behaviours, such as job searching. Past research further found that CSE beliefs do indeed have a

strong influence on CE and employment outcomes (Nasta, 2007). The testing of the relationship between CE and WR revealed a positive and significant relationship. The results obtained in this study are in line with the findings of Jepsen and Dickson (2003) who established CE as a precursor to career establishment. This is congruent with Makki et al. (2015) who found out that there is a positive and a significant association between CE and WR amongst engineering graduates in Malaysia.

The statistical analysis exposed that SPE has a positive impact on WR. In spite of the fact that the interest in employability is largely and relatively under-researched in the sense of any empirical investigation of what it actually means to individuals in the context of their experiences, their aspirations and their perceptions of their ability to compete in the external labour market, authors such as Taylor (2013), Hillage and Pollar (1998) and Rothwell and Arnold (2007), in their exploration, discovered that 'self-sufficiency' and 'employability' are those deep quality feelings of being secure and content with oneself, a deep-rooted sense of innermost wholeness and constancy, and the proficiency to exchange self-sufficiently within the labour market for one to realise their potential through justifiable employment. These findings are in accordance with Berntson, Sverke and Marklund (2006) as well as Rothwell and Arnold (2007), who investigated the positive effect of practices that procured considerable academic courtesy such as SPE, which are now correspondingly used in this research and well defined as the individual's view of precisely how desirable he or she is in obtaining new employment. The results of the study conducted by De Cuyper et al. (2011) and De Cuyper et al. (2014), for instance, revealed that SPE is largely alleged to boost an employee's work performance, and that employers seem keener on attracting and retaining remarkably skilled employees. The result obtained from testing this hypothesis is also in agreement with a survey conducted by the above authors (Berntson et al., 2006; De Cuyper et al., 2011, 2014; Hillage & Pollar, 1998; Rothwell & Arnold, 2007) who investigated the effect of SPE on WR. The research uncovered that SPE indeed has a significant role in rendering graduates more desirable to employers in the labour market as well as encouraging WR of these graduates.

Recommendations

Based on the analysis of the literature, and more specifically, in the light of the findings of the empirical research, the following recommendations are offered:

- Taking into consideration that CE had a positive impact on WR of students, it is recommended that students should be engaged with graduate capabilities on entry to university, using more case scenarios in curricula and linking students with industry representatives, as a standard practice in pedagogy. This will enhance WR.

- Although significant and positive relationships were found between CSE, CE, SPE and WR, the researchers suggest that this topic should be explored using a qualitative enquiry to further gain an understanding of the influence of CSE, CE and SPE on WR. In addition, further exploration is warranted to find out other factors that are instrumental in stimulating WR amongst students.
- There should be a broad, graduate-centred understanding of WR, whereby a fluid concept mandating curricula should be designed by universities with well-planned negotiations and interactions between universities, employers and students.
- It is important for academics and curriculum designers to better understand students' perspectives of WR because there is an assumption that academic skill sets are the same skill sets required in employment (Cavanagh et al., 2015).

Managerial implications

This study has several theoretical implications relevant to the body of knowledge. The study developed and empirically tested, for the first time, a model that explains how CSE, CE and SPE influence WR of students. This study has also brought a richer insight model to the academic body of knowledge through the structural equation model used in this study. The developed model explained a significant amount of variance in WR. Thus, the developed model validated several relationships between constructs in an emerging economy context.

On the practitioners' side, because higher education institutions are tasked with providing industry with graduates that are considered work ready, the findings of this study provide implications from which managers of institutions of higher learning can benefit. Given the robust relationship between SPE and WR, as indicated by a path coefficient of 0.374, administrators of institution of higher learning in South Africa should pay attention on building strategies that make students to perceive that they have what it takes to join the world of work (they are indeed employable) after they have obtained their qualifications. For instance, ensuring that experiential learning is involved in all the programmes that the students study, which is the process of learning through experience or learning through reflection on doing. This will be more advantageous to students who would like to evaluate themselves if indeed they are work ready.

Limitations and future research opportunities

Despite the germane insights offered by this study, this study had limitations that are expected to lead to future research. Although this study fills a gap in the academia, it should be noted that this study only focused on one institution, which is Regenesys Business School. Therefore, the discoveries from this examination probably cannot be generalisable to students at other South African institutions of higher learning given the comparatively small student sample used and the investigation's core interest in a solitary university. Therefore, future examinations ought to coordinate students from other institutions to expand the representativeness of the sample. In conclusion, the examination's quantitative character may have prompted the disregard of more illuminating and more extravagant information, which a qualitative methodology could have created had it been converged in the investigation.

Acknowledgements

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