The influence of knowledge management technology on knowledge management processes in small training providers

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Keywords

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Abstract

This study investigated the influence of knowledge management technology on the knowledge management processes in small training providers. In the contemporary educational landscape, small training providers face unique challenges in managing and leveraging knowledge due to limited resources and infrastructure. Using insights from technology and KM processes literature, including the resource-based view (RBV), this paper creates an integrative conceptual model to examine the relationships under investigation. This research adopted a quantitative approach, with the use of surveys to collect data from 237 employees. A non-probability sampling method, to be specific a convenience sampling technique was utilised in the study. Data analysis was executed using the SPSS version 25.9 and Smart-PLS software. The findings reveal that KM technology has a positive relationship on all the KM processes (creation, capturing, storing and sharing). Specifically, KM technology facilitates the systematic capture and organisation of knowledge, improves accessibility and sharing among staff, and supports the practical application of knowledge in training programmes. This research highlights the transformative potential of technology in small training providers, offering actionable insights for the management and employees in aiming to foster a more agile and knowledge-driven educational environment. Future research could involve employing other research approaches and be carried out in other settings.

1. Introduction

1.1. Background

Small training providers play a crucial role in contributing to South Africa's socio-economic stability by offering additional opportunities for training and development, specialised trades, and business

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skills, which are essential for the economy (Jackson, 2016). Skills development has been a key focus in South Africa's policy landscape in recent years (Wedekind, 2013). At present, small training providers must focus on the best ways to enhance trainees' skills and abilities to meet workplace demands, as the evolving work landscape heightens the need for these enterprises to prioritise 21st-century skills training (Charles & Nawe, 2017). According to Bisschoff and Govender (2007), a small training provider includes individuals, companies, or contractors who offer both internal and external training to prospective employees or employees in a professional environment. Small training providers play a significant role in a knowledge-driven economy. As learning organisations, they have the potential to enhance knowledge skills, produce highly qualified trainees, foster creativity and innovation, and effectively collaborate in the creation of knowledge and the development of intellectual property (Cunningham, Theilacker, Gahan, Callan & Rainnie, 2016).

In today's economic environment, marked by intensified competition and rapid technological advancements, the importance and presence of organisations are viewed essential for maintaining both present and future competitiveness, especially in times of market volatility and uncertainty (Soto-Acosta, Popa & Martinez-Conesa, 2018). The survival of enterprises relies on their organisational intelligence. This intelligence is derived from the people, technology, and processes they possess, as well as their relationships with stakeholders (Ferreira, Mueller & Papa, 2018). Within the context of this study, the focus will be on knowledge management technology and specifically knowledge management processes (KMP). The technology revolution has significantly increased the importance of knowledge management (Lee, Xu, Kuilboer & Ashrafi, 2021; Zbuchea & Vidu, 2018). As a result, numerous companies are optimising their KM processes to better handle organisational learning and business expertise. The primary goal of these efforts is to assist employees in generating critical business knowledge, organising it efficiently, and ensuring its accessibility throughout the organisation, as needed (Tseng, 2008). Technology has simplified interactions among employees, customers, suppliers, and partners while they perform their respective business tasks (Lee, Leong, Hew & Ooi, 2013). Furthermore, it has enabled cross-functional collaborations in areas such as product development, marketing, and customer service (Shams, Vrontis, Weber & Tsoukatos, 2019), within the organisations offering training and development programmes. Technology not only enhances efficient business operations, teamwork responsibilities, and collaborations, and supports effective business decision-making, but it also transforms the way businesses compete. Therefore, it is evident that technology is an essential tool for small training providers to gain a competitive edge and drive organisational innovation (Tseng, 2008).

Numerous organisations are investigating knowledge management to enhance their performance and maintain their competitiveness. KM generally aims to align with organisational goals to boost performance and foster a culture where individuals are motivated to create, learn, share, and utilise knowledge collaboratively, benefiting both internal and external stakeholders (Vangala & Banerjee,

2016). Knowledge management involves the processes of creating, storing, sharing, and applying knowledge within an organisation. Knowledge management systems (KMS) refer to technology systems that assist employees in these knowledge management processes (Friedrich, Becker, Kramer, Wirth & Schneider, 2020:341).

Small training providers, similar to other educational institutions, engage in knowledge management processes (Nair & Munusami, 2020; Mahdi, Nassar & Almsafir, 2019). Regardless of whether they have a formal knowledge management strategy, it is crucial for them to manage their knowledge assets effectively. This includes understanding and creatively utilising technology related to knowledge management processes (Veer-Ramjeawon & Rowley, 2020:745).

Knowledge management processes in small training providers can assist in creating knowledge repositories and enhancing access, sharing, and the transfer of knowledge (Maravilhas & Martins, 2019; Fernández-López, Rodeiro-Pazos, Calvo & Rodríguez-Gulías, 2018;). They also have the potential to improve the overall knowledge environment within the skill development sector (Kianto, Shujahat, Hussain, Nawaz & Ali, 2019). In small training providers, knowledge is managed at various levels, i.e. individual, community, organisational, and network levels (Engel, 1990). Knowledge in organisations typically exists in two forms: explicit and tacit (Alavi & Leidner, 2001). Consequently, small training providers, such as other organisations, can benefit from utilising both types of knowledge. Employees can absorb tacit knowledge by sharing their experiences in facilitating and managing skills development programmes (Al-Zoubi, Alrowwad & Masa'deh, 2020), usually through informal and formal meetings organised by management (Bayu, 2018). Explicit knowledge, on the other hand, can be accessed through quality management systems, training manuals, research reports, the Quality Council for Trades and Occupations (QCTO), and Sector Education and Training Authorities (SETAs). Therefore, KM holds significant potential for managing training and development knowledge and enhancing its productivity (Vangala *et al.,* 2016). However, comprehensive research on KM technology in KM processes within small training providers remains limited compared to studies conducted in other areas such as higher education institutions (Guzman, Zuluaga-Ortiz, Barrios-Miranda & Delahoz-Dominguez, 2022), events management (Borodako, Berbeka & Rudnicki, (2021), health (Pandey, Gupta, Behl, Pereira, Budhwar, Varma, Hassan & Kukreja (2021), and government departments (Kalashi, Bakhshalipour, Azizi & Siavash, 2020). For this reason, the following objectives were adopted for the study: to determine the influence of KM technology in knowledge creation, capturing, storing, and sharing.

In the following sections, the problem statement and research objectives are outlined, followed by a review of literature grounded in the resource-based view, technology in knowledge management, and KM processes. Next, the conceptual model that illustrates the relationship between technology and KM processes is introduced. Discussions on the ethical considerations and research method used in this study are presented. The results and findings from the data analysis are presented thereafter.

Finally, the study concludes with a discussion on managerial implications, conclusions, limitations, suggestions for future research, and acknowledgements.

1.2. Problem statement

Small training providers are facing challenges of introducing cutting-edge technology in their operations, due to a lack of funds as compared to their counterparts (Temel & Durst, 2021). These small training providers are knowledge-driven organisations that require the integration of technology to be effective in knowledge creation, capturing, storing and sharing (Bandara, Rabhi & Bano, 2023; Trunfio & Campana, 2020). Consequently, they need to address and keep up with the evolution of technology to remain competitive in the market. The previous studies examined technology on other knowledge management processes in different settings. The focus was on knowledge application (Becerra-Fernandez & Sabherwal, 2008), as well as knowledge planning, maintenance and evaluation (Omona, van der Weide & Lubega, 2010). Therefore, this study intends to investigate the following KM processes, i.e. creation, capturing, storage and sharing in small training providers. Considering the role played by technology on KM processes in organisations, this study intends to determine the influence of KM technology on KM processes in small training providers.

1.3. Research objectives

The research specifically aims to address the following objectives:

- To determine the influence of KM technology in knowledge creation.
- To establish the influence of KM technology in knowledge capturing.
- To explore the influence of KM technology in knowledge storing.
- To identify the influence of KM technology in knowledge sharing.

2. Literature review

2.1. Resource-based view

This research is grounded in the resource-based view (RBV), which focuses on gaining a competitive advantage by effectively utilising available resources (Barney, Ketchen & Wright, 2011). However, an organisation can only meet the demands of a constantly changing environment if it has the necessary capabilities (Sun, Shahzad & Razzaq, 2022). The key elements of RBV are capabilities and resources (Valaei, Rezaei, Bressolles & Dent, 2022), both tangible and intangible, with capabilities being a subcategory that is primarily non-marketable and enhances the efficiency of related resources (Savino & Shafiq, 2018). To extend RBV to include technological capabilities for optimal performance, resources must be valuable, inimitable, rare, and non-substitutable (VIRN) (Sun et al., 2022; Andersén, 2021). Investing in technology alone is not enough to enhance organisational performance. Companies need to integrate technological resources and capabilities into their products and services, optimise business processes, make better decisions, and develop adaptable

organisational structures to impact firm performance (Mataruka, 2022). Therefore, the RBV is a theory that needs to be combined with other organisational approaches to highlight the impact of KM technology on KM processes.

2.2. Knowledge management technology

Technology is a crucial element of KM (Kipkosgei, Kang & Choi, 2020). As technology has advanced, it has become an essential enabler and foundational aspect of KM (Harb & Abu-Shanab, 2020; Sarka, Heisig, Caldwell, Maier & Ipsen, 2019). The KM technologies encompass products and services such as desktop computers, laptops, handheld devices, wired or wireless intranet, business productivity software such as editors and spreadsheets, enterprise software, data storage, and network security, among others (Akinola & Afonja, 2022; Lawson & Robertson, 2020; Cherinet, 2019; Aceto, Persico & Pescapé, 2019). Knowledge management (KM) technology, integral to effective knowledge management, can be categorised into two main types: communication technologies (such as emails, video conferencing, electronic bulletin boards, and computer conferencing) and decision-making technology (including decision support systems, expert systems, and management information systems). KM technology encompasses the information technology infrastructure and its functionalities that support the architecture of knowledge management (Allameh & Zare, 2011).

Within the context of this paper, KM technology refers to systems that support functions such as information creation, construction, identification, capturing, acquisition, selection, valuation, organisation, linking, structuring, formalisation, visualisation, distribution, retention, maintenance, refinement, evolution, access, search, and application (Hamad, 2018). KM is defined as the systematic and organisationally specified process of creating, capturing, storing, and sharing knowledge, including both tacit and explicit knowledge, to enhance organisational performance (Alavi & Leidner 2001). In today's knowledge-based economy, many organisations leverage technology and KM processes to gain, sustain, and enhance their knowledge resources (Zaim, Muhammed & Tarim, 2019; Sekovanic & Lovrencic, 2019). It is recognised that KM technology is vital for the success of KM implementations (Hajimohammadi & Vafaei, 2019). Likewise, Alavi and Leidner (2001), and Adel Odeh, Ammar and Tareq (2021) agree that KM technology significantly supports organisational processes such as knowledge capturing, storage, retrieval, creation, transfer, and reuse. However, the impact of KM technology on KM processes within small training providers remains unclear. The KM processes being studied include knowledge creation, knowledge capturing, knowledge storing, and knowledge sharing.

2.3. Knowledge management processes

Knowledge management processes encompass methods for identifying, creating, defining, capturing, storing, organising, transferring, disseminating, using, reviewing, sharing, and applying knowledge within an organisation (Adeinat & Abdulfatah, 2019; Mahdi *et al.,* 2019; Oliva & Kotabe, 2019).

These processes can be broadly classified into four main categories: creating new knowledge, capturing existing knowledge, storing knowledge, and sharing knowledge (Yousuf Al-Aama, 2014).

2.3.1. Knowledge creation

At this stage, employees generate and uncover knowledge through their daily activities (Hamad, 2018). The knowledge creation process involves seeking out new knowledge and information from both inside and outside the organisation, facilitated by collaboration and partnerships (Forés & Camisón, 2016; Donate & de Pablo, 2015). This process is considered a strategic asset in today's global market; without continuous knowledge creation, a business will become inefficient (Tchamyou, 2017; Omotayo, 2015). Hamad (2018) highlights that generating knowledge within an organisation is a critical factor for success and continuous improvement in KM.

2.3.2. Knowledge capturing

In this phase, knowledge is acquired and encoded for convenient storage (Antunes & Pinheiro, 2020). It is important to capture both explicit and tacit knowledge gained by individuals within organisations (Maravilhas & Martins, 2019). Abualoush and Alrowwad (2018), and Hislop, Bosua and Helms (2018) emphasise that organising and managing organisational knowledge properly facilitate easier access. Furthermore, knowledge capture and storage involve various formats, including digital documentation and paper (Sharma, 2019; Janus, 2016). Integrating and storing knowledge reduce redundancy and improve efficiency (Alavi, Kayworth & Leidner, 2005). These authors also noted that capturing and storing knowledge are crucial for both effective use and reuse (Hamad, 2018).

2.3.3. Knowledge storing

Knowledge storing processes involve the systems and procedures for storing and maintaining organisational knowledge (Obeso, Hernández-Linares, López-Fernández & Serrano-Bedia, 2020). These processes encompass activities such as classifying knowledge and saving it in database systems (Mahdi *et al.,* 2019). This form of knowledge management practice can be implemented using manuals, guidelines, books, databases, directories, intranets, or documents containing updated information about clients, suppliers, the environment, or the organisation (Donate & Sánchez de Pablo, 2015).

2.3.4. Knowledge sharing

Knowledge sharing within an organisation involves the exchange of knowledge among individuals and groups, making it a central component of KM (Ahmad & Karim, 2019). This process aligns with KM's primary aim of encouraging knowledge dissemination among people and organisations (Balle, Steffen, Curado & Oliveira, 2019; Al-Kurdi, El-Haddadeh & Eldabi, 2018). Effective knowledge sharing can be facilitated through various means such as training sessions, focus group meetings, workshops, and direct interactions (Nguyen, Siri & Malik, 2022; Obrenovic, Jianguo, Tsoy,

Obrenovic, Khan & Anwar, 2020; De Bernardi, Bertello & Venuti, 2019; Kim & Shim, 2018). Additionally, intranets and extranets can provide a platform for this exchange. To meet KM objectives, organisations must foster an environment where employees can freely share, access, and contribute to the collective knowledge base (Vangala *et al.,* 2016).

3. Research methodology

The study is based on the positivist paradigm, which asserts that empirical evidence is gathered, analysed, and used to form a theory explaining the relationship between the independent and dependent variables (Cohen, Manion & Morrison, 2007). In that sense, data analysis employs deductive methods, beginning with the formulation of a hypothesis that is either confirmed or rejected based on the results of statistical analysis (Cohen *et al.,* 2007).

The research method employed a quantitative methodology and survey method to gather data using a structured questionnaire. The permission to conduct the study was sought from the owners/managers of the small training providers and upon approval, the consent form and questionnaires were distributed to the employees. The target participants were employees of the accredited small training providers in the North West Province of South Africa. A sample frame consisted of approximately 350 employees. Convenience sampling was used. According to Obilor (2023), a convenience sample involves gathering data from a readily available and nearby group. One benefit of this sampling method is that it enables researchers to collect responses in a cost-efficient way (Rahi, Alnaser & Abd Ghani, 2019). The data was collected from 237 employees, which yielded a response rate of 67.7%.

The data collection instruments included items that were rated using a five-point Likert scale ranging from *strongly disagree* to *strongly agree*. The reliability of the measurement instrument was assessed using the Cronbach alpha method, which is among the most widely used and significant techniques to evaluate reliability. The validity of the questionnaire was established through the average variance extracted (AVE) and the Fornell and Larcker criterion. The data analysis was conducted using SPSS version 25.9 and Smart-PLS software to perform structural equation modelling (SEM) to test hypotheses. According to Hair Jr, Hult, Ringle, Sarstedt, Danks and Ray (2021), structural equation modelling allows researchers to concurrently model and estimate intricate relationships among several dependent and independent variables.

3.1. Conceptual model and hypotheses

Hypothesis formulation

Figure 1 depicts the conceptual model used to comprehend the connection between KM technology and knowledge management processes (creation, capturing, storing, and sharing). The proposed connections between research constructs are discussed below.

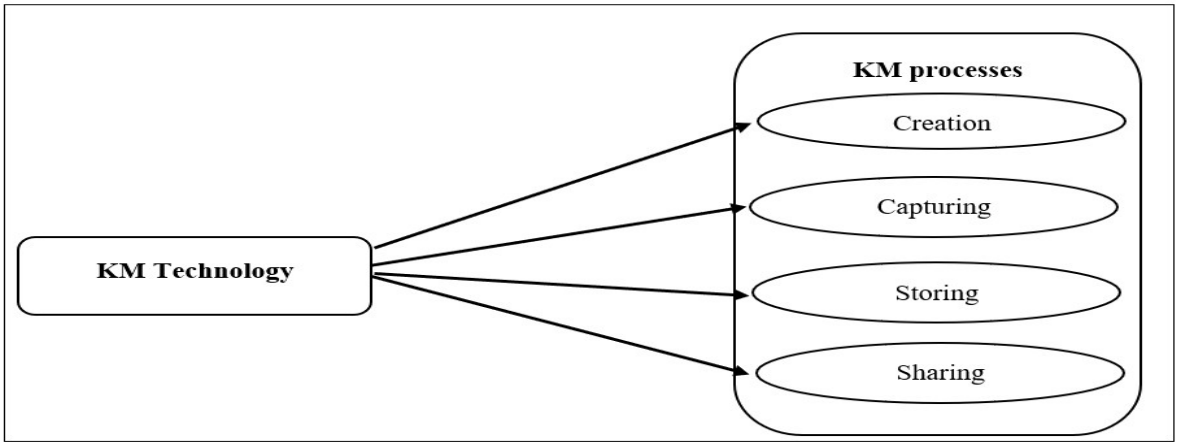

Figure 1: Conceptual model

Source: Authors' own construction

The following hypotheses were formulated for the study:

- H_1: There is a positive relationship between KM technology and knowledge creation
- H_2: There is a positive relationship between KM technology and knowledge capturing
- H_3: There is a positive relationship between KM technology and knowledge storing
- H_4: There is a positive relationship between KM technology and knowledge sharing

3.2. Ethics

Approval to carry out the study was granted by the Faculty Research Ethics Committee at the university, which mandates adherence to ethical standards for any research involving human subjects, including confidentiality, informed consent, and participant privacy. The ethics clearance for this research was obtained from the North-West University Economic and Management Sciences Research Ethics Committee (No. NWU-01830-22-A2).

4. Results and findings

Data analysis involves converting gathered data into a more manageable form to allow for behaviour categorisation and the application of statistical techniques (Cooper & Schindler, 2016). Initially, preliminary data analysis was conducted with SPSS version 25.9 statistical software. Following this, the Smart-PLS software package was used to perform a structural equation modelling (SEM) procedure to test the hypotheses. This section offers a detailed overview of the participants' demographic information, including their age, highest educational level achieved, work experience, and job titles within the small training providers. The data presented in the tables reflects the respondents' opinions and includes corresponding summaries. Table 1 provides the frequencies and percentages of the demographic details.

Based on the data from Table 1, an analysis of the respondents' demographics shows that most of the accredited small training providers in the North West Province employed workers aged 31 to 40 (35.4%; n = 84). Additionally, a significant number of employees (55.7%; n = 132) have a degree as their highest educational level, and 23.2% (n = 55) have five to 10 years of work experience. Many employees (33.3%; n = 79) work as facilitators. To determine the presence of KM management (KM) practices among these small training providers, it was essential to assess the respondents' understanding and familiarity with KM. According to Table 1, 65% (n = 154) of participants are familiar with KM, while 35% (n = 83) are not. These results show that a majority of employees (65%, n = 154) are knowledgeable about KM, as shown in Table 1.

Table 1. Demographic characteristics

Variable	Category	n	%
Age	Under 20 years	1	0.4%
	21-30 years	48	20.3%
	31-40 years	84	35.4%
	41-50 years	69	29.1%
	51 years and over	35	14.8%
Highest qualification	Certificate	15	6.3%
	Matric	16	6.8%
	Diploma	55	23.2%
	Degree	132	55.7%
	Masters	18	7.6%
	Doctoral	1	0.4%
Working experience	Less than 1 year	10	4.2%
	Between 1 year and 2 years	45	19.0%
	Between 2 years and 3 years	51	21.5%
	Between 3 years and 4 years	41	17.3%
	Between 5 years and 10 years	55	23.2%
	Over 10 years	35	14.8%
Job title	Administrator	74	31.2%
	Facilitator	79	33.3%
	Assessor	63	26.6%
	Moderator	10	4.2%
	Quality Assurer	11	4.6%
Understanding and familiarity of the concept of KM	Yes	154	65%
	No	83	35%

Source: Authors' own construction

Summary of measurement model accuracy statistics

The measurement model assessment statistics are summarised below. The mean values supplied below suggest that the majority of the respondents agreed with the measures asked (>1-<4). The standard deviations were less than 2. Consequently, this implies that the mean values accurately represent the majority's average perceptions. The reliability and validity assessment sections provide a comprehensive explanation of the measurement model statistics.

Table 2: Scale accuracy analysis

Research construct		Scale item		Cronbach's alpha	CR	AVE	Factor loadings
		Mean	**SD**				
KMT	KMT1	4.013	0.926	0.799	0.838	0.513	0.576
	KMT2	3.941	0.944				0.618
	KMT3	3.131	1.244				0.808
	KMT4	3.426	1.206				0.812
	KMT5	3.996	1.076				0.735
CR	CR1	3.734	1.108	0.798	0.884	0.720	0.715
	CR2	3.042	1.309				0.922
	CR3	3.046	1.301				0.894
CP	CP1	2.992	1.310	0.899	0.937	0.832	0.932
	CP2	2.844	1.268				0.932
	CP3	3.013	1.308				0.871
SR	SR1	3.051	1.324	0.894	0.950	0.904	0.946
	SR2	3.025	1.281				0.956
SH	SH1	3.624	1.129	0.819	0.917	0.847	0.919
	SH2	3.498	1.128				0.921

Reliability analysis assessment

Reliability is defined as the degree to which a measuring instrument is consistent and stable, as per Sürücü and Maslakci (2020). Repeatability is the fundamental characteristic of reliability. Will the same results be obtained if an instrument is administered repeatedly? Cronbach's alpha and composite reliability (CR) are the two most frequently employed methodologies for determining reliability. The results of both Cronbach's alpha and composite reliability are presented in Table 3. The composite reliability statistics ranged from 0.838 to 0.950, while the Cronbach's alpha ranged from 0.798 to 0.899. The reliability statistic of both indicators exceeds the necessary threshold of 0.70 (McNeish, An & Hancock, 2018). As a result, the reliability of the construct has been established.

Table 3. Construct reliability analysis (Cronbach's alpha and composite reliability)

	Cronbach's alpha	**Composite reliability (rho_c)**
KMT	0.799	0.838
CR	0.798	0.884
CP	0.899	0.937
SH	0.819	0.917
SR	0.894	0.950

Construct validity

Statistically using PLS-SEM, construct validity is established when there is convergent validity and discriminant validity.

Convergent validity

"Convergent validity is the extent to which multiple attempts to quantify the same concept are consistent" (Bagozzi, Yi & Phillips, 1991). According to Bagozzi (1993:52), "two or more measures of the same thing should covary highly if they are valid measures of concept." When the AVE value is equal to or greater than the recommended value of 0.50, convergent validity is established when items converge to measure the underlying construct (Fornell & Larcker, 1981). Convergent validity results based on the AVE statistics in the current study reveal that all the constructs were greater than the recommended value of 0.50 (Ab Hamid, Sami & Sidek, 2017; Hair, Hult, Ringle & Sarstedt, 2014). However, when all the constructs were greater than 0.70, convergent validity is not a concern. The AVE value for each construct is displayed in Table 4.

Table 4. Construct convergent validity (AVE)

Construct	Average variance extracted (AVE)
KMT	0.513
CR	0.720
CP	0.832
SR	0.904
SH	0.847

Discriminant validity

Discriminant validity is the extent to which the measures of distinct concepts are distinct. The concept is that if two or more concepts are distinct, then valid measures of each should not correlate to highly (Rönkkö & Cho, 2022).

Fornell and Larcker criterion

In accordance with Ab Hamid, Sami and Sidek's (2017) and Fornell and Larcker (1981), criteria, discriminant validity is established when the square root of AVE for a construct exceeds its correlation with all other constructs. In this investigation, the square root of AVE (in **bold** and *italics*) for a construct was determined to be greater than its correlation with other constructs (Table 5). As a result. this offers robust support for the establishment of discriminant validity.

Table 5. Discriminant validity: Fornell and Larcker criterion

	CP	CR	KMT	SH	SR
CP	***0.912***				
CR	0.792	***0.849***			
KMT	0.408	0.467	***0.716***		
SH	0.547	0.621	0.365	***0.920***	
SR	0.840	0.715	0.389	0.598	***0.951***

Structural model assessment and hypothesis testing

The subsequent phase of SEM-based data analysis was path analysis (Stein, Morris & Nock, 2012; Beran & Violato, 2010). Anderson and Swaminathan (2011) define path modelling as the process of evaluating the structural trajectories of a conceptualised research model and the relationship between observed or measured variables and theoretical constructs (Roche, Duffield & White, 2011). The objective of this SEM procedure was to verify and illustrate the theoretical underpinnings of the investigation and the importance of the link between model constructs (Jenatabadi & Ismail, 2014). In path modelling, the structural model of the study was assessed by analysing standardised regression

coefficients and p-values (Held & Ott. 2018). It is imperative to elucidate both the predictive ability and the standardised regression coefficients. Below, Figure 2 shows a structural model result for the proposed hypothesis.

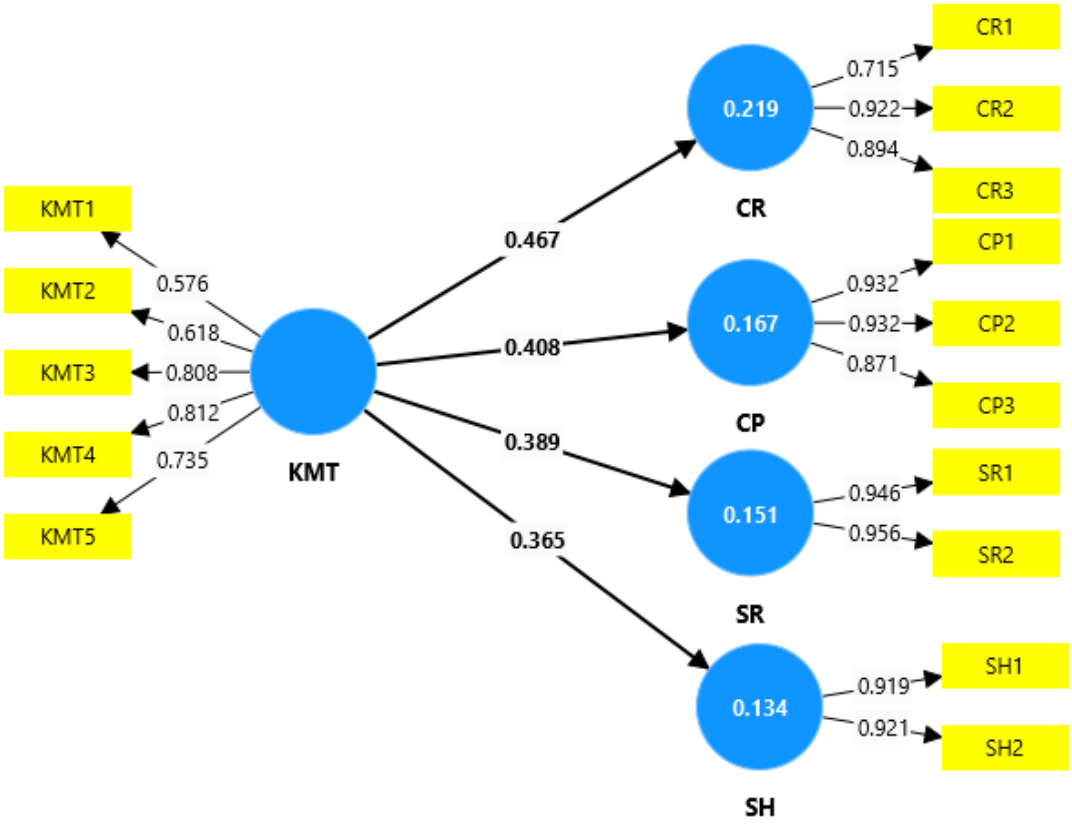

Figure 2: Structural model

Hypothesis testing

The measurement and structural model had been evaluated and finalised. Using path analysis, the subsequent step was to investigate the causal relationship between latent variables (Mueller & Hancock, 2018). According to Nusair and Hua (2010), SEM posits that specific latent variables have a direct or indirect impact on other variables within the model, resulting in estimation results that illustrate the relationship between these latent variables. The estimation results for this study are presented in Table 6, which is derived from hypothesis testing. The hypothesis that has been suggested is illustrated in the table, the coefficients of the path, t-test, and whether or not the hypothesis is accepted or rejected. The literature suggests that a significant relationship is indicated by a t-value greater than 1.96 and that a more robust relationship between latent variables is indicated by higher path coefficients (Al-Zwainy & Al-Marsomi, 2023).

Table 6: Hypothesis testing results

Hypothesised relationship	Hypothesis	Path coefficient (β)	T-statistics (t)	P- Value	Rejected/supported
KMT-> CR	H_1	0.467	9.789	**0.000**	Significant and supported
KMT-> CP	H_2	0.408	7.489	**0.000**	Significant and supported
KMT -> SR	H_3	0.389	7.081	**0.000**	Significant and supported
KMT-> SH	H_4	0.365	6.703	**0.000**	Significant and supported

On the basis of the findings in Table 6 above, the study proposed four hypotheses to address the research question. All hypotheses (H1, H2, H3, H4) were statistically supported and significant ($p<0.05$, $t>196$) based on the positive or negative effect of the relationship.

Knowledge management technology and knowledge creation

H1: There is a positive relationship between knowledge management technology and knowledge creation

The results of the investigation into the prospective relationship between KM technology and knowledge creation indicate that knowledge management technology has a beneficial connection with knowledge creation. Additionally, the findings suggest that the correlation between KM technology and knowledge capturing is both positive and statistically significant (β =0.467, t=9.789, p=0.000). Based on the results that indicate a positive correlation, the hypothesis was validated. This implies that the manner in which knowledge creation was conducted was somewhat related to knowledge management technology. In support of the findings, Abubakar, Elrehail, Alatailat and Elçi (2019) concluded that KM technology significantly associates with knowledge creation processes. Moreover, KM technology holds a crucial role in knowledge management as it facilitates the creation of knowledge within organisations (Abualoush, Masa'deh, Bataineh & Alrowwad, 2018).

Knowledge management technology and knowledge capturing

H2: There is a positive relationship between knowledge management technology and knowledge capturing

The study's results corroborate the existence of a positive correlation between KM technology and knowledge capturing. The relationship was found to be significant at β=0.408, t=7.489. p=0.000. This suggests that the existence of a relationship between KM technology and knowledge capturing is substantial. Subsequently, this suggests that H2 is endorsed. To corroborate the findings, according to Iqbal, Latif, Marimon, Sahibzada and Hussain (2019), KM technology was discovered to have a significant and positive relationship on the processes of knowledge capturing. Additionally, KM

technology is connected to knowledge capturing in the knowledge management practices of an organisation (Chaudhuri, Dayal & Narasayya, 2011).

Knowledge management technology and knowledge storing

H3: There is a positive relationship between knowledge management technology and knowledge storing

Based on the results that were obtained. It is inevitable that the relationship between KM technology and knowledge storage is positive. In addition to the path modelling results (β=0.389, t=7.081, p=0.000), it is clear that the relationship between the two variables is moderate, as evidenced by the path modelling estimate of 0.389. In other words, KM technology does not have a strong positive relationship with knowledge storage as much as it does with knowledge creation and knowledge capturing. Contrary to these findings, Abualoush, Masa'deh, Bataineh and Alrowwad (2018) discovered that KM technology has a strong positive relationship with knowledge storage within organisations. Also, a study by Dlamini and Ocholla (2018) determined that KM technology tools have a significant association with knowledge storage.

Knowledge management technology and knowledge sharing

H4: There is a positive relationship between knowledge management technology and knowledge sharing

The study's findings have corroborated the existence of a positive relationship between KM technology and knowledge sharing. The findings are indicated by the path modelling values (β=0.365. t=6.703. p=0.000). The proposed model's path modelling estimate is 0.365, which indicates that the relationship between this and constructs is the weakest. However, research by Iqbal, Latif, Marimon, Sahibzada and Hussain (2019) revealed that KM technology had a significant and positive relationship with knowledge sharing processes.

5. Managerial implications

The present study offers implications for academics and the skills development sector. The findings highlight the positive relationship between the KM technology and KM processes in the small training provider setting. It is essential for the management and employees of these organisations to consider the importance and role played by KM technology in the KM processes. The association could facilitate efficiency and effectiveness in the operations of the organisation. The findings call for the management of the training providers to consider the role of technology infrastructure and tools on KM processes in small training providers.

6. Conclusions, limitations and future research

The study explored both the theoretical and practical insights into how KM technology associates with KM processes. Furthermore, the study contributes to existing knowledge by offering empirical evidence that supports a positive relationship between KM technology and KM processes, as previously identified by other researchers within various contexts (Jarmooka, Fulford, Morris & Barratt-Pugh, 2021; Al-Qubaisi, Ajmal & Khan, 2018). The findings emphasised the relationship of KM technology on the elements of KM processes within small training providers. These organisations are responsible for delivering training and development programmes in a knowledge economy that is constantly evolving due to technological advancements. This evidence will help scholars to rethink these important relationships. This study contributes new knowledge to the existing body of knowledge management literature, within the context of small training providers and the skills development sector.

The results of this examination might not be applicable to small training providers in other provinces of South Africa. Therefore, future research should involve training providers from various provinces to enhance the sample's representativeness. Additionally, focusing solely on training providers restricts the generalisability of the findings, as they do not encompass the entire skills development sector.

Therefore, future studies should also include other areas of skills development such as Sector Education and Training Authorities (SETAs). In summary, the quantitative nature of the investigation might have led to the neglect of more insightful and detailed information that a qualitative approach could have provided if it had been part of the study. Future research could employ other research methods to discover similar topics as the current study to improve the breadth of the findings.

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