

Vocational identity and work engagement: The mediating effect of career adaptability



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Orientation: Given that freelancers work for multiple clients for varying periods, it is their responsibility to enhance their own levels of work engagement. For organisations to benefit from the use of freelancers, they need to ensure that freelancers utilise emotional, cognitive and physical energies in completing their work to become engaged.

Research purpose: This study set out to examine: (1) the influence of freelancers' vocational identity and career adaptability on their work engagement and (2) whether career adaptability mediates the relationship between vocational identity and work engagement.

Motivation for the study: The study posited that vocational identity and career adaptability function as resources aiding freelancers to enhance their work engagement levels.

Research approach/design and method: Using a quantitative, cross-sectional approach, we examined 124 freelancers' vocational identity, career adaptability and work engagement. Mediation analysis guided the evaluation of hypotheses.

Main findings: Results revealed a significant positive relationship between vocational identity and work engagement. Interestingly, only the control dimension of career adaptability showed a significant positive link with work engagement. The control dimension of career adaptability partly mediated the direct link between vocational identity and work engagement.

Practical/managerial implications: Practically, freelancers seem to employ both their vocational identity and career control to enhance their levels of work engagement. Suggesting that a freelancer's work engagement is contingent upon the extent to which they can express their preferred self in their work and their perceived control over their futures.

Contribution/value-add: This study advances the current understanding of the factors that influence freelancers' work engagement.

Keywords: vocational identity; career adaptability; work engagement; freelancers.

Introduction

The arrival of industry 4.0 is reshaping the world in which we live, how we relate to one another and work (Parashar et al., 2023). Industry 4.0 can be defined as a period of radical and disruptive change, characterised by increased interaction and collaboration between humans and smart technology (Calitz et al., 2017), significant data-exchange technological developments resulting in increased automation and digitisation (Schwab, 2017), and the merging of biological, digital and physical domains (Butler-Adam, 2018). Industry 4.0 will ultimately result in large-scale, fundamental changes to work structures and the way work is conducted (Brynjolfsson & McAfee, 2014). An example of this can be seen in the rise of the 'gig economy'.

The gig economy typically involves the short-term transaction of labour for monetary gain, which is actively promoted through the increased utilisation of online platforms (Broughton et al., 2018). Hence, the gig economy can also be described as a free market system in which crowd work and on-demand labour is performed on a contingent basis, facilitated through digital platforms that connect contingent workers and clients (De Stefano, 2016). Thus, the gig economy consists of two broad classifications of labour, namely crowd work and on-demand labour. According to Bergvall-Kåreborn and Howcroft (2014), crowd work can be defined as performing a series of tasks for various organisations on digital platforms, while De Stefano (2016) indicates that on-demand labour through digital platforms involves individuals doing physical work

(such as cleaning, transportation, deliveries, fixing things and administrative tasks) for clients who utilise digital platforms (apps) to identify willing workers and to facilitate the work process.

Within the gig economy, an increasing number of freelancers utilise digital platforms or advances in technology (such as telecommuting) to render services to multiple organisations (Kuhn, 2016). Burke and Cowling (2020) define freelancers as people who earn an income or extra money by simultaneously working on different projects for different organisations or people for short periods. Freelancers are exposed to various advantages and disadvantages when performing work and providing services in the gig economy. According to Broughton et al. (2018), advantages may include: increased flexibility and autonomy regarding the scheduling of work hours; deciding how to perform work and whether to accept or decline certain projects; the ability to earn a primary or a secondary source of income; being better able to balance work and other commitments, such as studying or taking care of children and the ability to explore other interests and abilities, develop skills and gain experience. Individuals can also shape their own careers and are not forced to engage in workplace politics. Lastly, the freedom to travel and work remotely from any location (i.e. when performing crowd work).

Additionally, Broughton et al. (2018) indicate the following disadvantages: Lack of security regarding fixed income and the shortage of work opportunities, which are experienced more intensely by individuals who perform gig work as a primary source of income. Insufficient labour legislation regarding gig workers' basic conditions of employment (such as working hours and minimum wage rates), which could result in exploitation. Poor pay that may be less than the standard minimum wage, especially concerning on-demand labour as it is highly price competitive and most tasks requested are low-skilled tasks. Lack of retirement and benefit packages, such as medical aid. Loneliness and increased social isolation. Lastly, individuals are expected to manage their own careers, training and development.

Based on the advantages and disadvantages mentioned above, freelancers operating in the gig economy can be equated to having a protean career. Protean careers can be characterised by a person's propensity to autonomously manage their career so that they can achieve personally defined career success (DiRenzo et al., 2015). A protean career orientation can be described as employees' mindsets in how they direct the development of their careers (Hirschi et al., 2017). A protean careerist values continuous learning and directs their career based on personal goals and values (Briscoe et al., 2006; Hall, 2002). As such, employees with this orientation subjectively measure the success of their careers based on the achievement of personal goals (Hall, 2002). According to Hirschi et al. (2017), the construction of a protean career requires the presence of certain behaviours

and attitudes, such as career adaptability and positive vocational identity statuses.

Aims and objectives

With today's world of work being characterised by a high degree of volatility, uncertainty, complexity and ambiguity (VUCA) (Bennett & Lemoine, 2014), it is imperative for workers to take ownership of their careers and have a greater sense of self-direction and adaptability if they wish to navigate this career landscape successfully and not just be passive recipients of it (Hall et al., 2018). In the aftermath of the coronavirus disease 2019 (COVID-19) pandemic, with an unprecedented rise in unemployment rates and increased participation in the gig economy (Umar et al., 2021), it is vital to understand how freelancers identify with their careers, adapt to the changing nature of it and how this influences their level of work engagement to enable freelancers to embrace and sustainably navigate and participate successfully in the gig economy.

It should be noted that Berger et al. (2018) indicated a need for more research regarding employees' experience of alternative work arrangements. Kuhn (2016) also identified the need for more research surrounding freelancers, as an underrepresented group in previous research, and the gig economy's impact on these individuals who are expected to fuel it.

Therefore, the aims of the present study were to investigate the influence of freelancers' levels of vocational identity on their levels of work engagement and the mediating effect of career adaptability on this relationship.

Literature review

Work engagement and the Job Demands-Resource Theory

The Job Demands-Resources (JD-R) theory provides guidance in understanding and explaining the influence of several variables on individual performance via well-being (i.e. burnout and engagement) (Bakker et al., 2023). More specifically, the JD-R theory suggests that individuals experience work demands in the execution of their duties. When individuals have enough resources to deal with job demands, they are more likely to experience work engagement (Bakker et al., 2023). According to Schaufeli and colleagues (2002), work engagement is described as an affirmative, satisfying, working-related state of mind defined by vigour, dedication and absorption (Schaufeli et al., 2002). Having access to resources (personal and/or organisational) activates a motivational process that influences employees' levels of work engagement and subsequently work performance (Bakker et al., 2023).

Work engagement among freelancers

Given that freelancers work for multiple clients for varying periods, it is their responsibility to enhance their own

levels of work engagement. For organisations to benefit from the use of freelancers, they need to ensure that they can utilise emotional, cognitive and physical energies in completing their work to become engaged (Shukla & Shaheen, 2023).

Toth et al. (2021) investigated the relationship between entrepreneurial passion and work engagement among knowledge workers. They found that digital entrepreneurs and freelancers had higher levels of work engagement compared to traditional workers, which was rationalised through the JD-R Model. Toth et al. (2021) reason that digital entrepreneurs and freelancers who possess increased entrepreneurial passion require an increased sense of challenge in their work (i.e. job demands) to enhance overall work engagement. Horrigan (2022) conducted a qualitative study of American freelancers amidst the COVID-19 pandemic and indicated that American information technology (IT) freelancers experienced similar work engagement levels as the general working population. Horrigan (2022) cites reasons such as fatigue by work environment and complacency and comfort as detrimental to work engagement, whereas enthusiasm for work challenges and control over the personal work environment are beneficial to work engagement to justify the findings.

Vocational identity

Vocational identity refers to an individual's clarity and stability regarding their personal talents, interests, personality, career goals and objectives (Holland, 1997). Vocational identity could also refer to how people construct their work journey and make work choices based on personal interests, goals and values, which are continuously shaped by external factors (Klotz et al., 2014). Furthermore, according to Klotz et al. (2014), vocational identity guides workers' practices and offers them a renewable source of internal motivation that promotes vocational engagement. Porfeli et al. (2011) state that vocational identity is comprised of three dimensions (i.e. commitment, exploration and reconsideration of commitment). Each dimension consists of two distinct components:

Commitment: consists of commitment making (i.e. the degree of conviction regarding a chosen career decision which is significant to a person) and identification with commitment (i.e. how a person devotes themselves to certain values and career decisions made).

Exploration: contains both in-breadth exploration (which involves actions taken by an individual that facilitates learning about values and career possibilities) and in-depth exploration (that involves actions that create better understanding of certain values and occupational choices).

Reconsideration of commitment: comprised of self-doubt (i.e. the negative feelings experienced when making career decisions) and commitment flexibility (i.e. a person's freedom

and willingness to embrace new changes based on occupational choices and preferences).

Cropanzano and colleagues (2023) are of the opinion that the development of a work identity becomes crucial for freelancers given the fact that working for multiple organisations may influence the identity they have of themselves. Anicich (2022) further argues that it is possible that alternative work arrangements (such as gig work) may create challenges for such individuals to develop their work identities.

Vocational identity and work engagement

Limited empirical research has been conducted that investigated the above relationship between vocational identity and work engagement. One notable exception is the work done by Loebel (2020) who investigated the relationship between vocational identity and both work engagement and burnout in a sample of American adults. It should be noted that Loebel investigated the relationship between vocational identity and work engagement to expand the JD-R model viewing vocational identity as a personal resource. He found that vocational identity was significantly (and positively) related to work engagement and significantly (and negatively) related to burnout.

From a career identity perspective, it is suggested that individuals with a strong career identity are more inclined to put in effort when completing work-related task, including dealing with feedback (Sun et al., 2022). Career identity and vocational identity are considered synonymous (Meijers, 1998). Researchers found that career identity is significantly related to work engagement in a sample of nurses in China. Career identity also mediated the relationship between resilience and work engagement (Meng et al., 2023).

Similarly, occupational identity facilitates the direction of an individual's career, provides them with meaning and increases their coping abilities when faced with challenges. It allows them to do work that reflects their strengths, interests, preferences and goals (Skorikov & Vondracek, 2011).

It can therefore be concluded that individuals who make important and meaningful career decisions, are confident about their decisions and devote themselves to their chosen careers are expected to feel elevated levels of work engagement. Whereas individuals who are still learning about their career interests and are continuously discovering new career options are expected to feel reduced levels of work engagement:

H1: Vocational identity is significantly related to work engagement.

Career adaptability

Career adaptability can be regarded as an individual's willingness to handle work roles while successfully

navigating unpredictable work challenges that may arise due to the changing nature of work and work environments (Rudolph et al., 2017). Career adaptability can also be described as a person's eagerness and utilisation of coping resources to openly embrace new career plans (Duffy & Blustein, 2005).

Super and Knasel (1981) viewed career adaptability as a person's preparation and capacity to handle work changes, which Herr (1992) expanded to include dimensions of reality orientation, planfulness, exploration, decision making and access to information. In addition, Duffy and Blustein (2005) found that adolescents' career adaptability could be predicted based on their career decision self-efficacy (i.e. one's confidence regarding their career decisions) and career choice commitment (i.e. one's commitment to career decisions made).

Savickas (2005) defines career adaptability as a psychosocial resource that helps people to navigate evolving work environments successfully by promoting career concern, control, curiosity and confidence. Although there are multiple definitions and dimensions proposed for career adaptability, this research article will adopt the definition and dimensions proposed by Savickas (2005). This decision is based on Duffy and Blustein's (2005) dimensions being found to not encapsulate the full scope of career adaptability in adolescents, and Savickas's (2005) dimensions being seen as acceptable for both adults and adolescents because it does not distinguish between the different career changes that these distinctive groups face, such as in the dimensions indicated by Super and Knasel (1981).

Career adaptability and work engagement

Both local (Coetzee, 2017; Louis, 2021; Tladinyane & Van der Merwe, 2016) and international (Rossier et al., 2012; Yang et al., 2019) studies have investigated the relationship between career adaptability and work engagement.

In a sample of employees in the South African insurance industry, Tladinyane and Van der Merwe (2016) found a significant relationship between career adaptability and work engagement. Similarly, Coetzee and colleagues (2017) found that career confidence (a component of career adaptability) was a significant predictor of work engagement in a sample of individuals employed in the media industry. More recently, Louis (2021) again found support for the relationship between career adaptability and work engagement among a sample of South African millennials.

Rossier and colleagues (2012) found that career adaptability mediated the relationship between personality and work engagement. Yang and colleagues (2019) also found career adaptability significantly predicted work engagement. They concluded that career adaptability allows individuals to engage and focus on their work, making it easier to experience positive emotions. This is in line with Savickas and Porfelli's

(2012) view that career adaptability allows individuals to use it as a resource in developing adaptive strategies to successfully adapt their goals to deal with a changing environment:

H2: Career adaptability is significantly related to work engagement.

Career adaptability as a mediator in the relationship between vocational identity and work engagement

As indicated by Savickas (2019), vocational identity and career adaptability are two meta-competencies used to construct a career in career construction theory (CCT), as it informs individuals about when to change careers and indicates the individual's readiness to undergo such career transitions. These two constructs are related (Savickas, 2011), with a positive reciprocal relationship (Negru-Subtirica et al., 2015) – career adaptability predicts vocational identity. In turn, vocational identity predicts career adaptability indicating that vocational identity and career adaptability are two significant and interconnected dimensions of career development (Negru-Subtirica et al., 2015). Career identity thus provides the direction for an individual's career (Hall, 2002; Savickas, 2002 as cited by Haibo et al., 2018), assisting the individual to know when change is needed (Hall, 2002; Porfeli & Savickas, 2012 as cited by Haibo et al., 2018).

Studies by McArdle et al. (2007) and Negru-Subtirica et al. (2015) indicate that individuals who possess strong vocational identities have more career adaptability resources and experience increased subjective career success. In addition, Marinica and Negru-Subtirica (2020) indicate that a strong vocational identity leads to more adaptive behaviours. Moreover, career adaptability is positively associated with increased life satisfaction and overall work engagement (Rudolph et al., 2017). Career adaptability has also been previously identified as a mediator in explaining the mechanism through which work engagement is influenced (Yoo & Lee, 2019). For example, the study by Yoo and Lee (2019) demonstrated career adaptability as a mediator in the relationship between core self-evaluation and work engagement.

Therefore, an individual's level of vocational exploration and commitment (i.e. vocational identity) influences their career adaptability – based on their proactive planning for their career (concern), belief that they are personally responsible for constructing their career (control), willingness to discover their personal interests and career options (curiosity) and self-efficacy regarding the construction and execution of a desired career plan (confidence) – which ultimately affects individual's levels of work engagement. Hence, vocational identity directs the individual's efforts in choosing appropriate adaptive strategies. Enabling them to know what and when change is needed in their careers to enhance their levels of work engagement:

H3: Career adaptability mediates the relationship between vocational identity and work engagement.

Research design

Research method

To investigate the three hypotheses, the present study opted for a quantitative, cross-sectional research design. A quantitative research design is characterised by the systematic gathering and analysis of numerical information using statistical techniques (Ochieng, 2009). A cross-sectional survey design is often used to provide a 'snapshot' of a phenomenon of interest and its associated characteristics at a single moment in time (Levin, 2006).

Participants

To determine the required sample size for the present study, Faul et al.'s (2007) G*power statistical software was used. Based on the *priori* calculation ($\eta^2 p = 0.15$ with 80% power), a minimum sample of 68 was considered suitable. As such, data were collected from 124 individuals that identified themselves as freelancers using a convenience sampling design. More specifically, these individuals had to perform work for various organisations on a task or project basis and are recruited independently or through digital platforms. Therefore, this research study selected a sample of participants who met the following stipulated conditions: (1) the participants had to be able to understand the English language so that they were able to comprehend the research survey and respond accordingly and (2) they had to have performed some form of freelance work in terms of full-time and/or part-time freelancing or moonlighting as a freelancer.

The majority of the sample identified as female (61%). In terms of ethnicity, the majority of the sample identified as white people (51%) followed by 28% identifying as black African people. Most of the participants performed contract work (34%) and identified as being self-employed (25%). Lastly, 36% of the sample have been working as freelancers for less than 5 years, with 17% of the sample having been working as freelancers between 5 and 10 years. Interestingly, 68% of the sample indicated that they use online platforms to advertise their freelancing services.

Measuring instruments

Utrecht Work Engagement Scale: Developed by Schaufeli et al. (2006), the Utrecht Work Engagement (UWES-9) item comprises of three dimensions (i.e. vigour, dedication and absorption) of which each dimension is measured by three items. This instrument contains items such as 'At my work, I feel that I am bursting with energy' for vigour, 'I feel happy when I am working intensely' for dedication, and 'I am immersed in my work' for absorption. It further utilises a frequency rating scale with seven points, where 0 indicates 'never' and 6 indicates 'always'. In addition, De Bruin and Henn (2013) indicate that across 10 different countries, the

UWES-9 reported Cronbach's alphas (∞) that ranged between 0.85 and 0.92 for total work engagement, while its dimensions vigour (median ∞ of 0.77), dedication (median ∞ of 0.85) and absorption (median ∞ of 0.78) also reported satisfactory reliability scores. Convergent validity was also found between the three dimensions (De Bruin & Henn, 2013). Similarly, Steyn and Grobler (2016) reported a Cronbach alpha ranging from 0.90 to 0.92.

Vocational Identity Measure: The Vocational Identity Measure (VIM), created by Gupta et al. (2015), is a unidimensional measure that determines an individual's vocational identity based on how aware they are of their career aspirations. This measure was derived from Holland's (1996) definition of vocational identity, which describes vocational identity as an individual's goals, interests and abilities regarding their career. As indicated by Gupta et al. (2015), the VIM has 20 items that utilise a 5-point Likert scale for responses, with 1 indicating 'strongly disagree' and 5 indicating 'strongly agree'. Examples of typical scale items include: 'It is clear to me what I want to do for a living and that I have the right abilities to do well in it', 'I have a clear sense of my occupational interests', and 'I have a pretty good sense of what type of work I enjoy doing'. Furthermore, the VIM has a Cronbach's alpha (∞) of 0.96, indicating strong internal reliability within the scale (Gupta et al., 2015).

Career Adapt-Abilities Scale (South African Version): The CAAS (South African Version) comprises four scales (with six items each) that measure concern, control, curiosity and confidence, where respondents are expected to use a 5-point Likert-type scale to express how strongly they have developed the indicated abilities, with 1 indicating 'not strong' and 5 indicating 'strongest'. Examples of scale items include: 'Thinking about what my future will be like' for concern, 'Making decisions by myself' for control, 'Investigating options before making a choice' for curiosity and 'Performing tasks efficiently' for confidence. The CAAS has also been validated for use in 13 countries around the globe, including South Africa (Porfeli & Savickas, 2012). According to Maree (2012), the CAAS-International yields a 0.92 Cronbach alpha (∞), while its sub-scales indicate lower reliability scores of 0.83 for concern, 0.74 for control, 0.79 for curiosity and 0.85 for confidence. Furthermore, the CAAS-South Africa has a 0.91 Cronbach's alpha (∞) and the following reliability scores for its sub-scales: 0.77 for concern, 0.71 for control, 0.78 for curiosity and 0.80 for confidence (Maree, 2012).

Data analysis

Cronbach's alpha was used to determine the reliability of the measuring instruments and their associated sub-dimensions. According to Cortina (1993), Cronbach's alpha shows the internal reliability of psychometric measures based on the covariance among item-pairs, the number of test items and the variance of the total test scores.

A coefficient of 0.70 is considered acceptable (Carmines & Zeller, 1979). Construct validity is evidenced by the average variance extracted with a minimum value of 0.5 (Henseler et al., 2009). Mediation analysis was used to evaluate the three hypotheses.

To determine possible mediation, both the direct and indirect effects need to be consulted. Partial mediation would be present when both the direct and indirect effects are statistically significant ($p < 0.05$). In contrast, full mediation will be present when the direct effect is statistically non-significant, with the indirect effect being statistically significant. The JASP software programme was used for all the analyses.

Ethical considerations

Ethical clearance to conduct this study was obtained from the University of Johannesburg Department of Industrial Psychology and People Management Research Ethics Committee (No. IPPM-2020-423[M]) prior to data collection. The link to the survey was shared via social media (LinkedIn) and with the help of two associations that provide platforms for freelancers in South Africa.

Results

The reliability estimates of the measuring instruments are reported in Table 1. All the measuring instruments have reliability estimates ranging between 0.83 and 0.95.

From Table 2, it is evident that the path coefficient between career adaptability and work engagement is not statistically significant. However, the path coefficients between vocational identity and career adaptability as well as vocational identity and work engagement are statistically significant. This model explained 29% of the variance in

work engagement. The indirect effect is also not statistically significant (see Table 3).

Given these findings related to career adaptability, the present study explored which of the dimensions associated with career adaptability could act as possible mediators (using a revised model).

As can be seen in Table 4, the analysis of the revised model revealed the following insignificant path coefficients: concern and work engagement, curiosity and work engagement, confidence and work engagement. Given that the direct effect was statistically significant ($p = 0.000$) (see Table 5), the present study found that career adaptability (and more specifically the control component) partially mediates the relationship between vocational identity and work engagement (see Table 6). Hence, H3 was partially supported. This revised mediational model (with each of the components of career adaptability as possible mediators) explained 36% of the variance in work engagement.

Discussion of results

The positive relationship between vocational identity and work engagement is consistent with other research studies (Hirschi, 2012; Loebel, 2020; Popova-Nowak, 2010). The relationship between vocational identity and work engagement can be understood in terms of Kahn's (1990) conceptualisation of work engagement as being dependent on the congruence between an individual's work role and the expression of their preferred self in that role (Loebel, 2020; Popova-Nowak, 2010). This understanding of the relationship between vocational identity and work engagement also supports the notion that vocational identity predicts work engagement, as demonstrated in the research

TABLE 1: Reliability estimates.

Variable	Cronbach's Alpha	Number of items
Work Engagement (UWES-9)	0.94	9
Vocational Identity (VIM)	0.95	20
Career adaptability	0.85	24
Concern (CAAS)	0.83	6
Control (CAAS)	0.84	6
Curiosity (CAAS)	0.89	6
Confidence (CAAS)	0.86	6

UWES-9, Utrecht work engagement scale; VIM, vocational identity measure; CAAS, career adapt-abilities scale.

TABLE 2: Path coefficients: Original Model (ML).

Conceptual model	Estimate	SE	z-value	p
CA → WE	0.11	0.10	1.10	0.274
VI → CA	1.11	0.11	10.02	0.000
VI → WE	0.76	0.17	4.52	0.000

SE, standard error; CA, career adaptability; WE, work engagement; VI, vocational identity.
*, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

TABLE 3: Indirect effect: Original Model (ML).

Conceptual model	Estimate	SE	z-value	p
VI → CA → WE	0.12	0.11	1.09	0.276

SE, standard error; CA, career adaptability; WE, work engagement; VI, vocational identity.

TABLE 4: Path coefficients: Revised Model (ML).

Conceptual model	Estimate	SE	z-value	p
CON → WE	-0.11	0.11	-1.00	0.317
CONT → WE	0.38	0.12	3.16	0.002
CUR → WE	-0.16	0.12	-1.34	0.182
CONF → WE	0.05	0.12	0.43	0.666
VI → CON	1.04	0.12	8.99	0.000
VI → CONT	1.04	0.12	9.02	0.000
VI → CUR	0.92	0.12	7.46	0.000
VI → WE	0.92	0.12	7.40	0.000

SE, standard error; CA, career adaptability; WE, work engagement; VI, vocational identity; CON, concern; CONT, control; CUR, curiosity; CONF, confidence.

TABLE 5: Direct effect: Revised Model (ML).

Conceptual model	Estimate	SE	z-value	p
VI → WE	0.70	0.17	4.14	0.000

SE, standard error; WE, work engagement; VI, vocational identity.

TABLE 6: Specific indirect effects: Revised Model (ML).

Conceptual model	Estimate	SE	z-value	p
VI → CON → WE	-0.11	0.11	-1.00	0.320
VI → CONT → WE	0.40	0.11	2.99	0.003
VI → CUR → WE	-0.14	0.11	-1.31	0.189
VI → CONF → WE	0.05	0.11	0.43	0.667

SE, standard error; WE, work engagement; VI, vocational identity; CON, concern; CONT, control; CUR, curiosity; CONF, confidence.

findings. Popova-Nowak (2010) indicates that individuals who become engaged in the work that they are doing contribute to their increased vocational identity through the process of meaning making. Therefore, a freelancer's work engagement can be considered dependent on the amount of meaning that they derive from their work and the extent to which they can express their preferred self (i.e. vocational identity) in the work that they perform.

The finding that the control dimension of career adaptability is only statistically significant with work engagement is contradictory to most previous research studies, which found that the confidence dimension of career adaptability is the most strongly associated career adaptability dimension with work engagement (Merino-Tejedor et al., 2016; Rossier et al., 2012; Tladinyane & Van der Merwe, 2016). The samples observed during these research studies included Spanish university students (Merino-Tejedor et al., 2016), a French-speaking Swiss sample (Rossier et al., 2012) and adults employed in an insurance company (Tladinyane & Van der Merwe, 2016). However, all three studies indicated that the strong association between confidence and work engagement could be attributed to certain work engagement dimensions such as vigour (persistence in the face of difficult tasks) being more aligned to confidence (in terms of self-efficacy to solve difficult career challenges) as well as increased self-efficacy beliefs, which lead to better goal achievement and work engagement (Rudolph et al., 2017). Therefore, it can be understood that when a freelancer takes control of their career, their career adaptability affects their work engagement.

It was expected that career adaptability mediates the relationship between vocational identity and work engagement. This can be understood in terms of the CCT, which highlights the interrelationship between vocational identity and career adaptability. As indicated by Ebenehi et al. (2016), the CCT suggests that vocational identity guides individuals' careers and promotes the development of career adaptability. Although career adaptability is positively associated with overall work engagement (Rudolph et al., 2017), it was found that the control component of career adaptability mediates the relationship between vocational identity and work engagement. Given that the path coefficient between vocational identity and work engagement was statistically significant, the mediating effect was only deemed partial. As this was one of the first studies of its kind to explore the relationship between vocational identity, career adaptability and work engagement, the partial mediating effect between vocational identity and work engagement cannot be compared to existing results. However, it has been determined that vocational identity is positively associated with career adaptability and that vocational identity predicts work engagement, while the control component of career adaptability is associated with work engagement. Hence, it can be concluded that vocational identity influences work engagement through the control sub-dimension of career adaptability.

Practical implications

Given that vocational identity was found to be significantly related to work engagement, it is imperative for freelancers to initially establish a clear and stable understanding of their career interests, values and abilities through extensive career exploration and ultimately committing to their chosen career (Marcia, 1993). A strong vocational identity will act as a compass to guide freelancers to pursue work in the gig economy that they enjoy, enabling freelancers' expression of their preferred self in the work context and allowing them to derive a great sense of meaning from the work that they perform, ultimately resulting in work engagement (Loebel, 2020; Popova-Nowak, 2010). Moreover, a strong vocational identity will assist freelancers to maintain their work engagement by adapting to changing life events and to revise their identity narrative so that they can identify and develop opportunities to match their career interests and goals during career transitions (Savickas, 2012).

From the findings, it can be seen that it is necessary for freelancers to increase their career adaptability to achieve and maintain their work engagement. As indicated by Savickas (2005), this can be achieved through planning for their future (concern), taking responsibility for building their careers (control), exploring career interests and opportunities in their field (curiosity) and believing in their ability to execute desired career plans (confidence). By focusing on their career adaptabilities, especially the control dimension, freelancers can ensure that they are ready and able to navigate career challenges and changes successfully to achieve and maintain their work engagement.

Specific emphasis should be given to teach individuals how to take control of their careers and how to shape themselves and their work environments to encourage individuals to create their own career and work opportunities by freelancing in the gig economy (Savickas, 2005). Furthermore, taking control of one's career to achieve personally defined career success will enable individuals to adopt a protean career mindset and to willingly enter and participate in the gig economy as freelancers (Hirschi et al., 2017), resulting in increased work engagement. Additionally, increased vocational identity and heightened career adaptabilities will predispose individuals operating in the gig economy to achieve work engagement and ultimately to a chosen career in the gig economy.

Limitations and recommendations

Given the relatively small sample, this could have influenced the present study's ability to find support for mediation. Future researchers would do well to replicate the present study with a much bigger sample. However, given the nature of freelancing, it may be challenging to identify individuals who are performing freelance work in the gig economy.

Spreitzer and colleagues (2017) suggest that it is worthwhile to investigate freelancers' perceptions regarding the flexibility of the employment relationship. Two of the questions may be relevant to the present study: What is their

professional identity? How do they think about career development? (pp. 486–487).

Conclusion

In conclusion, this study examined the links between vocational identity, career adaptability and work engagement of freelancers in the gig economy. The results revealed significant path coefficients between vocational identity and career adaptability, as well as vocational identity and work engagement. Of all the career adaptability components, control was found to partially mediate the vocational identity and work engagement relationship. The outcomes of this study suggest that vocational identity works independently and through the control sub-dimension to influence freelancers' levels of work engagement.

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Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

V.N. was responsible for the data-gathering, writing of the draft article, project administration and obtaining the necessary resources and writing of the discussion and conclusion. T.M. was involved in the conceptualisation of the research and the review and editing of the article and supervision. P.N. was responsible for the conceptualisation of the research, methodology, data analysis and writing of the discussion, conclusion and supervision.

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Data availability

The authors confirm that the data supporting the findings of this study are available within the article.

Disclaimer

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References

Anicich, E.M. (2022). Flexing and floundering in the on-demand economy: Narrative identity construction under algorithmic management. *Organizational Behavior and Human Decision Processes*, 169. <https://doi.org/10.1016/j.obhdp.2022.104138>

Bakker, A.B., Demerouti, E., & Sanz-Vergel, A. (2023). Job demands–resources theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10, 25–53. <https://doi.org/10.1146/annurev-orgpsych-120920-053933>

Bennett, N., & Lemoine, G.J. (2014). What a difference a word makes: Understanding threats to performance in a VUCA world. *Business Horizons*, 57(3), 311–317. <https://doi.org/10.1016/j.bushor.2014.01.001>

Berger, T., Frey, C.B., Levin, G., & Danda, S.R. (2018). Uber happy? Work and well-being in the 'gig economy'. *Economic Policy*, 34(99), 429–477. <https://doi.org/10.1093/epolic/eiz007>

Bergvall-Kåreborn, B., & Howcroft, D. (2014). Amazon mechanical turk and the commodification of labour. *New Technology, Work and Employment*, 29(3), 213–223. <https://doi.org/10.1111/ntwe.12038>

Briscoe, J.P., Hall, D.T., & Frautschy DeMuth, R.L. (2006). Protean and boundaryless careers. *Journal of Vocational Behavior*, 69(1), 30–47. <https://doi.org/10.1016/j.jvb.2005.09.003>

Broughton, A., Gloster, R., Marvell, R., Green, M., Langley, J., & Martin, A. (2018). *The experiences of individuals in the gig economy*. Institute of Employment Studies.

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. Norton.

Burke, A., & Cowling, M. (2020). The relationship between freelance workforce intensity, business performance and job creation. *Small Business Economics*, 55, 399–413. <https://doi.org/10.1007/s11187-019-00241-x>

Butler-Adam, J. (2018). The fourth industrial revolution and education. *South African Journal of Science*, 114(5–6), 1–1. <https://doi.org/10.17159/sajs.2018/a0271>

Calitz, A.P., Poizat, P., & Cullen, M. (2017). The future African workplace: The use of collaborative robots in manufacturing. *SA Journal of Human Resource Management*, 15, 1–11. <https://doi.org/10.4102/sajhrm.v15i0.901>

Carmines, E.G., & Zeller, R.A. (1979). *Reliability and validity assessment*. Sage.

Coetzee, M. (2017). Psychosocial career preoccupations and employability capacities in the work context. In M. Tomlinson, & L. Holmes (Eds.), *Graduate employability in context: Research, theory and debate* (pp. 295–316). Palgrave MacMillan.

Coetzee, M., Ferreira, N., & Shunmugum, C. (2017). Psychological career resources, career adaptability and work engagement of generational cohorts in the media industry. *SA Journal of Human Resource Management/Tydskrif vir Menslikehulpbronbestuur*, 15, 1–12. <https://doi.org/10.4102/sajhrm.v15i0.868>

Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98–104. <https://doi.org/10.1037/0021-9010.78.1.98>

Cropanzano, R., Keplinger, K., Lambert, B.K., Caza, B., & Ashford, S.J. (2023). The organizational psychology of gig work: An integrative conceptual review. *Journal of Applied Psychology*, 108(3), 492–519. <https://doi.org/10.1037/apl0001029>

De Bruin, G.P., & Henn, C.M. (2013). Dimensionality of the 9-item Utrecht work engagement scale (UWES-9). *Psychological Reports*, 112(3), 788–799. <https://doi.org/10.2466/01.03.PRO.112.3.788-799>

De Stefano, V. (2016). *The rise of the 'just-in-time workforce': On-demand work, crowdwork and labour protection in the 'gig-economy'*. Conditions of work and employment series, No. 71. International Labour Office.

DiRenzo, M.S., Greenhaus, J.H., & Weer, C.H. (2015). Relationship between protean career orientation and work-life balance: A resource perspective. *Journal of Organizational Behavior*, 36(4), 538–560. <https://doi.org/10.1002/job.1996>

Duffy, R.D., & Blustein, D.L. (2005). The relationship between spirituality, religiousness, and career adaptability. *Journal of Vocational Behavior*, 67(3), 429–440. <https://doi.org/10.1016/j.jvb.2004.09.003>

Ebenehi, A., Rashid, A., & Bakar, A. (2016). Predictors of career adaptability skill among higher education students in Nigeria. *International Journal for Research in Vocational Education and Training*, 3(3), 213–227. <https://doi.org/10.13152/IJRVET.3.3.3>

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175–191. <https://doi.org/10.3758/BF03193146>

Gupta, A., Chong, S., & Leong, F.T. (2015). Development and validation of the vocational identity measure. *Journal of Career Assessment*, 23(1), 79–90. <https://doi.org/10.1177/1069072714523088>

Hall, D.T. (2002). *Careers in and out of organizations*. Sage.

Hall, D.T., Yip, J., & Doiron, K. (2018). Protean careers at work: Self-direction and values orientation in psychological success. *Annual Review of Organizational Psychology and Organizational Behavior*, 5, 129–156. <https://doi.org/10.1146/annurev-orgpsych-032117-104631>

Henseler, J., Ringle, C.M., & Sinkovics, R.R. (2009). The use of partial least squares path modeling in international marketing. In R.R. Sinkovics, & P.N. Ghauri (Eds.), *New challenges to international marketing: Advances in international marketing* (Vol. 20, pp. 277–319). Emerald Group Publishing Limited.

Herr, E.L. (1992). Counseling for personal flexibility in a global economy. *Educational and Vocational Guidance*, 53, 5–16.

Hirschi, A. (2012). Vocational identity trajectories: Differences in personality and development of well-being. *European Journal of Personality*, 26(1), 2–12. <https://doi.org/10.1002/per.812>

Hirschi, A., Jaensch, V.K., & Herrmann, A. (2017). Protean career orientation, vocational identity, and self-efficacy: An empirical clarification of their relationship. *European Journal of Work and Organizational Psychology*, 26(2), 208–220. <https://doi.org/10.1080/1359432X.2016.1242481>

Holland, J.L. (1996). Exploring careers with a typology: What we have learned and some new directions. *American Psychologist*, 51(4), 397–406. <https://doi.org/10.1037/0003-066X.51.4.397>

Holland, J.L. (1997). *Making vocational choices: A theory of vocational personalities and work environments*. Psychological Assessment Resources.

Horrigan, M. (2022). *Exploring the work engagement of freelancers in America during the COVID-19 era Using Interpretative Phenomenological Analysis (IPA)*. Doctoral dissertation, Northeastern University.

- Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.5465/256287>
- Klotz, V.K., Billett, S., & Winther, E. (2014). Promoting workforce excellence: Formation and relevance of vocational identity for vocational educational training. *Empirical Research in Vocational Education and Training*, 6(1), 6. <https://doi.org/10.1186/s40461-014-0006-0>
- Kuhn, K.M. (2016). The rise of the 'gig economy' and implications for understanding work and workers. *Industrial and Organizational Psychology*, 9(1), 157–162. <https://doi.org/10.1017/iop.2015.129>
- Levin, K.A. (2006). Study design III: Cross-sectional studies. *Evidence-Based Dentistry*, 7(1), 24–25. <https://doi.org/10.1038/sj.ebd.6400375>
- Loebel, G.A. (2020). *An examination of the relationships between vocational identity, hardness, meaningful work, burnout, and work engagement*. Doctoral dissertation, Colorado State University.
- Louis, B.L. (2021). *Career adaptability and work engagement among South African millennials*. Unpublished master's dissertation, University of Johannesburg.
- Marcia, J.E. (1993). The status of the statuses: Research review. In *Ego identity* (pp. 22–41). Springer.
- Maree, J.G. (2012). Career adapt-abilities scale – South African form: Psychometric properties and construct validity. *Journal of Vocational Behavior*, 80(3), 730–733. <https://doi.org/10.1016/j.jvb.2012.01.005>
- Marinica, B.V., & Negru-Subtirica, O. (2020). Relationships between volunteering functions and vocational identity in emerging adult volunteers. *International Journal for Educational and Vocational Guidance*, 20, 591–611. <https://doi.org/10.1007/s10775-020-09418-3>
- McArdle, S., Waters, L., Briscoe, J.P., & Hall, D.T.T. (2007). Employability during unemployment: Adaptability, career identity and human and social capital. *Journal of Vocational Behavior*, 71(2), 247–264. <https://doi.org/10.1016/j.jvb.2007.06.003>
- Meijers, F. (1998). The development of a career identity. *International Journal for the Advancement of Counselling*, 20, 191–207. <https://doi.org/10.1023/A:1005399417256>
- Meng, Z., Zhang, L., Zan, H., & Wang, J. (2023). Psychological resilience and work engagement of Chinese nurses: A chain mediating model of career identity and quality of work life. *Frontiers in Psychology*, 14, 1275511. <https://doi.org/10.3389/fpsyg.2023.1275511>
- Merino-Tejedor, E., Hontangas, P.M., & Boada-Grau, J. (2016). Career adaptability and its relation to self-regulation, career construction, and academic engagement among Spanish university students. *Journal of Vocational Behavior*, 93, 92–102. <https://doi.org/10.1016/j.jvb.2016.01.005>
- Negru-Subtirica, O., Pop, E.I., & Crocetti, E. (2015). Developmental trajectories and reciprocal associations between career adaptability and vocational identity: A three-wave longitudinal study with adolescents. *Journal of Vocational Behavior*, 88, 131–142. <https://doi.org/10.1016/j.jvb.2015.03.004>
- Ochieng, P.A. (2009). An analysis of the strengths and limitation of qualitative and quantitative research paradigms. *Problems of Education in the 21st Century*, 13, 13–18.
- Parashar, B., Sharma, R., Rana, G., & Balaji, R.D. (2023). Foundation concepts for industry 4.0. In A. Nayyar, M. Naved, & R. Rameshwar (Eds.), *New horizons for industry 4.0 in modern business* (pp. 51–68). Springer.
- Popova-Nowak, I.V. (2010). *Work identity and work engagement*. WordPress.
- Porfeli, E.J., & Savickas, M.L. (2012). Career adapt-abilities scale-USA form: Psychometric properties and relation to vocational identity. *Journal of Vocational Behavior*, 80(3), 748–753. <https://doi.org/10.1016/j.jvb.2012.01.009>
- Porfeli, E.J., Lee, B., Vondracek, F.W., & Weigold, I.K. (2011). A multi-dimensional measure of vocational identity status. *Journal of Adolescence*, 34(5), 853–871. <https://doi.org/10.1016/j.adolescence.2011.02.001>
- Rossier, J., Zecca, G., Stauffer, S.D., Maggiori, C., & Dauwalder, J.P. (2012). Career adapt-abilities scale in a French-speaking Swiss sample: Psychometric properties and relationships to personality and work engagement. *Journal of Vocational Behavior*, 80(3), 734–743. <https://doi.org/10.1016/j.jvb.2012.01.004>
- Rudolph, C.W., Lavigne, K.N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, 98, 17–34. <https://doi.org/10.1016/j.jvb.2016.09.002>
- Savickas, M.L. (2002). Career construction: A developmental theory of vocational behavior. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 149–205). Jossey-Bass.
- Savickas, M.L. (2005). The theory and practice of career construction. *Career Development and Counseling: Putting Theory and Research to Work*, 1, 42–70.
- Savickas, M.L. (2011). Constructing careers: Actor, agent, and author. *Journal of Employment Counseling*, 48(4), 179–181. <https://doi.org/10.1002/j.2161-1920.2011.tb01109.x>
- Savickas, M.L. (2019). *Career counseling*. American Psychological Association.
- Savickas, M.L., & Porfeli, E.J. (2012). Career adapt-abilities scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661–673. <https://doi.org/10.1016/j.jvb.2012.01.011>
- Schaufeli, W.B., Bakker, A.B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716. <https://doi.org/10.1177/0013164405282471>
- Schaufeli, W.B., Salanova, M., González-Romá, V., & Bakker, A.B. (2002). The measurement of burnout and engagement: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3(1), 71–92. <https://doi.org/10.1023/A:1015630930326>
- Schwab, K. (2017). *The fourth industrial revolution*. Currency.
- Shukla, K., & Shaheen, M. (2023). I am my own boss: Effect of self-leadership on gig-worker's work engagement and performance. *Leadership & Organization Development Journal*, 45(1), 35–50. <https://doi.org/10.1108/LODJ-03-2023-0146>
- Skorikov, V.B., & Vondracek, F.W. (2011). Occupational identity. In S.J. Schwartz, K. Luyckx, & V.L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 693–714). Springer Science and Business Media. https://doi.org/10.1007/978-1-4419-7988-9_29
- Spreitzer, G.M., Cameron, L., & Garrett, L. (2017). Alternative work arrangements: Toward images of the new world of work. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, 473–499. <https://doi.org/10.5465/AMBPP.2017.10315symposium>, <https://doi.org/10.1146/annurev-orgpsych-032516-113332>
- Steyn, R., & Grobler, S. (2016). Sex differences and work engagement: A study across 27 South African companies. *Journal of Contemporary Management*, 13, 461–481. Retrieved from <https://scielo.org.za/pdf/jcm/v13n1/17.pdf>
- Sun, B., Fu, L., Yan, C., Wang, Y., & Fan, L. (2022). Quality of work life and work engagement among nurses with standardised training: The mediating role of burnout and career identity. *Nurse Education in Practice*, 58, 103276. <https://doi.org/10.1016/j.nepr.2021.103276>
- Super, D.E., & Knael, E.G. (1981). Career development in adulthood: Some theoretical problems and a possible solution. *British Journal of Guidance and Counselling*, 9(2), 194–201. <https://doi.org/10.1080/03069888108258214>
- Tladinyane, R., & Van der Merwe, M. (2016). Career adaptability and employee engagement of adults employed in an insurance company: An exploratory study. *SA Journal of Human Resource Management*, 14(1), 1–9. <https://doi.org/10.4102/sajhrm.v14i1.752>
- Toth, I., Heinänen, S., & Puimalainen, K. (2021). Passionate and engaged? Passion for inventing and work engagement in different knowledge work contexts. *International Journal of Entrepreneurial Behavior & Research*, 27(9), 1–25. <https://doi.org/10.1108/IJEBR-09-2020-0632>
- Umar, M., Xu, Y., & Mirza, S.S. (2021). The impact of COVID-19 on gig economy. *Economic Research*, 34(1), 2284–2296. <https://doi.org/10.1080/1331677X.2020.1862688>
- Yang, X., Feng, Y., Meng, Y., & Qui, Y. (2019). Career adaptability, work engagement, and employee well-being among Chinese employees: The role of Guanxi. *Frontiers in Psychology*, 10, 1029. <https://doi.org/10.3389/fpsyg.2019.01029>
- Yoo, K., & Lee, H. (2019). Core self-evaluation and work engagement: Moderated mediation model of career adaptability and job insecurity. *Frontiers in Psychology*, 10, 2093. <https://doi.org/10.3389/fpsyg.2019.02093>