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Does integrated talent management foster competitive advantage in higher education institutions?

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Orientation: Today, industries and academic institutions across different continents, including those in South Africa, compete for the same talent, which presents the most valuable asset of an organisation. The surge in talent rivalry means that employers need to adopt strategies to distinguish themselves from their rivals.

Research purpose: The aim of this study was to develop a conceptual model to better understand how talent management (TM) creates value for higher education institutions.

Motivation for the study: Talent management research is primarily built around an exclusive approach to TM, yet how it works in practice and is implemented, conceived and developed in higher education, remains unclear. Hence, this study is needed to understand how integrated TM fosters competitive advantage in higher education institutions.

Research approach/design and method: A quantitative research method was, by means of a questionnaire. Primary data were collected from 265 academics across three universities in South Africa. The data were analysed using the Statistical Package for the Social Sciences and Analysis of Moment Structures.

Main findings: The results revealed that integrated TM practices (i.e. talent attraction, development and retention) positively contributed to sustainable competitive advantage of higher education institutions.

Practical/managerial implications: The study provides a better understanding of the role of integrated TM in improving competitive advantage. Also, the study will help shape the policy-making process on TM in higher education institutions.

Contribution/value-add: This study adds value to TM literature by designing a conceptual model for higher education institutions to achieve sustainable competitive advantage.

Keywords: competitive advantage; higher education institutions; talent attraction; talent development; talent management; talent retention.

Introduction

Today, industries and academic institutions from around the world, including those in South Africa, are all vying for the same pool of talent. This talent pool is undoubtedly the most valuable asset for any organisation. The surge in talent rivalry means that employers, including higher education institutions (HEIs), need to adopt strategies to distinguish themselves from their rivals. From the perspective of the knowledge-based view (KBV) of the firm, it is argued that talent is a unique resource for every organisation. The KBV of the firm assumes that organisational sustainability lies in the firm's ability to attract and develop new knowledge-based assets that create core competencies (Barney, 1996; Chebiego et al., 2021). According to the KBV of the firm, this study assumes that in order for HEIs to establish and sustain a competitive advantage, it is necessary for them to adopt an integrated talent management (TM) approach as a means of distinguishing themselves from their competitors.

The concept of global TM first appeared in the Journal of World Business, which is identified as a critical success factor for many organisations (Scullion et al., 2019). Since then, several academic debates have helped bring the topic of TM to a broader scholarly audience beyond the early human resource (HR) strategy (Järvi & Khoreva, 2020). Talent management is considered a lever capable of attracting, developing, and retaining skilled and talented employees to achieve a sustainable competitive advantage (Sareen & Mishra, 2016; Schiemann, 2014). The recent emphasis on TM worldwide marks a paradigm shift from the HR approach towards the strategic human resource management (SHRM) approach, driven by corporate strategy (Silzer & Dowell, 2009).

Collings and Mellahi (2009) point out that the concept of integrated TM is a unique approach to achieve competitive advantage because it helps in attracting, developing and maintaining the talent required. Gateau and Simon (2017) also concur that TM is the primary source of sustainability for many organisations because TM is important for the current knowledge economy. Nonetheless, it has been established that TM in HEIs is a relatively new and untapped opportunity. Its significance lies in offering HEIs a proven and practical way to gain a competitive advantage (Rudhumbu & Maphosa, 2015). Gallardo-Gallardo et al. (2020) confirm that empirically, TM research is primarily built around an exclusive approach to TM; yet how TM works in practice and how is implemented, conceived and developed in organisations, remains unclear. Musakuro (2022) also acknowledges that there is scarce research on the holistic TM system within South African HEIs, although previous studies have attempted to investigate some of the components that constitute TM. Musakuro (2022) further posits that TM practices such as workforce planning, succession planning and performance management, are poorly managed in South African HEIs.

For, Al Aina and Atan (2020), the ongoing debate surrounding what constitutes TM, is hampering the implementation of TM in most organisations, including HEIs. Furthermore, the authors claim that, although many studies have stressed the significant relationship between TM and organisational performance, what remains unclear is how TM practices can be employed to achieve sustainable organisational performance. Chethana and Noronha (2023) also acknowledge, despite an abundance of research on TM, most institutional leaders do not prioritise TM activities because new recruits take too long to be inducted and learn about their institutional culture and procedures. Chethana and Noronha (2023) further argue that the ineffective TM in HEIs results in a high staff turnover rate because leaders spend very little time on TM. Chethana and Noronha (2023) conclude that TM strategies in most HEIs are ineffective because they fail to engage, inspire and retain the talent required to achieve institutional goals. From the extant literature, this study observes that it is unclear how integrated TM delivers competitive advantage for HEIs, particularly within the South African context. Therefore, the study aims to determine whether integrated TM fosters competitive edge in HEIs. This study adds value to TM literature by designing a conceptual model for HEIs to achieve sustainable competitive advantage.

Theoretical framework

The KBV of the firm is the most appropriate theoretical lens that underpins this study. It considers knowledge to be the most strategically significant resource of the firm (Barney, 1991; Grant, 1996). From the perspective of the KBV of the firm, knowledge represents the most valuable resource required to achieve sustainable competitiveness and transform other resources. Therefore, Barney (1991) postulates that firms require dynamic capabilities to convert resources to build sustainable competitive advantage. However, these dynamic

capabilities and resources are difficult to imitate (Foss, 1996). Dynamic capability allows firms to build and reconfigure their capacity to compete in ever-changing business environments (Teece et al., 1997).

Zack (1999) argues that knowledge possessed by employees enhances the ability of the firm to compete with other rivals. Therefore, for HEIs to obtain sustainable competitive advantage, they need to integrate the philosophies and components of the KBV of the firm into TM policies and practices to attract, develop and retain academic talent.

Empirical literature

This section reviews the empirical literature on integrated TM and competitive advantage in the higher education (HE) sector.

Conceptualisation and contextualisation of the talent construct

Although many scholars have used the construct of talent in their studies, it appears that some of these definitions are context-driven and cannot be universal (Tansley, 2011; Tansley et al., 2013). To complicate this matter further, Van Zyl et al. (2017) contend that the lack of a conceptual definition and theoretical foundation of talent provides ambiguity for the methodology adopted for discovering talent within the work setting. Meyers et al. (2020) concur that, while there is a surge in research on TM, the conceptualisation of talent remains undefined and unclear. Wiblen and McDonnell (2020) argue that, given the conceptual challenges and limitations of talent, several calls have been made to explore how talent is understood in organisations, especially in the public sector context. This study answers this call by contributing to a better conceptualisation of talent within the HE context.

Joubert (2007) perceives talent as an individual ability to inspire, energise and arouse the emotions of others. Tyskbo (2023) conceptualises talent in two broad ways: non-contextual conceptualisations (i.e. general and related to official practices – talent as future leaders and talent as a general commitment) and contextual conceptualisations (i.e. specific and related to informal assumptions – talent as Trojans and specialists, talent as individual agility, and talent as public service awareness). For Vardi and Collings (2023), talent represents selected individuals in strategic roles. In other words, talent refers to employees who combine excellent input (i.e. excellent abilities) with outstanding output (performance and value creation).

To advance this argument about who and what constitutes talent, the study relies on two distinctive approaches: the object approach and the subject approach to talent. The former assumes that talent takes into account the exceptional and exclusive characteristics of individual employees. Within this school of thought, four approaches to talent can be distinguished, namely: talent as a natural ability, talent as

mastery, talent as commitment and talent as fit (Gallardo-Gallardo et al., 2013). Talent, as a natural ability, denotes the exceptional characteristics or abilities of employees that are assumed to be innate and rare (Meyers & Van Woerkom, 2014; Tyskbo, 2023).

Contrary to talent as a natural ability, Tyskbo (2023) contends that employee characteristics can also be viewed as, and assumed to be, developable and nurtured through organisational practices and learning. This notion underscores the importance of talent development or capacity building, which aims to develop the skills and competencies of employees required to function well on the job (Kaliannan et al., 2023). Consequently, this study considers talent to be the mastery of advanced knowledge, skills and abilities required to perform the job. According to Tyskbo (2023), who views talent as a commitment, the focus is on how employees are committed to their work and the organisation. Here, talent represents the intrinsic force that directs focus and enthusiasm, the eagerness and determination of employees, through their efforts and energies in order to contribute to organisational success. The 'fit approach' regards talent as the fit between the individual employee's talent and the practical context (Tyskbo, 2023). Thus, the right place, position and time within which the employee works in the organisation (Coulson-Thomas, 2012; Tyskbo, 2023).

According to the inclusive approach to talent, firms can adopt either an inclusive or exclusive approach (Gallardo-Gallardo et al., 2013). The inclusive approach to talent includes everyone in the organisation (Gallardo-Gallardo et al., 2013). The inclusive approach focusses on treating all employees as equals and providing them with an egalitarian distribution of resources (Jooss et al., 2019). Similarly, Vardi and Collings (2023) argue that inclusive talent assumes that all employees possess unique talent that needs to be identified and developed through systematic training. In contrast, the exclusive approach is based on workforce segmentation, which implies that talent refers to a subset of employees in the organisation (Thunnissen et al., 2013). This segmentation is based on two criteria: performance and potential. Performance as a criterion sees talent as a high-performance employee (Björkman et al., 2013). Thus, 'A' players rank top in terms of performance and capability. With potential as the criterion, talent refers to high-potential employees who can add value to the organisation (Tyskbo, 2023).

Conceptualisation and contextualisation of the term talent management

The concept of TM is not novel but is obscurely defined because of the complexity surrounding it (Lockwood, 2006). According to Collings and Mellah (2009), TM has no clear conceptual boundaries because of a lack of consensus among scholars. Gallardo-Gallardo et al. (2015) confirm that despite the limited consensus surrounding the definition of talent and TM and the appropriate methods to study these constructs, the academic literature on TM has noticeably expanded in recent times. Collings et al. (2019) share a similar

view that TM is one of the most debated ideas in management literature in the last two decades. However, the extant literature on the conceptualisation of TM remains problematic. Notwithstanding the conceptual problem surrounding TM, the focus is on talent attraction, development and retention. Järvi and Khoreva (2020) define TM as activities and processes that identify key positions which differentially contribute to organisational sustainable competitive advantage; developing a talent pool of high potential and high-performing incumbents to fill these roles; developing a differentiated HR architecture during the process of selection, to thereby ensure competent incumbents and to safeguard their continued commitment to the organisation.

The conceptual meaning of competitive advantage

The extant literature (Barney, 1991; Penrose, 1959) suggests that competitive advantage represents a firm's internal non-imitable resources. Barney (1991) argues that competitive advantage is associated with the value-creating strategy of a firm; value cannot be imitated by rivals in the present or future. According to Rofaida (2016), sustainable competitive advantage is a firm's ability to obtain and maintain a good market share within the industry. Friesenbichler and Reinstaller (2022) argue that competitive advantage stems from the strategic choices of a firm to seize market opportunities. For Correia et al. (2020), competitive advantage is measured on three variables: imitability, durability and ease of matching. Other scholars (Almulhim, 2020; Zhang & Zhang, 2022) have pointed out that competitive advantage stems from the value or benefits a firm can create for its customers.

Contrary to definitions by other scholars (Almulhim, 2020, Correia et al., 2020, Zhang & Zhang, 2022), this study argues that competitive advantage is not only obtained by doing something better than other competitors, through lower prices and quality products for example, competitive advantage can be obtained through the organisational ability to attract, develop and retain high-performing employees. This notion underscores the position of the resource-based view (RBV) of firm theory, which states that firms can obtain a competitive advantage through recruiting and retaining intellectual capital (Barney, 1991; Kogut & Zander, 1992).

Hypotheses development

In the current environment almost all organisations, including HEIs, face strong competition, be it for market share or to obtain scarce resources. The HE environment has undergone several changes, and the competition among HEIs continues to increase, leading to scholarly interest (Hart & Rodgers, 2023). These changes in the HE environment require more professional human capital to achieve a competitive edge. In their study, Miotto et al. (2020) argue that in the HE landscape, intangible assets, including reputation and legitimacy, are critical factors for gaining and sustaining competitive advantage. Contrary to other scholars

(Miotto et al., 2020), this study is based on the premise that three broad strategies of an integrated TM (i.e. talent identification and attraction, talent development and talent retention) impact the competitive advantage of HEIs.

Al Nsour and Tayeh (2018) ascertained that a moderate level of TM in the form of recruiting, developing, retaining and deploying talent, leads to a high level of competitive advantage achievement in the form of quality, flexibility, differentiation and cost. Ashif (2019) also established that TM is recognised as an alternative approach for achieving competitive advantage by many firms. Schreuder and Noorman (2019) argue that a comprehensive TM approach allows an organisation to attract, retain and successfully develop the employees needed to increase organisational competitiveness. Mujtaba and Mubarik (2021) confirmed that TM positively affects organisational sustainability by attracting, developing and retaining highly qualified intellectuals needed to compete in the industry. On the contrary, the findings by Thamage and Motshegwa (2021) suggest that although organisations have a TM strategy as part of their human resources management (HRM), these strategies are not effectively implemented, thereby compromising their competitive advantage. Chethana and Noronha (2023) share a similar sentiment that TM strategies are ineffective because they fail to engage, motivate and ensure talent retention and improve achievements at their institutions. Given this problem, South African HEIs are increasingly concerned with the future availability and supply of academics. It is evident from the discussion that there is a lack of consensus among scholars about how TM delivers a competitive advantage for organisations. Therefore, this study will shed more light on how TM delivers a sustainable competitive advantage for HEIs. Considering these findings, the following hypothesis was proposed:

H1: A significant positive relationship exists between integrated talent management and competitive advantage in HEIs

According to Tarique and Schuler (2010), talent attraction is the process by which a firm competes for intellectual capital in the global market. These days, given the competition for talent, it has been found that many HEIs still face significant challenges in attracting high-performing and talented staff, especially academics (Fox Tree & Vaid, 2022). It is argued that firms which have the ability to identify and match the inherent talent of candidates with their responsibilities and culture are more likely to enjoy a competitive advantage by building a more solid foundation for the future. Thus, talent acquisition contributes to competitive advantage by identifying and attracting highly skilled employees required to perform the job. In contrast, Al Aina and Atan (2020) found that talent attraction and development had no impact on sustainable organisational performance. In light of these findings, the following hypothesis was proposed:

H2: A significant positive relationship exists between talent attraction and competitive advantage in HEIs

Fajčíková et al. (2016) contend that talent development constitutes a modern approach to human resource management (HRM) that focusses on developing the potential and competencies of employees to obtain a competitive advantage. Bolander et al. (2017) see talent development as a technique for nurturing talent. Mujtaba and Mubarik (2021) found that talent development positively impacts the sustainability of an organisation. In their study, Abiwu and Martins (2022) acknowledge that talent development strategies such as training and development, as well as career development, positively influenced the sustainability of South African universities because most employees value the developmental opportunities offered by their employers. Thus, through talent development, HEIs can nurture the talent required to achieve sustainable competitive advantage through training, development and career development.

On the contrary, Kaliannan et al. (2023) discover that, although inclusive talent development, coupled with other TM practices, contribute to individual growth and organisational performance, the evidence for and discussion of talent development and competitive advantage remain scarce. Thus, implementing talent development in most organisations appears underutilised or disjointed. These challenges prevent organisations from having the required skills and competencies, which are rare and inimitable. In most cases, the challenge of implementing talent development resulted in decreased productivity and innovation, customer service delivery, loss of market shares, delayed key strategic initiatives and inability to achieve high growth forecast, thus negatively impacting competitive advantage. In light of these findings, the following hypothesis was proposed:

H3: A significant positive relationship exists between talent development and competitive advantage in HEIs

Talent retention involves the science of maintaining employees in their current jobs within the organisation for a longer period (Lewis & Heckman, 2006). According to Barkhuizen et al. (2017), almost half the academics in South African HEIs consider leaving their jobs. Therefore, this study aims to establish whether academic talent retention fosters sustainable competitive advantage in HEIs. Oladapo (2014) suggests that organisational success, profitability and sustainability are determined by a firm's ability to retain and sustain top talent. Nzimande et al. (2023) believe that talent retention is a vital strategy in fostering teaching and learning practices and promoting collaboration between staff members and management. Mujtaba and Mubarik (2021) discovered that talent retention positively impacts organisational sustainability. Although it has been established that talent retention leads to a competitive advantage, the extent to which it fosters a competitive advantage in HEIs remains unclear. Therefore, this study expands the theoretical understanding and knowledge of how talent retention fosters competitive advantage in HEIs. In light of these findings, the following hypothesis was proposed:

H4: Talent retention will positively influence the competitive advantage of HEIs

This study presents the structural equations as follows:

$$Y_{ITM} = \alpha + \beta_1 TIA + \beta_2 TD + \beta_3 TR + \varepsilon_1 \qquad \text{[Eqn 1]}$$

$$Y_{CA} = \alpha + \beta_1 ITM + \varepsilon_2 \qquad \text{[Eqn 2]}$$

where ITM is integrated talent management, TIA is talent identification and attraction, TD is talent development, TR is talent retention and CA is competitive advantage.

Conceptual model

The conceptual model that guides this study is graphically presented in Figure 1.

As shown in the conceptual model (Figure 1), this study suggests that three broad strategies constitute an integrated TM (i.e. talent identification and attraction, talent development and talent retention) which impact the competitive advantage of HEIs. According to Gateau and Simon (2017) and Mujtaba and Mubarik (2021), TM has a proven and practical way to create value for organisations by attracting, developing and retaining the talent required to perform a given task. Organisational competencies and skills are attracted, developed and maintained through integrated TM; therefore, HEIs can leverage TM practices to compete for the talent required to achieve competitive advantage.

Research design and methodology
Research strategy

Descriptive research was conducted to adequately describe the relationship between integrated TM and competitive advantage. Siedlecki (2020) believes that descriptive research aims to adequately describe the events in their natural settings, as in this case. Descriptive research helped to prevent the manipulation of the results, thereby enhancing the validity of the results.

Research approach

A cross-sectional survey design was used to analyse the data from the population at a single point in time (Wang & Cheng, 2020). The cross-sectional study allowed the researcher to measure the research outcomes and participants' exposures at the same time. The quantitative research method was employed to quantify the relationship between TM and competitive advantage. Quantitative research aims to measure a phenomenon by collecting and analysing statistical data (Castellan, 2010).
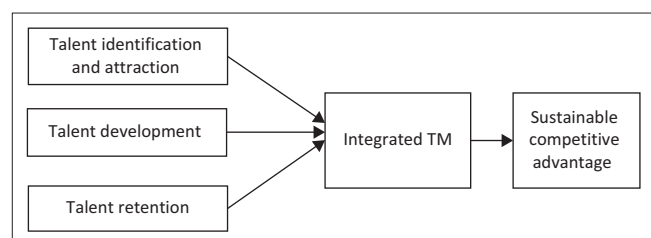
TM, talent management.
FIGURE 1: Integrated talent management and sustainability.

Research setting

This study was conducted at three South African HEIs, located at KwaZulu-Natal, Western Cape and Gauteng. These institutions have granted permission for the research to be conducted. Also, the written consent of the respondents was obtained before the data collection. These institutions were selected because they are pre-eminent in South Africa, contributing to quality education. Furthermore, they were chosen because relevant and rich information could be collected from the participants.

Target population and sampling method

The target population ($N = 3613$) included academics, cluster leaders, deans and professional services (HR directors, HR managers and HR development officers). However, the unit of analysis was only academics. The study applied a 5% margin of error and 95% confidence level to determine the sample size. Therefore, the sample size was calculated to be 317. The stratified method was used to select respondents. Etikan and Bala (2017) advocate that stratified sampling is more useful in obtaining a representative of a good sample. Certain criteria were employed to select the samples for the study. An essential inclusion criterion used was that the scope of the study was limited to academics within the three institutions. Moreover, the study included only those with more than 2 years of working experience in each of the selected universities.

Data collection instrument

The data were collected using a self-developed questionnaire, which was developed from empirical literature and was pre-tested before the data collection. The pilot study involved five participants from one South African HEI in the KwaZulu-Natal province. These participants were excluded from the actual study. The pilot study results indicated no reliability and validity issues with the study. The results showed that items measuring each research objective such as talent attraction ($\alpha = 0.840$), talent development ($\alpha = 0.983$), talent retention ($\alpha = 0.898$) and competitive advantage ($\alpha = 0.963$) had Cronbach's alpha scores exceeding the recommended value ($\alpha = 0.700$). Moreover, items with loadings > 0.4 were retained for the analysis using the exploratory factor analysis (EFA). Overall, the pilot study results suggested that the data set complied with the requirements of sampling adequacy and sphericity for EFA to be performed. All study variables were measured on a 5-point scale, ranging from strongly disagree (1) to strongly agree (5).

The measuring instrument comprised of 31 items: talent attraction – six items (i.e. the duties of the staff in this university are clearly set out and defined in the job advertisement, the expected work experience of the staff is clearly stated in the advertisement, the qualification for a job in the university is stated in the job advertisement, the university has a good reputation as an employer of choice in the education sector, vacancies are advertised in the recruit medium for people to apply and the interviews are

conducted by a panel of experts); talent development – seven items (i.e. there is enough opportunities for training and development within the university, there is an opportunity for transfer of knowledge in the university after staff complete their training and development programmes, the training and development opportunities in the university helped staff to become more creative and innovative in their job, there exists several opportunities for training and development for academics in this university, the university evaluates and manages staff performance, academics are encouraged to develop their knowledge and skills, research output is considered as a criterion for promotion); talent retention – ten items (i.e. I feel appreciated at work, my superior gives me an honest explanation for decisions, my superior seems concerned about my welfare, I find it easy to communicate with my line manager, my line manager trusts me even when I make genuine mistakes, my line manager is always accessible, my line manager respects me, my supervisor provides me with relevant information pertinent to my job, I have quality relationship with my line manager and my line manager is always happy to listen to my recommendations) and competitive advantage – eight items (i.e. the university recognises academics as valuable resources which are very distinctive from other resources, the university considers academics as rare resources which are very difficult for other institutions to acquire, academics in my university are considered as resources which cannot be imitated by other universities, the university recognises academics as key resources which are difficult to replace with another strategic equivalent, the university is committed to the well-being of all staff including academics, the academics in my institution are fully utilised to the best of their advantage, there exists several HRM practices and strategies to retain skilled academics in this university and the universities considers investing in my training and developmental needs). It must be noted that the integrated TM was measured by aggregating all the items for talent attraction, development and retention. The online survey was used to collect the data from 265 respondents (academics) in the three universities.

Data quality and integrity

Reliability and validity are the most effective tools for evaluating the quality and integrity of research instruments. While Cronbach's coefficient alpha was used to measure the reliability of the measuring instrument, EFA was used to determine the validity of the measuring instrument. Traub and Rowley (1991) suggest that the reliability score ranges from 0 to 1, with perfect reliability equalling 1, and no reliability equalling 0. Downing (2004) argues that reliability scores between 0.70 and 0.80 may be acceptable. Therefore, a reliability score of 0.70 and above was considered acceptable.

This study employed internal validity, which consists of content and construct validity. Content validity measures the degree to which the research instrument covers the content it is supposed to measure (Yaghmaei, 2003). The EFA, confirmatory factor analysis (CFA) and principal

components analysis (PCA) were further employed to determine the validity of the questionnaire. The EFA was used to evaluate the relationship between latent variables developing theoretical constructs. Joseph et al. (2012) attest that the CFA is used to verify the factor structure of a set of observed variables. The theoretical constructs in the study included integrated TM practices, talent attraction, talent development, talent retention and competitive advantage. The CFA was applied to determine the relationship between these variables. In the CFA, a pattern matrix using Promax rotation was applied to determine the loadings.

The PCA is an analytical tool outlining a data table in which observations are described by several inter-correlated numerical dependent variables (Abdi & Williams, 2010). The data were captured in the Statistical Package for the Social Sciences (SPSS) (version 27, SPSS Inc., West Madison, Chicago, U.S.), The SPSS, which was designed by IBM Corporation, performs the comparison and correlational statistical tests in the univariate, bivariate, and multivariate analysis for parametric and non-parametric statistical techniques (Ong & Puteh, 2017), and a PCA was carried out on all the items, using a direct, oblique rotation. The principal goal was to achieve a parsimonious solution by describing the original variation of the data set using a few underlying components. Only items with loadings > 0.4 were regarded as highly significant when extracting the factors.

Kaiser–Meyer–Olkin (KMO) and Bartlett's Test was further employed to test the sampling adequacy. The KMO and Bartlett's measures the adequacy of the sample size, ranging from 0 to 1, reaching 1 when all the items are perfectly estimated without an error: where: ≥ 0.90 = marvellous; ≥ 0.80 = meritorious; ≥ 0.70 = middling; ≥ 0.60 = mediocre; ≥ 0.50 = poor; < 0.50 = unacceptable. According to the rule of thumb, the KMO score should be 0.60 or higher to be significant.

Ethical considerations

The ethical clearance protocol was approved by the Research Ethics Committee of the University of KwaZulu-Natal Humanities and Social Sciences (reference number: HSSREC/00000852/2019). The questionnaires were captured on Google Forms (https://forms.gle/yiZWjCHjjXZwSmDj7) and were placed among the institution's notices. Additionally, the link was emailed to the respondents. After several weeks of follow-up and gentle reminders to the respondents regarding the completion of the electronic survey, 265 responses were retrieved. The survey did not collect any information that disclosed the identity of the respondents. The survey began with an introduction as well as an informed consent form, emphasising that participation is voluntary. Respondents had the right to refuse to participate in this study and may withdraw from it at any time. It was pointed out that the survey responses are confidential and anonymous, only aggregate information was reported in this study.

Results

As is evident in Table 1, male respondents (50.6%) participated more than their female counterparts (49.4%). Moreover, most respondents were between 41 years and 50 years old (30.2%) and between 51 years and 60 years old (29.8%). White (38.9%) and African (30.6%) races constituted more respondents than the other population groups. The results showed that most respondents held a Doctorate degree (74%), followed by a Master's degree (26%). The results indicated that 40% of the respondents were from Institution B, followed by Institutions C (32.8%) and A (27.2%). Most respondents were from the faculty of business (28.7%). The results further suggested that lecturers (31.3%), professors (29.1%) and senior lecturers (27.9%) represented the majority of respondents. The results revealed that 32.1% and 21.9% of the respondents had worked in their respective institutions for between 6 years and 10 years and between 11 years and 15 years, respectively.

TABLE 1: Description of the biographies of the respondents.

Variable	Categories	Frequency	%
Gender	Male	134	50.6
	Female	131	49.4
Age (years)	26–30	6	2.3
	31–35	21	7.9
	36–40	43	16.2
	41–50	80	30.2
	51–60	79	29.8
	61 and above	36	13.6
Population group/race	African people	81	30.6
	Indian people	47	17.7
	Coloured people	34	12.8
	White people	103	38.9
Qualifications	Masters	69	26.0
	Doctorate	196	74.0
Institutions	A	72	27.2
	B	106	40.0
	C	87	32.8
Faculties	Business/Commerce	76	28.7
	Education	27	10.2
	Health Sciences	40	15.1
	Engineering and Built Environment	26	9.8
	Humanities	34	12.8
	Law	19	7.2
	Science	25	9.4
	Theology and Religion	2	0.8
	Natural and Agricultural Sciences	16	6.0
Positions	Junior lecturers	1	0.4
	Lecturers	83	31.3
	Senior lecturers	74	27.9
	Associate professors	30	11.3
	Professors	77	29.1
Tenure (years)	< 2	22	8.3
	2–5	48	18.1
	6–10	85	32.1
	11–15	58	21.9
	16–20	25	9.4
	21 and above	27	10.2
Employment status	Full-time	197	74.3
	Fixed-term	51	19.2
	Contract	17	6.4

Most respondents were full-time employees (74.3%) within the three institutions.

Moreover, the study utilised descriptive statistics such as mean, standard deviation (SD) and correlation matrix to analyse the data. The mean represents a simple arithmetic average of all values (Wilson, 2010). According to the rule of thumb, using a scale of 1–5, a mean score value of 3.00 and above is considered significant, while a score below 3.00 is considered insignificant. The SD describes the degree to which the data value for the construct is spread around the mean value. It is used to measure dispersion, which is the square root of the variance that describes the range of variability in a dataset (Sekaran & Bougie, 2016). Correlation is a type of inferential statistic that determines the bivariate relationship between two targeted variables (Pallant, 2015).

As shown in Table 2, items measuring integrated TM (mean = 4.40), talent attraction (mean = 4.44), talent development (mean = 4.38), talent retention (mean = 4.40) and competitive advantage (mean = 4.24) had very high mean scores, exceeding 3.00. Statistically, it can be concluded that all variables that form part of this study are highly significant. Moreover, Pearson's correlation analysis indicated a strong positive relationship between integrated TM and sustainable competitive advantage ($r = 0.683$, $p < 0.0.01$). Also, there was a strong positive relationship between talent attraction and competitive advantage ($r = 0.728$, $p < 0.0.01$). There was a moderate relationship between talent development and competitive advantage ($r = 0.554$, $p < 0.0.01$). Finally, there was a strong positive relationship between talent retention and competitive advantage ($r = 0.625$, $p < 0.0.01$).

Measurement model

The structural equation modelling (SEM) procedure was applied to examine whether the proposed hypothesised model (see Figure 1) is appropriate. Confirmatory factor analysis was employed to assess the reliability and validity of the proposed model. Subsequently, a structural model was estimated and used to test the hypotheses. The CFA suggested that some items from talent attraction, talent development and talent retention were removed from the questionnaire to improve the model fit. Before testing the hypotheses, the reliability and validity of the remaining items were tested. Cronbach's alpha coefficient was calculated for the dimensions of the independent variables (integrated TM, talent identification, development and retention) and the dependent variable (competitive advantage) to determine the reliability of the

TABLE 2: Descriptive statistics and the correlation matrix.

Variable	Mean	SD	1	2	3	4
1. Talent management	4.40	0.48545	-	-	-	-
2. Talent attraction	4.44	0.47153	0.728**	-	-	-
3. Talent development	4.38	0.48879	0.827**	0.554**	-	-
4. Talent retention	4.40	0.65711	0.928**	0.527**	0.625**	-
5. Competitive advantage	4.24	0.79885	0.683**	0.542**	0.571**	0.587**

SD, standard deviation.
**, $p < 0.001$.

questionnaire. As shown in Table 3, the reliability scores range from 0.76 (talent attraction) to 0.95 (competitive advantage).

The validity of each item of the questionnaire was also determined. The 'average variance extracted' (AVE) was used to assess the 'convergent validity' of the test. According to the rule of thumb, each item should have sufficient weight (loading ≥ 0.3) and a significant value (t-value ≥ 1.96) for its postulated structure to demonstrate reasonable validity (Anderson & Gerbing, 1988). Moreover, the AVE score should be ≥ 0.50 (Fornell & Larcker, 1981).

The values of Cronbach's alpha coefficient for the dimensions of the independent and dependent variables, such as talent attraction ($\alpha = 0.76$), talent development ($\alpha = 0.81$), talent retention ($\alpha = 0.94$) and competitive advantage ($\alpha = 0.94$), had high levels of inter-item consistency, exceeding 0.70. Statistically, these findings indicate a reasonable degree of reliability, because they are above the threshold. The weights of the items ranged from 0.44 to 0.87, and were significant at the 0.01 level, indicating that each item was weighted correctly and significantly on its hypothesised structure. The AVE values for talent development (0.523), talent retention (0.593) and competitive advantage (0.671) were above the proposed threshold of 0.50, with the exception of talent

TABLE 3: Reliability and validity of the measuring instrument.

Variables	Cronbach's alpha (α)	CR	AVE	Item	Weights
Talent attraction (TA)	0.76	0.820	0.433	TA1	0.606***
-	-	-	-	TA2	0.689***
-	-	-	-	TA3	0.704***
-	-	-	-	TA4	0.639***
-	-	-	-	TA5	0.665***
-	-	-	-	TA6	0.629***
Talent development (TD)	0.81	0.863	0.523	TD1	0.757***
-	-	-	-	TD2	0.865***
-	-	-	-	TD3	0.829***
-	-	-	-	TD4	0.572***
-	-	-	-	TD5	0.439***
-	-	-	-	TD6	0.764***
-	-	-	-	TD7	0.596***
Talent retention (TR)	0.94	0.936	0.593	TR1	0.749***
-	-	-	-	TR2	0.737***
-	-	-	-	TR3	0.803***
-	-	-	-	TR4	0.735***
-	-	-	-	TR5	0.715***
-	-	-	-	TR6	0.719***
-	-	-	-	TR7	0.819***
-	-	-	-	TR8	0.816***
-	-	-	-	TR9	0.812***
-	-	-	-	TR10	0.786***
Competitive advantage (CA)	0.94	0.942	0.671	CA1	0.835***
-	-	-	-	CA2	0.772***
-	-	-	-	CA3	0.820***
-	-	-	-	CA4	0.846***
-	-	-	-	CA5	0.855***
-	-	-	-	CA6	0.827***
-	-	-	-	CA7	0.802***
-	-	-	-	CA8	0.794***

CR, composite reliability; AVE, average variance extracted.

***, $p < 0.001$.

attraction (0.433). Hence, it can be deduced that the measurement model indicated the convergent validity of the measuring instruments used to measure talent development, talent retention and competitive advantage in HEIs.

Regression analysis was run using the baseline model in Eqn (1), with the output indicated in Table 4. In Model 1, talent attraction was regressed with integrated TM by controlling other related factors. The results reported in Model 1 show that when the value for talent identification and attraction in HEIs increases by 73%, the mean of integrated TM also increases by the same margin. The model had a cross-variable variance of 53% (Adj $R^2 = 0.536$, $F = 305$, $p < 0.001$), meaning about 47% unexplained judging from the adjusted coefficient of determination. In Model 2, talent development was included in the analysis to examine the cross-variable variance. The results show a significant drop in the coefficient of talent attraction from 0.73 to 0.41 ($p < 0.001$). Talent development recorded a significant coefficient of 0.57 ($p < 0.001$), which increased integrated TM by 57%. The inclusion of talent development in regression Model 2 increased the cross-variable variance to 77% (Adj $R^2 = 0.770$, $F = 441$, $p < 0.001$), judging from the adjusted coefficient of determination. By implication, talent attraction and development jointly explain 77% of the variations in integrated TM in HEIs in South Africa. All identified TM practices (talent attraction, development and retention) were used in Model 3. The results show that all independent variables made significant contributions to the integrated TM by the beta loading of each independent variable in the model. The adjusted coefficient of determination (Adj $R^2 = 0.873$, $p < 0.001$) shows that the explanatory variables had a joint significant influence of 87% on integrated TM.

In examining the relationship between integrated TM and sustainable competitive advantage, this study brings to the fore the following findings, as shown in Table 5. From Table 5, the study presents four different models of the link between integrated TM and competitive advantage. Model 1 regresses the aggregate-integrated TM on competitive advantage. Competitive advantage increased by 64% for

TABLE 4: The effects of talent management practices on integrated talent management.

Variable	Model (1)	Robust s.e.	Model (2)	Robust s.e.	Model (3)	Robust s.e.
Integrated talent management *Specifications*						
Constant	22.98***	3.99	1.81	3.09	-2.84	0.00
Talent attraction	0.733***	0.18	0.417***	0.15	0.235***	0.00
Talent development	-	-	0.578***	0.11	0.297***	0.00
Talent retention	-	-	-	-	0.630***	0.00
Observation	256	-	256	-	256	-
R^2	0.538	-	0.771	-	0.873	-
Adjusted R^2	0.536	-	0.770	-	0.873	-
VIF	1.000	-	1.420	-	1.730	-
Tolerance	1.000	-	0.700	-	0.576	-
Durbin Watson	1.880	-	1.950	-	1.900	-

Source: Field Data-South African Higher Education Institutions (2020)

Note: Dependent variable: integrated talent management.

s.e., standard error; VIF, variance inflation factor.

***, $p < 0.001$.

TABLE 5: The influence of integrated talent management on competitive advantage.

Variable	Model (1)	Robust s.e.	Model (2)	Robust s.e.	Model (3)	Robust s.e.	Model (4)	Robust s.e.	Model (5)	Robust s.e.
Competitive advantage *Specifications*										
Constant	-2.67	2.68	4.72	3.11	4.97	2.85	8.85***	2.16	-4.19	3.03
Integrated talent management	0.646***	0.03	-	-	-	-	-	-	-	-
Talent attraction	-	-	0.503***	0.14	-	-	-	-	0.199***	0.15
Talent development	-	-	-	-	0.534***	0.11	-	-	0.212***	0.13
Talent retention	-	-	-	-	-	-	0.587***	0.05	0.352***	0.06
Observation	256	-	256	-	256	-	256	-	256	-
R^2	0.417	-	0.253	-	0.285	-	0.344	-	0.420	-
Adjusted R^2	0.415	-	0.250	-	0.282	-	0.342	-	0.413	-
VIF	1.000	-	1.000	-	1.000	-	1.000	-	1.074	-
Tolerance	1.000	-	1.000	-	1.000	-	1.000	-	0.576	-
Durbin Watson	1.470	-	1.510	-	1.340	-	1.004	-	1.048	-

Note: Dependent variable: competitive advantage.

s.e., standard error; VIF, variance inflation factor.

***, $p < 0.001$.

TABLE 6: Summary of results from the hypotheses.

Hypothesis	Variable	Regression	n	p	Adj R^2	Robust s.e.	Decision
H1	Integrated talent management will positively influence competitive advantage	β = 0.646	256	< 0.001	0.415	0.03	Accepted
H2	Talent attraction will positively influence competitive advantage	β = 0.503	256	< 0.001	0.250	0.14	Accepted
H3	Talent development will positively influence competitive advantage	β = 0.534	256	< 0.001	0.282	0.11	Accepted
H4	Talent retention will positively influence competitive advantage	β = 0.587	256	< 0.001	0.342	0.05	Accepted

s.e., standard error.

every unit increase in the integrated TM. This relationship can be further explained by the fact that integrated TM practices in HEIs could contribute to sustainable competitive advantage. The model had a cross-variable variance of 41% (Adj R^2 = 0.415, $p < 0.001$).

Models 2–4 assessed the relationship between integrated TM practices (talent attraction, development and retention) and competitive advantage to determine their level of significance and, as theorised, these factors were positively significant, except with a lower coefficient of determination (R^2). To explain the correlation in Model 2, it is imperative to note that talent attraction is an output that increases sustainable competitive advantage in HEIs.

Model 3 focusses on talent development strategies that contribute to the competitive advantage of South African HEIs. This includes organisational learning, training and development, career planning and management. These results are consistent with those of previous empirical research. For instance, Williamson (2011) argues that in a competitive and dynamic business environment, learning and development are considered the most vital strategic tools that deliver success for an organisation. From the perspective of the KBV of the firm, knowledge acquired through continuous learning and development helps employees create value for their organisation.

In Model 4, there is an exponential increase in the coefficient of talent retention, as it increases competitive advantage by 58% within the HEIs. Talent retention strategies influence employee commitment, dedication and loyalty to work towards organisational goals.

Integrated TM practices (talent attraction, development and retention) were integrated into Model 5. The findings suggest that independent variables significantly contribute to competitive advantage, as per the beta loading of each independent variable in the model. In Model 5, the inclusion of other variables as controls seems to have increased the coefficients of the various integrated TM practices. This partly explains the competitive advantages of HEIs in South Africa.

Table 6, the Regression Model 1 suggests an R^2 of 0.417 and an adjusted R^2 of 0.415. This implies that the model (integrated TM) predicts 41% of the variations in competitive advantage. This is significant ($p < 0.01$), meaning a significant relationship exists between integrated TM and competitive advantage in HEIs. The results support the hypothesis that a significant positive relationship exists between integrated TM and competitive advantage. Moreover, the regression model 2 indicates an R^2 of 0.253 and an adjusted R^2 of 0.250. The results suggest that Model 2 (talent attraction) predicts 25% of the variations in competitive advantage. This is also significant at ($p < 0.01$), meaning a significant relationship exists between talent attraction and competitive advantage.

These results support hypothesis two, which states a significant positive relationship exists between talent attraction and competitive advantage. In addition, regression Model 3 showed an R-value of 0.285 and an adjusted R-value of 0.282. This implies that the model (talent development) predicts 28% of the variations in competitive advantage. This is also significant at ($p < 0.01$), meaning that a significant relationship exists between talent development and competitive

advantage. Therefore, the findings support the hypothesis that a significant positive relationship exists between talent development and competitive advantage. Furthermore, regression model 4 showed an *R*-value of 0.344 and an adjusted *R*-square of 0.342. The results indicate that the model (talent retention) predicts a 34% difference in competitive advantage. This is also significant at ($p < 0.01$), indicating that a significant positive relationship exists between talent retention and competitive advantage.

The standardised beta and the corresponding *p*-values for integrated TM (β = 0.646, $p < 0.010$), talent retention (β = 0.587, $p < 0.010$), talent development (β = 0.534, $p < 0.010$) and talent attraction (β = 0.503, $p < 0.010$) indicated that integrated TM and talent retention had the highest impact on competitive advantage in South African HEIs, followed by talent development and attraction. Given these results, it can be concluded that integrated TM, talent retention, development and attraction jointly serve as predictors of competitive advantage in South African HEIs. Hence, the hypotheses that underpin the study may be fully accepted.

Table 6 summarises the results from the hypotheses.

Discussion

The primary aim of the study was to determine whether integrated TM fosters competitive edge in HEIs. To achieve the broad aim, four hypotheses were formulated and tested statistically.

Model 1 regresses the aggregate-integrated TM on competitive advantage. The overall results explain that integrated TM practices in HEIs could contribute to sustainable competitive advantage. The results of this study are consistent with the findings of existing research (AlMannai et al., 2017; Gateau & Simon, 2017), which state that TM is the primary source of competitive advantage for organisations, including HEIs. Schreuder and Noorman (2019) confirm that a comprehensive TM approach allows an organisation to attract, retain and successfully develop the employees needed to increase organisational competitiveness. Mujtaba and Mubarik (2021) maintain that TM positively impacts organisational sustainability by attracting, developing and retaining the intellectual capital required to perform the tasks. In contrast, the findings of Thamage and Motshegwa (2021) revealed that although organisations have a TM strategy as part of their HRM policy, they are not effectively implemented, thereby compromising their competitive advantage.

Models 2–4 regress the decomposed integrated TM practices (talent attraction, development and retention) on competitive advantage to determine their level of significance and, as theorised, these factors were positively significant, except with a lower coefficient of determination (R^2). The correlation in Model 2 indicates that talent attraction is an output that increases sustainable competitive advantage in HEIs. This implies that talent attraction practices such as job analysis, recruitment and selection, and employer branding could be leveraged by HEIs to achieve a sustainable competitive advantage. According to Phillips and Roper (2009), attracting the best talent provides a competitive advantage for organisations. In contrast, Al Aina and Atan (2020) find no relationship between talent attraction and sustainable organisational performance because it is poorly implemented in most organisations.

Model 3 focusses on talent development strategies that contribute to the competitive advantage of South African HEIs. The overall results suggest that talent development positively influences competitive advantage. In a competitive and dynamic business environment, learning and talent development are considered the most vital strategic tools that deliver success for an organisation. Abiwu and Martins (2022) discovered that talent development strategies, such as training and development as well as career development, positively influenced the sustainability of South African universities during the coronavirus disease 2019 (COVID-19) pandemic. From the perspective of the KBV of the firm, knowledge acquired through continuous learning and development helps employees create value for their organisation.

In Model 4, there is an exponential increase in the coefficient of talent retention, as it increases competitive advantage by 58% within the HEIs. Talent retention strategies influence employees' commitment, dedication and loyalty to work towards organisational goals. Oladapo (2014) states that organisational success, profitability and sustainability are determined by the firm's ability to retain and sustain top talent. This implies that organisations capable of retaining top talent are more likely to increase their profitability and competitive advantage. According to Mujtaba and Mubarik (2022), TM strategies, such as talent retention, are an indispensable source of sustainability for organisations. On the contrary, Thamage and Motshegwa (2021) discover that although organisations have a TM strategy as part of their HRM, they are not effectively implemented, thereby compromising their competitive advantage. Chethana and Noronha (2023) concur that TM strategies in HEIs are ineffective because they fail to engage, motivate and ensure talent retention and improve achievements at their institutions.

Managerial and theoretical implications

Managing talent is a daunting task for many organisations worldwide, especially HEIs. The extant literature shows that concern about talent scarcity is a global phenomenon because HEIs and organisations compete for the same talent. This challenge, if not addressed in the short run, will threaten the sustainability of HEIs. Against this background, this study sought to investigate whether integrated TM fosters the competitive advantage of HEIs. From a managerial standpoint, the findings of this study will help shape the policy-making process for TM in HEIs. Thus, the study will help the management of HEIs develop a comprehensive policy on TM that will help attract, develop and retain the intellectual capital required to compete. Also, the study will

help mitigate the shortage of skills and talent in HEIs by adopting integrated TM approaches and practices. Additionally, the study will position HEIs at the cutting edge because it better explains how HEIs can leverage integrated TM to attract and maintain highly skilled and high-performing employees who can deliver on the job.

Theoretically, the study expands the knowledge of integrated TM and competitive advantage in HEIs. Therefore, the findings will help extend the frontier of knowledge in HRM and SHRM, which will serve as reference material for students, academics, researchers, government, employees, employers, HEIs, policy-makers, HR practitioners and governments. Another theoretical implication of the study is that it educates the management of HEIs about how to implement TM practices to address the challenges of managing talent. The findings could create a sustainable competitive advantage for HEIs because TM creates a positive workplace culture that nurtures and retains talent.

Limitations and future research

The limitations of this study are the following: it relied on the quantitative approach to ascertain whether integrated TM fosters sustainable competitive advantage for HEIs. The implication is that the research findings may not accurately capture the context and subjective opinions as well as experiences of the respondents. Therefore, a future study should combine quantitative and qualitative methods (mixed-method) to provide a more complete picture of how integrated TM fosters competitive advantage in HEIs. Moreover, this study involved only academics in South African HEIs, making the generalisation of the results challenging because of the differences in the organisational context. Thus, the findings could only be applied to HEIs in South Africa. Given this limitation, future research should combine HEIs and other industries.

Conclusion and recommendations

In this dynamic business environment, HEIs face the challenges of managing their intellectual capital. Therefore, TM has become a priority for many institutions across the globe, including those in South Africa. Talent management is considered a broad strategy for attracting, developing and retaining highly skilled employees in strategic positions. The overall research findings showed that integrated TM practices fostered sustainable competitive advantage for HEIs by attracting, developing and retaining qualified academics needed to compete. The study concludes that TM is becoming increasingly important for individual talent growth, retention and organisational performance to achieve sustainable competitive advantage as premised by the KBV of the firm. The study recommends that the management of HEIs invest in TM practices to create a positive climate for attracting, nurturing and retaining the talent needed to achieve sustainable competitive advantage. Also, HEIs should pay attention to talented academics and invest in human capital that is qualified and skillful in order to add value to the institution. In doing the latter, the institution must offer career support and developmental opportunities for employees to improve their skills, knowledge, experiences and other abilities to function optimally.

Competing interests

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

Authors' contributions

L.A. contributed towards the conceptualisation, methodology, formal analysis, investigation, writing of the original draft, visualisation, project administration, software, validation, data curation and resources. I.M. was the supervisor and contributed towards the review and editing.

Data availability

The authors confirm that the data supporting the findings of this study are available within the article or from the corresponding author, L.A., upon reasonable request.

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