

# Employees' career mindsets as career capital for a digital work world orientation



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**Orientation:** Employees need to develop career capital for an open-minded work world orientation in an unpredictable, rapidly evolving digital-era work world in which jobs and occupational pathways have become blurred and uncertain.

**Research purpose:** This research empirically examined the extent to which distance learning employees' career mindsets as career capital predicted facets of their digital-era work world orientation.

**Motivation for the study:** The construct of work world orientation is empirically under-researched and the association between employees' career mindsets, work world awareness and competency including their higher education studies' contribution to their work world readiness is unclear.

**Research approach/design and method:** Data were collected from ( $N = 486$ ) full-time employed open- and distance-learning undergraduate students. Regression analysis and structural equation modelling (SEM) were applied in the cross-sectional, quantitative study.

**Main findings:** The results revealed the protean (pure challenge) career mindset as important 'knowing why' career capital to positively predict participants' digital work world awareness, work world competency and work world readiness.

**Practical/managerial implications:** The study highlighted the importance of the protean (pure challenge) career mindset in the career development learning of employees to better prepare them for the digital-era work world.

**Contribution/value-add:** The study enriched understanding of the implicit role of employees' 'knowing why' career capital in their approach-motivation towards important digital-era 'knowing what' career capital.

**Keywords:** digital-era work world orientation; career capital; career mindsets; protean career mindset; world of work competency; world of work readiness.

## Introduction

The conversation about employed graduates' world of work orientation remains important for their employability, lifelong learning and career success in today's more competitive and volatile technology-driven work environment (Bates et al., 2019; Bridgstock et al., 2019; Ramnund-Mansingh & Reddy, 2021; Tomlinson & Holmes, 2017). University students as prospective or active employees need preparation for the digital-era career workspace (Bremner & Laing, 2019; Ramnund-Mansingh & Reddy, 2021). Such preparation involves inter alia the building of knowledge about the technology-driven work world and developing insight into how individuals' career-related values and interests influence their perception of employment opportunities, job search behaviour and career decisions (Bridgstock et al., 2019). Individuals' active engagement with their career development is associated with their work-world readiness, employability, careers awareness, job search success and mental well-being (Choate et al., 2019; Ciarocco, 2018).

Higher education scholars and employers express the dire need for students to build the necessary career capital and intrinsic motivation to confidently navigate their careers while gaining a sense of control in the face of a rapidly evolving and uncertain technology-driven world of work (Bridgstock et al., 2019; Brown et al., 2020; Choate et al., 2019). Employees who pursue further studies need to develop an open-mindedness towards the unpredictability of a rapid evolving work world in which jobs and occupational pathways have become blurred and uncertain (Ramnund-Mansingh & Reddy, 2021). Individuals' understanding of their mindset towards the digital-era work world may help them turn uncertainty about jobs and occupations into useful career learning opportunities by

developing the optimism and skills they need to successfully navigate their careers and employability in the constantly changing employment market (Cortellazzo et al., 2020; Valickas et al., 2019). Research provides evidence that individuals' insight into their career-related values and interests promotes their active engagement in and open-mindedness towards the exploration of interest-relevant job and occupation opportunities including the development of skills and experience needed to ensure their future employability (Bates et al., 2019; Clements & Kamau, 2017). In this regard, research also shows that within the contemporary increasingly more complex digital-driven work environment, in which known jobs may become obsolete and new forms of jobs and occupations may continue to arise and disappear, individuals' internal or subjective career provides a sense of psychological stability for job search behaviour and decisions (Coetzee, 2022; Coetzee & Schreuder, 2014; Schein & Van Maanen, 2016).

In the context of the present study, the internal career alludes to individuals' career mindsets, which are underpinned by their personal 'knowing why' career capital, that is, their career-related interests, motives, needs and values (Abessolo et al., 2017; Brown et al., 2020; Coetzee & Schreuder, 2014; Rodrigues et al., 2013; Schein & Van Maanen, 2016). Individuals' career mindsets are an essential aspect of job and occupation choices, life-long career development, stability, success and well-being in times of uncertain career and employment prospects (Abessolo et al., 2017; Coetzee, 2022; Schein & Van Maanen, 2016). However, scant attention has been given to whether distance learning employees' career mindsets as career capital influence their digital-era work world orientation (Coetzee, 2022).

The present article addresses this gap in research by its aims to empirically examine the influencing role of individuals' career mindsets on their digital-era work world orientation. It is important to assess the association between these constructs to determine whether it is useful to consider individuals' career mindsets when preparing them for their careers and employability in a work world that is impacted by rapid change and evolutionary technology advancement (Coetzee, 2022; Cortellazzo et al., 2020; Valickas et al., 2019). Of importance to this study are four career mindsets that denote unique career values-driven attitudes and motivations pertaining to Schein's (1990) career anchors of pure challenge, entrepreneurial creativity, security and stability, service and dedication to a cause and general managerial competence. Research shows that these career anchors reflect career-related values and cognitive orientations associated with the careerist (general managerial competence) bureaucratic (security and stability), social (service and dedication to a cause) and protean (pure challenge and entrepreneurial creativity) career mindsets (Abessolo et al., 2017; Coetzee, 2022; Wils et al., 2010).

Scholars continue to draw attention to the role of career-related value-based motivations or 'knowing why' career capital in explaining the link between the individual and the external work context (Abessolo et al., 2017; Brown et al.,

2020; Coetzee, 2022; Coetzee & Schreuder, 2014; Rodrigues et al., 2013; Schein & Van Maanen, 2016). Value-based motivations are known to shape individuals' mindsets about the type of career they desire for career satisfaction (Schein, 1990; Schein & Van Maanen, 2016). Research shows that individuals' values-derived career mindsets drive the intrinsic motivation (i.e. 'knowing why' career capital) for external career exploration, for instance, being curious about the job and career opportunities that flow from changes in the world of work and actively developing the competence and confidence to pursue desired and alternative job and occupation opportunities (Abessolo et al., 2017; Coetzee, 2022; Ting & Datu, 2020).

This study was also interested in an under-researched triarchic model of individuals' digital-era work world orientation (Coetzee et al., 2021). The three-dimensional facets of individuals' work world orientation postulated by Coetzee et al. (2021) underscore individuals' 'knowing what' career capital (Jones & DeFillipi, 1996) in the form of their awareness of the digital nature of work, their work world readiness competency and the extent to which they perceive higher education studies to contribute to their world of work readiness. However, the sub-facets of the construct of work world orientation are empirically under-researched. Initial research provides evidence of associations between Schein's (1990) career anchors and the dimension of world of work awareness (Coetzee, 2022). However, it is unclear whether the career mindsets are significantly associated with the facets of world of work competency and higher education studies' contribution to students' world of work readiness.

### **Career mindsets as career capital**

Drawing from the premises of career capital theory (Inkson & Arthur, 2001; Parker et al., 2013), individuals' career mindsets represent an espoused career identity ('knowing why') in relation to the world of work. The career identity facilitates uniquely differentiating motivational patterns in approaching the work world and responding to contextual changes, including individuals' identification with the world of work, and the manner in which they pursue career goals (Abessolo et al., 2017; Brown et al., 2020; Coetzee, 2022; Schein & Van Maanen, 2016). Individuals' 'knowing why' career capital denotes their intrinsic career motivations, values and interests that direct the inner career towards the achievement of career goals and career satisfaction (Dickmann et al., 2018). Individuals generally adopt a primary or dominant career mindset that drives their internal motivational pattern (or 'knowing why' career capital) towards exploring the external world of work for suitable jobs and occupations (Brown et al., 2020; Schein, 1990; Schein & Van Maanen, 2016; Sutherland et al., 2015).

This study was interested in examining the influence of five forms of career mindsets known to exhibit uniquely differentiating career-related motivational attitudes towards external career exploration. The notion of career mindsets is

based on Schein's (1990) theory of career anchors and research by Wils et al. (2010) and Abessolo et al. (2017) on the career anchors construct. Of relevance to this study are the career anchor-related, values-driven motivations of the careerist (general managerial competence), bureaucratic (security and stability), social (service and dedication to a cause) and protean (pure challenge and entrepreneurial creativity) mindset.

Individuals with the careerist mindset of general managerial competence are more likely to pursue career paths offering professional success, power and achievement ('knowing why' career capital). They value self-enhancement and leave little room for uncertainty and would prefer to work in well-structured and organised environments with opportunities to follow an upward managerial track (Abessolo et al., 2017; Schein, 1990). The careerist mindset is associated with lower levels of career agility (i.e. adaptivity towards the ill-defined complexities and challenges of the digital-era world of work: Coetzee, 2022). The 'knowing why' career capital of the bureaucratic career mindset of security and stability relates to predictable, stable workspaces and jobs and occupations that offer continuity with employment and financial security and certainty. Their career identity motivation revolves around the human values of loyalty and conservation of tradition (Abessolo et al., 2017; Schein & Van Maanen, 2016; Wils et al., 2010). Individuals with a social career mindset endorse values of self-transcendence and are motivated ('knowing why' career capital) by career paths that offer opportunities for personal growth and contributing something of value in the larger society (Schein & Van Maanen, 2016; Wils et al., 2010).

The protean career mindset alludes to 'knowing why' career capital stemming from the need for freedom, professional growth, influence and self-determination. 'Knowing why' career capital is applied to the search of career paths that offer opportunities to create wealth through an enterprise or organisation of one's own and new, enterprising products and services (entrepreneurial creativity) or using expertise to solve challenging problems (pure challenge), win out over worthy opponents and overcome difficult obstacles (Schein & Van Maanen, 2016). The protean career mindset generally revolves around valuing openness to change and exhibiting agentic, self-directed career agile behaviour across multiple changing, boundaryless workspaces (Abessolo et al., 2017; Coetzee, 2022; Hall et al., 2018).

Individuals who abide by a protean career mindset are known to exhibit a crystallised career identity and inner directedness, including the capacity to cope with and adapt in response to rapidly shifting turbulent conditions (Hall et al., 2018). Research further shows a link between the protean career mindset and a willingness to engage in external career exploration, gaining knowledge of the impact of the digital era on job and employment opportunities and upskilling oneself accordingly to enhance their 'knowing what' career capital (Coetzee, 2022; Tee et al., 2022). The protean career mindset is further deemed important for career development and success in the digital-driven work

world because of the associated career capital that facilitates proactive initiatives in creating and influencing work circumstances and the likelihood of career success and employability (Cortellazzo et al., 2020; Tee et al., 2022).

## World of work orientation

The contemporary fast-advancing, technological-driven work world requires from individuals to rapidly adapt to and evolve with the transformation of organisations, work, jobs and occupations for sustainable careers and employability (Coetzee & Veldsman, 2022; Kohl & Swartz, 2019). In this regard, the career mindset-related external career exploration process energises individuals' interest in the world of work and the drive to build the 'knowing what' career capital they need for successful career development in the digital-era workspace (Bates et al., 2019; Jiang et al., 2019; Valickas et al., 2019). 'Knowing what' career capital relates to individuals' world of work orientation, which may include inter alia, awareness of jobs and occupations in the market, insight into the world of work competency they require and evaluation of whether their higher education studies contribute to their readiness for jobs and occupations in the world of work (Coetzee et al., 2022; Sutherland et al., 2015).

We draw from both principles of career capital theory (DeFillippi & Arthur, 1994) and approach-motivation theory (Elliot, 2006; Shao et al., 2018) to elucidate the notion of distance learning employees' work world orientation in relation to their career mindsets. Individuals' approach towards a situational context is generally activated or invigorated by intrinsic motivations associated with their 'knowing why' and 'knowing what' career capitals that direct their responses towards stimuli in the external environment. The 'knowing why' career capital pertains to the career identity mindset that invigorates the intrinsic motivational energy individuals bring to their internal and external career exploration (Jiang et al., 2019). The process of external career exploration involves building 'knowing what' career capital (e.g. gaining understanding of work world dynamics, available or possible jobs and occupations, including upskilling and development opportunities for employability: Sutherland et al., 2015). 'Knowing what' career capital alludes to the activation of approach-motivation that results in individuals evaluating the environment as benign and proffering positive stimuli and possibilities for achieving success (Jones & DeFilippi, 1996). Research shows links between a state of approach motivation and cognitive flexibility and originality towards external stimuli (Shao et al., 2018).

In the present study, the construct of world of work orientation denotes students' 'knowing what' career capital that involves their: (1) awareness of the world of work, (2) world of work competency and (3) world of work readiness (Coetzee et al., 2021; Jones & DeFilippi, 1996; Sutherland et al., 2015). The triarchic model of distance learning

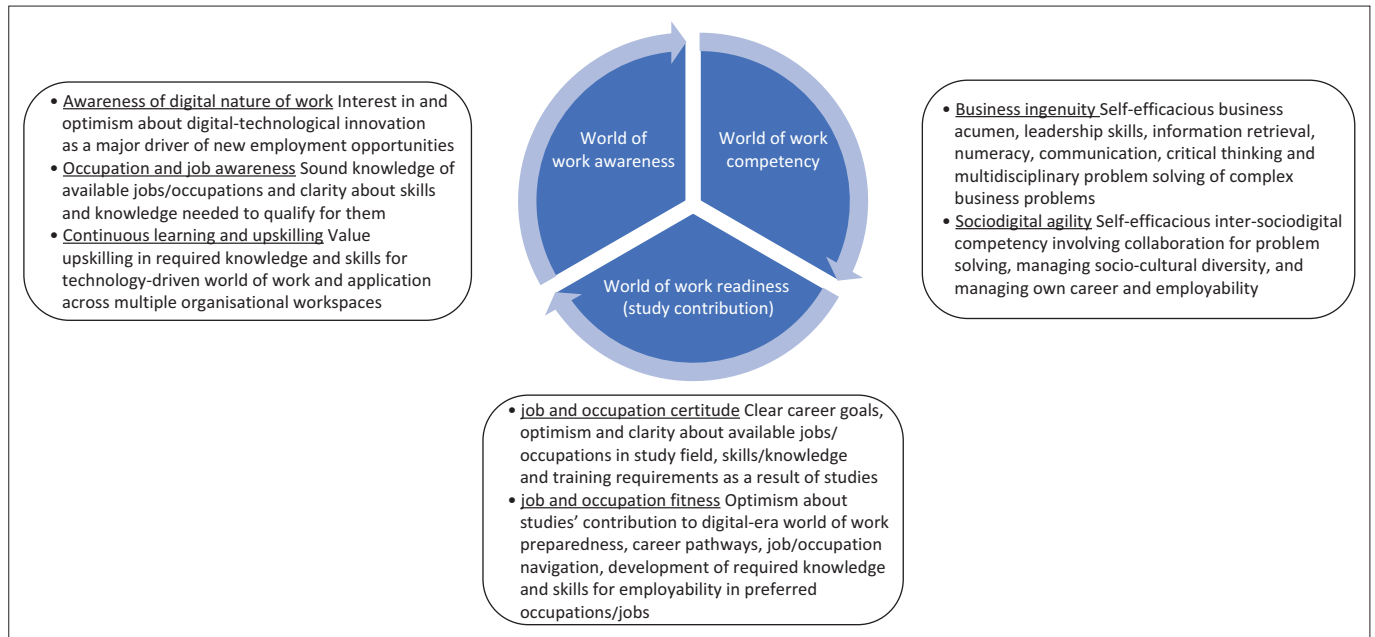


FIGURE 1: Conceptual triarchic model of individuals' digital-era work world orientation.

employees' world of work orientation and the various sub-facets is diagrammatically presented in Figure 1. The facet of 'world of work awareness' relates to individuals' interest in and optimism about digital-technological innovation as a major driver of new employment opportunities (awareness of digital nature of work), knowledge of available jobs and occupations and clarity about skills and knowledge needed to qualify for them (occupation and job awareness) and them valuing upskilling in and application of required knowledge and skills in a technology-driven world of work and across multiple organisational workspaces (continuous learning and upskilling; Bates et al., 2019; Coetzee et al., 2021).

'World of work competency' refers to employees' self-efficacious business acumen, leadership skills, information retrieval, numeracy, communication and critical thinking skills and capability for the multidisciplinary problem solving of complex business problems (business ingenuity). Individuals' sociodigital agility involves their self-efficacious inter-digital competency relating to digital collaboration for problem solving, managing socio-cultural diversity and self-directed management of their own career and employability (Coetzee et al., 2019, 2021; Kohl & Swartz, 2019).

'World of work readiness' refers to individuals' job and occupation certitude involving them having, as a result of their further studies, clear career goals, optimism and clarity about available jobs or occupations in their study field, including the skills, knowledge and training required. Individuals' job and occupation fitness alludes to their optimism about their studies' contribution to their preparedness for the digital-era work world and career pathways, job and occupation navigation and the actual development of required knowledge and skills for employability in preferred occupations and jobs (Bates et al., 2019; Coetzee et al., 2021). Research shows that individuals' awareness of the world of work, employment

opportunities and insight into jobs and occupations in the field of study influence their capacity to manage their employability. Accordingly, employers regard universities as important conduits for developing the career capital and approach motivation of graduates (Tomlinson, 2007; Winterton & Turner, 2019).

Integrating the insights derived from the research literature, we propose that individuals' career mindset ('knowing why' career capital) can influence their world of work orientation ('knowing what' career capital) because the mindsets allude to relatively stable, intrinsic values-driven motivations that are embedded in dominant career self-concept-related capital, which facilitates differentiating external career exploration cognitions and behaviour (Coetzee, 2022; Dickmann et al., 2018; Rodrigues et al., 2013; Schein & Van Maanen, 2016). It therefore stands to reason that in the internal and external career exploration process, individuals' career mindsets may direct or influence their orientation towards the digital-era work world (Coetzee, 2022). Drawing from approach-motivation theory (Elliot, 2006), individuals' work world orientation facets are assumed to represent approach-motivated invigorated cognitions towards career goal pursuit strategies (i.e. building 'knowing what' career capital) that contribute to their career success through the world of work awareness, competency and clarity on preferred job and occupation opportunities.

We further suggest that the various career mindsets may exhibit varied associations with the digital-era world of work orientation facets because of the underpinning differentiating value-oriented motivational cognitions about the desired career that may be pursued within a digital-era workspace. We expected, for example, that the protean career mindsets (pure challenge and entrepreneurial creativity) with its self-directed openness to change and continuous learning (Hall et al., 2018;

Schein & Van Maanen, 2016), would positively explain individuals' evaluation of their world of work awareness, world of work competency and world of work readiness. The careerist (general managerial competence), bureaucratic (security and stability) and social (service and dedication to a cause) mindsets would explain only certain facets of individuals' world of work orientation because these career mindsets may tend to be drawn to only those world of work orientation facets that resonate with their career mindset motivations. However, there is currently a paucity of research on the influence of career mindsets as career capital on individuals' digital-era work world orientation. Accordingly, the following research question ensued from our reasoning:

**Research question:** To what extent do individuals' career mindsets as career capital predict the various facets of their digital-era world of work orientation?

## Method

### Participants

The participants were ( $N = 486$ ) employed undergraduate students who were pursuing studies in the economic and management sciences field at a higher education institution. The students were recruited from a comprehensive South African open and distance e-learning university. The mean age of the participants was 34.34 years ( $SD = 9.12$ ; age range 25–55 years). There were 171 men (35%) and 314 women (65%) of whom 348 were in employment (72%) and 138 (28%) unemployed. Most of the student participants felt that the acceleration of technology brings new, exciting job and career opportunities (365; 75%). Most of them also revealed that they are actively searching for job roles that evolve with changing technological conditions because these jobs offer opportunities for growth and creativity (390; 80%).

### Measures

Participants completed four measures. The first measure related to individuals' career mindsets (careerist: general managerial competence; protean: entrepreneurial creativity and pure challenge; bureaucratic: security and stability and social: service and dedication to a cause). The second set of three measures related to facets of individuals' digital-era world of work orientation. The first facet pertained to individuals' awareness of the digital nature of work, occupation and job awareness and continuous upskilling and learning awareness. The second world of work orientation facet measured their personal evaluations of their world of work competency (business ingenuity and sociodigital agility). The third facet measured their perceptions about the extent to which their studies contributed to their world of work readiness (job and occupation certitude and job and occupation fitness).

### Career mindsets

Based on the career orientations scale of Schein (1990), the students expressed their preferences for the various career mindsets: general managerial competence (five items; e.g.

'I would rather leave my organisation than accept a job that would take me away from the general managerial track'); entrepreneurial creativity (five items; e.g. 'I will feel successful in my career only if I have succeeded in crafting or building something that is entirely my own product or idea'); pure challenge (five items; e.g. 'I seek out work opportunities that strongly challenge my problem solving and competitive skills'); security and stability (five items; e.g., 'I am most fulfilled in my work when I feel that I have complete financial and employment security') and service and dedication to a cause (five items; e.g. 'I will feel successful in my career only if I have a feeling of having made a real contribution to the welfare of society'). Responses were measured on a six-point Likert scale (1 = not true at all for me; 6 = always true for me). The internal reliability coefficients of the subscales ranged between 0.74 and 0.84. Coetzee (2022) confirmed the construct validity of the scale.

### World of work awareness

The world of work orientation scale developed by Coetzee et al. (2021) was used to measure as first facet, students' perceptions of the: (1) digital nature of work (five items; e.g. 'I see technological innovation as a major driver of new employment and career opportunities'), (2) occupation and job awareness (three items; e.g. 'I have a clear picture of jobs and occupational opportunities made possible by new technological advancements in my field of study') and (3) continuous upskilling and learning awareness (seven items; e.g. 'It is important for me to develop special knowledge and skills that will help me get the job I want in a world of work that is driven by constant technological innovation'). Responses were measured on a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). The internal reliability coefficients of the subscales ranged between 0.87 and 0.92. Coetzee (2022) confirmed the construct validity of the scale.

### World of work competency

The world of work orientation scale (Coetzee et al., 2021) was also used to measure as second facet, students' evaluations of their business ingenuity (11 items; e.g. 'I bring new, innovative solutions to complex business and economic problems') and sociodigital agility (10 items; e.g. 'I feel confident in using online tools such as search engines to gather information and data and to solve problems in the digital world of work'). Responses were measured on a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). The internal reliability coefficients of the subscales were 0.91 and 0.94. Coetzee et al. (2021) confirmed the construct validity of the scale.

### World of work readiness

The extent to which students perceived their studies to contribute to their world of work readiness was the third facet measured by the world of work orientation scale (Coetzee et al., 2021). The scale measured perceptions of students' job and occupation certitude (six items; e.g. I have a

**TABLE 1:** Descriptive data and bi-variate correlations among variables ( $N = 486$ ).

Variable	Mean (SD)	CR ( $\alpha$ )	1	2	3	4	5	6	7	8	9	10	11	12
1 General managerial competence	2.90 (1.56)	0.73 (0.72)	-	-	-	-	-	-	-	-	-	-	-	-
2 Security and stability	4.71 (1.08)	0.73 (0.72)	0.26***	-	-	-	-	-	-	-	-	-	-	-
3 Entrepreneurial creativity	4.01 (1.57)	0.80 (0.80)	0.24***	0.08*	-	-	-	-	-	-	-	-	-	-
4 Service and dedication to a cause	4.76 (1.09)	0.77 (0.76)	0.23***	0.26***	0.43***	-	-	-	-	-	-	-	-	-
5 Pure challenge	4.83 (.99)	0.72 (0.71)	0.25***	0.33***	0.33***	0.55***	-	-	-	-	-	-	-	-
6 Awareness digital nature of work	5.55 (1.07)	0.91 (0.92)	0.16***	0.29***	0.24***	0.31***	0.37***	-	-	-	-	-	-	-
7 Occupation and job awareness	4.90 (1.39)	0.88 (0.87)	0.26***	0.16***	0.22***	0.20***	0.36***	0.50***	-	-	-	-	-	-
8 Continuous learning and upskilling awareness	5.85 (.97)	0.85 (0.85)	0.09*	0.32***	0.18***	0.30***	0.40***	0.65***	0.43***	-	-	-	-	-
9 Business ingenuity	5.47 (.92)	0.93 (0.93)	0.21***	0.23***	0.19***	0.26***	0.51***	0.44***	0.48***	0.45***	-	-	-	-
10 Sociodigital agility	5.87 (.83)	0.91 (0.91)	0.016***	0.32***	0.18***	0.34***	0.50***	0.46***	0.42***	0.57***	0.76***	-	-	-
11 Job and occupation certitude	5.27 (1.09)	0.88 (0.88)	0.28***	0.25***	0.21***	0.31***	0.44***	0.36***	0.63***	0.44***	0.64***	0.62***	-	-
12 Job and occupation fitness	5.37 (1.14)	0.91 (0.91)	0.25***	0.30***	0.23***	0.38***	0.44***	0.34***	0.50***	0.34***	0.50***	0.49***	0.68***	-

Note: \*\*\* $p = 0.000$ .

CR, composite reliability; SD, standard deviation.

clear, written plan for how to get into the type of occupation or type of job I choose') and job and occupation fitness (six items; e.g. 'My studies equip me with the knowledge and skills that I need to apply in my job') were measured on a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). The internal reliability coefficients of the subscales were 0.88 and 0.92. Coetzee et al. (2021) confirmed the construct validity of the scale.

## Methods of statistical analysis

Confirmatory factor analysis (CFA) was performed to examine the discriminant validity among the 12 latent variables in the measurement model. Maximum likelihood estimation was applied. The statistical package AMOS (Arbuckle, 2021) Version 28 was utilised. Firstly, a single factor CFA was tested, and secondly, a multi-factor CFA was tested. Descriptive statistics, internal consistency reliability coefficients (Cronbach's alpha and composite reliability [CR]), Pearson product-moment correlations and linear regression analysis were calculated and analysed using IBM Corp. (2021) SPSS Version 28. The bootstrapping stringent lower-level confidence interval (LLCI) and upper level confidence interval (ULCI) range not containing zero was used to interpret significant regression effects at the 95% confidence interval (Hair et al., 2019). The observed statistically significant ( $p \leq 0.05$ ) career mindset regression estimates upon the seven world of work orientation variables were then subjected to structural equation modelling (SEM) to assess the validity of the structural model. The statistical package AMOS (Arbuckle, 2021), Version 28 was utilised. The following threshold fit indices for model fit suggested by Hair et al. (2019) served as guideline for CFA and SEM model acceptance: Minimum Discrepancy Function by Degrees of Freedom divided ( $\text{CMIN}/df$ ) < 3; Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Squared Residual (SRMR) < 0.07; Comparative Fit Index (CFI)  $\geq 0.90$ .

## Ethical considerations

The study was approved by the research ethics review and permission committees of the university (#2020\_CEMS-IOP\_031 and #2020\_RPC\_051). Participants received an invitation for anonymous, voluntary participation via an email from a 'noreply' student system administrator. The email contained an URL link to an online questionnaire. The participants provided informed consent that the researchers may use the data for anonymous, group-based research purposes.

## Results

### Testing the measurement model

We compared fit statistics of two alternative models to the baseline model. The single factor CFA model (loading all indicators onto a single latent variable) did not have a good fit with the data:  $\text{CMIN}/df = 4.35$ ;  $\text{RMSEA} = 0.08$ ;  $\text{SRMR} = 0.09$ ;  $\text{CFI} = 0.47$ ;  $\text{AIC} = 19370.7$ . The final multi/12-factor latent variable model (with indicators loading onto their respective factor) showed better and good model fit and thus discriminant validity among the 12 latent variables:  $\text{CMIN}/df = 2.05$ ;  $\text{RMSEA} = 0.05$ ;  $\text{SRMR} = 0.04$ ;  $\text{CFI} = 0.90$ ; Akaike's Information Criteria ( $\text{AIC}$ ) = 3859.4.

### Descriptive statistics and bivariate correlations

Table 1 provides a summary of the descriptive statistics and bivariate correlations. The internal consistency reliability coefficients (both Cronbach alphas and CRs) were higher ( $\geq 0.71$ ) than the cut-off value (0.70: Hair et al., 2019) for good reliability. The five career mindset variables had positive and significant correlations ( $p = 0.0001$  and  $p = 0.04$ ) with the seven world of work orientation variables ( $r \geq 0.09$  [small practical effect] to  $r \leq 0.51$  [large practical effect]).

**TABLE 2:** Regression estimates of career mindsets on digital-era work world orientation.

Variable	Awareness digital nature of work	Occupation and job awareness	Continuous learning and upskilling awareness	Business ingenuity	Sociodigital agility	Job and occupation certitude	Job and occupation fitness
General managerial competence	0.01	0.15***	-0.04	0.05	-0.01	0.11***	0.08**
Security and stability	0.18***	0.03	0.20***	0.06	0.13***	0.09*	0.14**
Entrepreneurial creativity	0.08*	0.09*	0.03	0.02	0.003	0.03	0.02
Service/dedication to a cause	0.09	-0.06	0.06	-0.04	0.06	0.05	0.17***
Pure challenge	0.24***	0.42***	0.29***	0.45***	0.34***	0.37***	0.31***
Constant	2.77***	2.24***	3.24***	3.01***	3.32***	2.42***	2.08***
Fp	22.89***	18.86***	25.89***	36.23***	37.53***	30.07***	32.39***
Adjusted R <sup>2</sup>	0.18	0.16	0.20	0.27	0.27	0.23	0.24

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$ .

## Regression estimates and validity of structural model

Table 2 summarises the regression estimates results for the regression of the five career mindsets upon the seven world of work orientations. Seven linear regression models were tested (one for each world of work orientation variable). The *F*-statistic for each model was significant:

- Awareness of digital nature of work:  $F = 22.89$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.18$  (moderate practical effect).
- Occupation and job awareness:  $F = 18.86$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.16$  (moderate practical effect).
- Continuous learning and upskilling awareness:  $F = 25.89$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.20$  (moderate practical effect).
- Business ingenuity:  $F = 36.23$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.27$  (large practical effect).
- Sociodigital agility:  $F = 37.53$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.27$  (large practical effect).
- Job and occupation certitude:  $F = 30.07$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.23$  (moderate practical effect).
- Job and occupation fitness:  $F = 32.39$ ;  $p = 0.000$ ; adjusted  $R^2 = 0.24$  (moderate practical effect).

Based on the guidelines of Hair et al. (2019), the variance inflation factor (VIF) values for all the construct variables were inspected for issues of collinearity to avoid misleading or bias estimation of the results. The results revealed VIF values of  $< 2.70$ , indicating no potential collinearity issues.

As shown in Table 2, the protean career mindset of pure challenge had significant and positive regression effects on all seven of the world of work orientation variables ( $\beta \geq 0.24$  to  $\beta \leq 0.45$ ;  $p = 0.000$ ; the LLCI and ULCI range did not contain any zero). The protean career mindset of entrepreneurial creativity had only positive and significant regression effects on awareness of the digital nature of work ( $\beta = 0.08$ ;  $p = 0.05$ ; LLCI = 0.02; ULCI = 0.14) and occupation and job awareness ( $\beta = 0.09$ ;  $p = 0.04$ ; LLCI = 0.003; ULCI = 0.17).

The social career mindset of service and dedication to a cause had a significant and positive regression effect on job and occupation fitness ( $\beta = 0.17$ ;  $p = 0.000$ ; LLCI = 0.07; ULCI = 0.27). The bureaucratic career mindset of security and stability had a significant and positive regression effect on awareness of the digital nature of work ( $\beta = 0.18$ ;  $p = 0.000$ ;

LLCI = 0.09; ULCI = 0.27), continuous learning and upskilling awareness ( $\beta = 0.20$ ;  $p = 0.000$ ; LLCI = 0.12; ULCI = 0.27), sociodigital agility ( $\beta = 0.13$ ;  $p = 0.000$ ; LLCI = 0.07; ULCI = 0.20), job and occupation certitude ( $\beta = 0.09$ ;  $p = 0.05$ ; LLCI = 0.001; ULCI = 0.17) and job and occupation fitness ( $\beta = 0.14$ ;  $p = 0.002$ ; LLCI = 0.05; ULCI = 0.23). The careerist mindset of general managerial competence had positive and significant regression effects on job awareness ( $\beta = 0.15$ ;  $p = 0.000$ ; LLCI = 0.07; ULCI = 0.23), job and occupation certitude ( $\beta = 0.11$ ;  $p = 0.000$ ; LLCI = 0.05; ULCI = 0.17) and job and occupation fitness ( $\beta = 0.08$ ;  $p = 0.01$ ; LLCI = 0.02; ULCI = 0.14).

The observed statistically significant ( $p \leq 0.05$ ) career mindset regression estimates upon the seven world of work orientation variables were subjected to SEM to assess the validity of the structural model. The structural model had a good fit with the model data: CMIN/ $df = 2.25$ ; RMSEA = 0.05; SRMR = 0.05; CFI = 0.90.

## Discussion

In this article, we have contributed to a better understanding of the extent to which distance learning employees' career mindset (as their 'knowing why' career capital), explain several facets of their digital-era world of work orientation (as a component of their 'knowing what' career capital). The results of the study corroborated research that highlights the importance of understanding how individuals' career mindsets influence their engagement with the world of work in the career exploration process (Abessolo et al., 2017; Coetzee, 2022; Cortellazzo et al., 2020; Jiang et al., 2019; Schein & Van Maanen, 2016). It appears from the findings that the career mindsets explored in this study did not have equally positive approach-motivational effects on the various facets of students' participants' world of work orientation. As shown in Table 3, this finding could be attributed to the varying underpinning 'knowing why' career capital motivations of the career mindsets that predicted varying manifestations of 'knowing what' career capital in participants' world of work orientation. Previous research links individuals' mindsets (i.e. predisposition to perceive and reason in a certain way) and the building of 'knowing what' career capital resources for career goal pursuit and employability (Bates et al., 2019; Coetzee et al., 2019).

**TABLE 3:** Career mindsets as career capital of individual's digital-era work world orientation.

Career mindsets	'Knowing what' career capital Awareness			'Knowing what' career capital Competency		'Knowing what' career capital Readiness	
	Awareness of digital nature of work	Occupation and job awareness	Continuous learning and upskilling awareness	Business ingenuity	Sociodigital agility	Job and occupation certitude	Job and occupation fitness
<b>Careerist</b>							
General managerial competence – career capital 'Knowing why': Influence and self-enhancement through career paths offering professional success, power and achievement in structured, predictable environments with opportunities to follow upwards managerial track.	-	✓	-	-	-	✓	✓
<b>Bureaucratic</b>							
Security and stability – career capital 'Knowing why': Loyalty and conservation of tradition through career paths in predictable, stable workspaces, jobs, occupations that offer continuity, employment and financial security.	✓	-	✓	-	✓	✓	✓
<b>Social</b>							
Service and dedication to a cause – career capital 'Knowing why': Self-transcendence, freedom to pursue personal values or higher life purpose through career path opportunities for personal growth and contributing something of value to larger society.	-	-	-	-	-	-	✓
<b>Protean</b>							
Pure challenge – career capital 'Knowing why': Power, autonomy, freedom, growth, openness to change, self-directed career agile behaviour through career path opportunities allowing the use of expertise to solve challenging problems, overcome difficult obstacles in multiple, boundaryless changing workspaces.	✓	✓	✓	✓	✓	✓	✓
Entrepreneurial creativity: Career capital 'Knowing why': Power, autonomy, freedom, openness to change, self-directed career agile behaviour applied to wealth creation opportunities through an enterprise or organisation of one's own and new enterprising products and services.	✓	✓	-	-	-	-	-

The pure challenge protean career mindset offered an explanation for all the facets of participating distance learning employees' world of work orientation. Rapid technological advancement seems to create an employment environment wherein especially the protean career mindset of pure challenge may thrive because of perceived new challenges for problem solving and growth that the uncertain, more complex digital-era workspace may pose (Hall et al., 2018; Schein & Van Maanen, 2016). Previous research provides evidence of the link between the protean (pure challenge) career mindset and confidence in the future, positive perception of events, insight into and ability to influence the environment and eagerness to set and pursue challenging goals (Cortellazzo et al., 2020).

The findings further suggest that the protean (pure challenge and entrepreneurial creativity) and bureaucratic (security and stability) career mindsets may explain individuals' curiosity about exploring the digital nature of work and imminent new forms of occupations and jobs that may be crafted because of technological advancement. This finding suggests that participants' interest in and optimism about digital-technological innovation as a driver of new employment opportunities may stem from an appreciation for new challenges and opportunities for problem-solving and wealth creation through new enterprising possibilities or from the need to better understand how the changes will affect employment security and stability. The protean career mindset's positive approach-motivation towards the digital-nature of work, jobs and occupations may be attributed to their self-directed agile career behaviour and openness to change

(Hall et al., 2018). The bureaucratic (security and stability) career mindset's positive approach-motivation towards the digital-era world of work could be attributed to the desire to sustain employment and financial security in the digital-era workspace (Schein & Van Maanen, 2016).

Both the protean (pure challenge) and bureaucratic (security and stability) career mindsets explained increased positivity towards upskilling in the knowledge and skills needed in the technology-driven world of work. This finding suggests that employees may either approach the need for upskilling and continuous learning from a pure challenge motivation or from a need to ensure continual employment security. However, knowledge of available jobs and occupations and clarity about skills and knowledge needed to qualify for them were evident only for the protean (pure challenge and entrepreneurial creativity) and careerist (general managerial competence) career mindsets. The finding could be attributed to the underpinning motivational values of achievement, professional success and power of the latter two career mindsets (Schein, 1990; Schein & Van Maanen, 2016).

The protean (pure challenge) and bureaucratic (security and stability) career mindsets explained participants' self-efficacious sociodigital competency that involves collaboration for digital-space problem-solving, managing socio-cultural diversity and managing own career and employability (Coetzee et al., 2021). It appears from the finding that motivational values of self-directed career management behaviour and collaboration with others in digital workspaces may be important for both individuals who value autonomy and challenge and those who value



employment security. However, in addition and as expected, the protean (pure challenge) career mindsets explained the world of work competency of business ingenuity that relates to self-efficacious business acumen, leadership skills, information retrieval, numeracy, communication, critical thinking and multi-disciplinary problem solving of complex business problems (Coetzee et al., 2021).

The careerist (general managerial competence), bureaucratic (security and stability), social (service and dedication to a cause) and protean (pure challenge) career mindsets seemed to explain employees' sense of preparedness or fitness for the digital-era world of work, which are ascribed to their higher education studies. The findings suggest that these career mindsets contributed to participants' optimism that their distance learning studies prepared them for new digital-era career pathways, helped them navigate new forms of jobs and occupations and develop the knowledge and skills needed for employability. Research shows that students who pursue higher education for further studies generally feel confident about their work readiness and future career development because of the capabilities they develop (Bowles et al., 2019, 2020; Choate et al., 2019; Winterton & Turner, 2019). With the exception of the social (service and dedication to a cause) and protean (entrepreneurial creativity) career mindsets, the career mindsets also explained optimism and clarity about career goals, available jobs and occupations and training requirements to ensure they develop the required skills and knowledge as aspects of their world of work readiness. In this regard, previous research shows that higher education career development programmes increased students' careers knowledge, job and occupation awareness, confidence and employability skills (Choate et al., 2019).

The findings of this study corroborate the reasoning that higher education institutions need to integrate career development planning in the curriculum (Choate et al., 2019) because such practice could help raise students' self-awareness of their career mindsets and their orientation towards the digital-era world of work. Career development planning that deepens students' insight into the motivational values that drive their career identity-related mindsets may help raise a greater curiosity towards exploring the changing digital-era job and occupation requirements for sustainable career success and employability. As a result, distance learning employees' readiness and competency for the digital-era world of work may be enhanced. The positive association between participants' protean (pure challenge) career mindset and the facets of work world orientation highlights the need for career development programmes that guide them towards reframing their dominant value-based motivations ('knowing why' career capital) towards the adoption of an additional protean (pure challenge) outlook on the world of work. Once individuals understand the needed 'knowing what' career capital embedded in the various facets of a digital-era world of work orientation, they may develop greater motivation to confidently approach the uncertainties of the job market with a protean-like, curious,

optimistic and explorative mindset. Self-awareness of how their dominant personal career mindset with its driving 'knowing why' career capital influences their world of work orientation (i.e. building of 'knowing what' career capital) may facilitate the protean-like (pure challenge) open-mindedness needed for career learning and employability.

## Limitations and future research

The findings should be interpreted against the backdrop of the cross-sectional nature of the research design. The participants originated from a single university institution in the study field of economic and management sciences. As such, the findings of the study should be regarded as exploratory in nature and no generalisations can be made at this stage. Future research could test the associations across various occupational contexts for distance learning employees in different study fields. The facets of the world of work orientation construct are time bound and may reflect individuals' 'knowing what' career capital developed over time. At different stages of their career and world of work experience, individuals might have different responses. Longitudinal studies that build time parameters at two or more points of measurement may be useful to assess shifts in, or stability of world of work orientation in relation to dominant career mindsets.

## Conclusion

Despite the research design limitations, the study revealed important preliminary insights that extended research on career anchor-related mindsets to the presently under-researched digital-era world of work domain. The career mindsets significantly influenced distance learning employees' world of work orientation and pointed to the implicit role of employees' 'knowing why' career capital in their approach-motivation towards important digital-era 'knowing what' career capital. Educators and career practitioners may seek to incorporate measures of distance learning employees' career mindset motivations and world of work orientation facets to enhance their competency and readiness for the digital-era workspace.

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## Authors' contributions

M.C., N.F. and I.L.P. contributed equally to the research and writing of the article.

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## Data availability

Data availability only upon approval of the corresponding author's research institution's research ethics committee and upon formal reasonable request to the author.

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