An Integrative Framework of Talent Management and Systems: Identifying Future Possibilities

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Abstract

Developments in talent management have been noteworthy. The talent management systems (TMS), which were an offshoot of the emergent needs, represent an integrated set of analytical tools for talent creation and management. This paper presents a discussion related to talent management and systems based on a review, interpretation, and synthesis of a broad range of relevant academic literature. The review of the literature was facilitated based on a conceptual model that we adapt. The findings reveal the complexity and multi-faceted nature of talent and talent management, the various perspectives that characterize talent management, and its necessary antecedents and outcomes. The talent management initiatives in firms are presently driven primarily through information systems, yet the focus on organizational talent management systems has been limited. Accordingly, we offer our suggestions on future exploration possibilities concentrating on the TMS through an interpretive framework, which could serve as useful contributions to the related domains.

Keywords: *Interpretive Framework, Narrative Review, Talent, Talent Management, Talent Management Systems*

1. Introduction

Ever since 1998, when a group of consultants from McKinsey coined the expression "war for talent" and posited that a fundamental belief in the importance of talent is needed to achieve organizational excellence, talent management has been an increasingly popular topic (Nayak et al. 2017, Stephen 2018, Thunnissen 2016). The developments related to talent management led to conceptualizations of systems that can facilitate processes related to talent management in organizations. The talent management systems (TMS) which resulted from such endeavors represented an integrated set of analytical tools for the creation and management of talent knowledge (Ensley et al. 2011). The excitement around talent management also resulted in a number of research synthesis efforts (e.g., Dries 2013, Gallardo Gallardo and Thunnissen 2016, Lewis and Heckman 2006, McDonnell et al. 2017, Tarique and Schuler 2010, Thussinnen et al. 2013). In all these synthesis efforts, the thesis concentrated on delineating talent management or its subdomains (e.g., talent, global talent management), following the review's objective towards identifying meaningful aspects for future consideration.

These review papers serve as a testimony of the academic community's continual attention on the domain. Yet, academic research in talent management has been criticized as it does not provide much support in finding the right talent management systems (Gallardo Gallardo and Thunnissen 2016). Even though talent management systems are in existence for more than a decade, none of the review papers address these systems in the context of talent management. In order to support the field in its advancements, there is a need to acknowledge the existence of these systems, and the role these systems can play in facilitating managing talent in the organizational context. In this manuscript, we use the term: talent management systems (TMS) in parlance with the conceptualization in Ensley et al. (2011) noted above as an integrated set of tools towards creation and management of talent. Some of the recent evidence discuss the importance of the technologies and tools in talent management processes (for example, Cardenas-Navia and Fitzgerald 2019). The growing importance and relevance in the present context prompted us to expand the inquiry horizon and review the status quo related to talent management and systems.

This article presents a review of the academic literature on talent management and systems towards suggesting opportunities for further exploration around TMS. This article aims to contribute to the present thrust on the systems related to talent management and offer recommendations to extend the knowledge base. We detail these subsequently.

2. Research Method and Analysis

Table 1 lists down the steps we followed for identifying articles for analysis. The search descriptors specify the data sources, keywords used, and timeframe for the present study. We took the starting year as 1998 as it is commonly cited as the year in which talent management became popularized due to the McKinsey report coining the phrase the "war for talent" (Chambers et al. 1998). We use a set of inclusion and exclusion criteria (Table 1) for screening the articles. The potential studies relevant for our research were identified based on applying these screening criteria to the candidate articles returned by running the keyword-based search query as indicated above. The search carried out in this manner resulted in over 1000 articles, excluding duplicates. The

contents of the articles identified in this manner were further manually screened for appropriateness. The screening process involved a manual inspection of titles, and if unsure, the abstracts and the contents to determine whether the concerned document addressed a talent management-specific issue. We finally shortlisted 157 articles.

Table 1. Review Process Snapshot

Specifics	**Details**
Search Descriptors *(Search for published conte based on the criteria adopte*	Data Sources: ISI Web of Science (Thomson Reuters) and Scopus (Elsevier) Keywords: 'talent', 'talent management', 'talent management system' (concatenated using the OR operator) Metadata fields: title, abstract, and keywords Search Coverage Duration (Years): 1998 onwards Additional Sources Referred (based on citation evidence): Books, Thesis, and Websites
Screening Criteria *(Screening conditions speci the inclusion and exclusion basis and is used to screen content returned from the searching process)* No of Articles: Over 1000 (excluding duplicates)	Basis for Inclusion: The article has been written in English. The article is accessible and describes issues that are meaning and intuitive to follow. The article has been cited by others unless it is a very recent arti We assume that a work cited and used by others is a hint of usefulness. Contents Excluded: Editorials, prefaces, summaries of articles and tutorials, workshops, and panels and poster sessions.
Shortlisting Criteria *(Finalizing articles for full- review based on the appropriateness)* No of Articles: 157	Manual Inspection of Article Title Article Abstract Article Introduction and Conclusion and/or Relevant Sections
Analysis Approach *(For analyzing the shortliste articles towards identifying relevant concepts)*	Content Analysis of Shortlisted Articles
Clustering Approach *(Concepts identified throug content analysis clustered*	Concepts identified from the shortlisted articles mapped to the categories characterizing the following thematic area: TM Factors

following the conceptual model)	TM Processes TM Outcomes TM Systems * *(TM: Talent Management)*

3. Conceptual Model

We adapt the process-based model of technology management (Voss et al. 1994) to serve as the conceptual model based on which we thematize the extant evidence. The model, in a nutshell, outlines the key processes, the enabling factors, and the outcomes that symbolize the technology management scenario in an organization. We abstract based on their presentation and provide a simplified view (Figure 1) depicting how the dominant themes relate to each other in the context of TMS. The TM (talent management) processes are pivoted on the conceptualization of talent. These are influenced by several factors some of which are the drivers of TM processes, while others act as challenges or barriers which need to be overcome to execute the TM processes. The execution of the TM processes leads to specific TM outcomes that can be recognized. The talent management systems (TMS) are expected to encapsulate the entire mechanism binding these themes towards facilitating talent management activities in an organization.

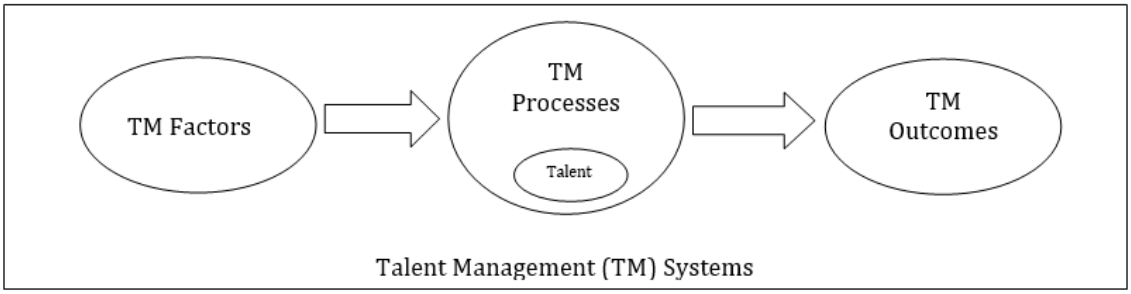

Figure 1. Conceptual Model to Organize Literature Review

4. Results

Here we present the dominant themes related to the talent management and systems literature as depicted in the conceptual model (Figure 1). We start with the talent management processes wherein we also introduce the talent concept. We then discuss the factors affecting talent management, which is then followed by the outcomes of talent management. Finally, we present the coverage related to talent management systems based on evidence we could note from the literature.

4.1. Talent Management (TM) Process

Notion of Talent

Dictionaries define talent as "… a natural ability to be good at something, especially without being taught" (Talent, n.d.). Talent as a term has been widely used but its

definition and conceptualization differ by discipline, organization, as well as across time (Cerna and Chou 2019). Several definitions on talent from the perspectives of individuals and organizations can be noted in the academic literature (Blass 2009, Cerna and Chou 2019, Meyers et al. 2013, Tansley 2011, Thunnissen and Arensbergen 2015). The various definitions indicate two broad conceptualizations of talent: binary ("talent" as qualities) or composite ("talent" as a relational concept) (Cerna and Chou 2019). Considering "talent" as a binary feature, "talent" is either an intrinsic or an extrinsic quality a person possesses. The conceptualization of talent as composite views talent as a relational concept where "talents" are identified vis-à-vis their (organizational) environments or singled out among their peers. "Talent" as a relational concept conceptualizes "talent" as consisting of composite features in terms of someone (i) within an organization or at a certain time-period being recognized as (ii) possessing multiple sets of specific qualities (intrinsic and extrinsic; explained below), and (iii) observed through behavior (Cerna and Chou 2019).

Talent Management Practices and Activities

Talent management as practiced in organizations broadly refer to the set of strategies that result in putting the right people with the right competencies in the right job in the right place, and at the right cost (Claus 2013). The six fundamental components of talent management are identified as workforce planning, recruitment, performance management, career/succession planning, compensation, and learning management (Hanscome et al. 2014). of this, the last five components viz; recruitment, performance management, career/succession planning, compensation, and learning management have received more attention in the HRM literature and hence have not been covered here.

Workforce planning implies forecasting the demand and future supply for talents (Taylor 2018). Concerning demand planning, Galluci (2014) discusses some of the essential attributes of an effective demand planner as the presence of know-how of statistics and modeling, analytical ability, negotiation skills, leadership skills, and a change driver. Further, to deal with the uncertainties, just-in-time (JIT) talent management strategies for managing the talent demand has been advocated (Cappelli, 2010). The author refers to three strategies to cope with uncertainties in talent acquisition viz; hiring and training in smaller batches for ease of deployment, designing centralized systems to facilitate cross-department movements, and providing generic or specialized training as per requirements (Cappelli, 2008).

The conception, implementation, and development of talent management processes and activities also carry with it, an implicit understanding of the context (Thunnissen, and Gallardo-Gallardo 2019). The studies addressing the internal context highlight the importance of the firm characteristics (e.g., nature of the services/products, organization size, profit and returns, budgetary constraints, location, ownership, and the composition of the workforce) on the choices made regarding the intended talent management policy (Buttiens 2016, Cooke et al. 2014, Thunnissen 2016, Ulrich and Allen 2014). The importance of the external context has also been stressed where "… *organizations are not only competing with each other, but governments and their societies have also joined the talent race*" (Khilji and Schuler 2017, p. 400). Overall, these studies demonstrate the need

of tailoring talent management processes and activities based on the assumption that an organization is a social system that interacts in its own way with one's environment.

4.2. Talent Management (TM) Factors

A number of factors affecting talent management have been identified in the literature which we broadly classify as internal and external. The internal factors represent specific characteristics of the firms affecting talent management. This can represent the characteristics of the workforce and associated practices, for example, organizing recruitment and selection targeting talented individuals (Lewin et al. 2009), workforce demographics (Cooke et al. 2014), managing talent usage (for example, the extent to which the talent will be utilized) (Cappelli, 2008), establishing intrinsic and extrinsic motivational practices (Annakis et al. 2014, Rana et al. 2013), providing opportunities for employee development and career progression (Grégoire et al. 2015), fostering employee engagement/commitment and participation (Kock and Burke 2008, Mochorwa and Mwangi 2013), and monitoring employee retention (Frank et al. 2004). This can represent organizational infrastructures, for example, the presence of supporting information systems in firms (Al Ariss et al. 2014, Tufts et al. 2015). The internal factors can also be in the form of organizational soft elements such as corporate branding or organizational reputation (Glenn 2012, Theurer et al. 2016), specific organizational policies, for example, corporate social responsibility (Kim and Scullion 2011), the company's strategy (Joyce and Slocum 2012), organizational culture/structure (Cappelli 2008, Cooke et al. 2014, Gallardo-Gallardo et al. 2013), social environment in the workplace (Kunisch et al. 2015), and management/leadership support (CIPD 2010, Reilly 2008).

The external factors mostly relate to the broader context wherein an organization operates. This can be the political (Hudson 2009, Vlădescu 2012), economic (Vaiman et al. 2012), legal (Sidani and Al Ariss 2014, Yang et al. 2012), cultural (Poocharoen and Brillantes 2013), social (Cooke et al. 2014), and financial (Llorens 2011, Nolan 2011) situations within which the firm operates. Changes in political priorities, for instance, often mean changes in budgets (Troshani et al. 2011), thus potentially limiting financial resources for supporting talent management. Political ideologies, for example, greater emphasis on fairness and transparency, have also been reported to impact talent management policies (Cooke et al. 2014). The economic perspective can recognize the shift towards the knowledge-based economy, thereby implying a shift towards intangible and human assets) (International Institute for Labour Studies 2009). The impact of legislation can be in the form that, say, in specific countries (e.g., China), providing training to civil servants is approved by the civil service law (Yang et al. 2012). The impact of culture on talent management has also been recognized (Iles et al. 2010). The other set of external factors characterize specific industry's/sector's attributes (Burbach and Royle 2010) and related competition/market forces (Poocharoen and Lee 2013, Ready and Conger 2007), and the dynamics of the emerging markets (referring to the need of identifying competencies to manage in culturally complex and geographically distant countries) (Bjo¨rkman and Lervik, 2007, Farndale et al. 2010, Li and Scullion 2006, Scullion et al. 2007).

4.3. Talent Management (TM) Outcomes

Another stream of research focused on understanding the effects and outcomes of talent management. Many authors agree to the point that the main objective of talent management is to attract, develop, motivate and retain talent (Beechler and Woodward 2009, Davies and Davies 2010, McCauley and Wakefield 2006, Pandita and Ray 2018, Ready and Conger 2007). These studies relate the effect of talent management at the individual level (i.e., on the talents). Similar explorations have also considered other perspectives, for example, the impact of talent management on employee outcomes, specifically performance (Bibi 2019), commitment (Vural et al. 2012), engagement and satisfaction (Karuri 2015), and report a positive association between talent management practices and the respective dependent variables.

A section of studies has focused on the organizational level outcomes of talent management. Investigations following this line have looked at the contributions of talent management on firm performance (e.g., Bethke-Langenegger et al. 2011, Clake and Winkler 2006, Collins et al, 2019, Frank and Taylor 2004, Groves 2011, Moczydlowska 2012, Muriithi and Makau 2017, Ulrich and Ulrich 2010), organizational agility (Gieles and van der Meer 2017, Harsch and Festing 2020), competitive advantage (Ashton and Morton 2005. Ibrahim and Zayed 2018, Latukha 2016, Lewis and Heckman 2006, Mellahi and Collings 2010, Schuler et al. 2011, Stahl et al. 2007), organizational effectiveness and success (Dad Karam et al. 2017, Mupepi 2017, Yaseen et al. 2018). All of these studies report a positive association between talent management and the dependent variables in concern, with some employing individual and organizational-level additional moderator and mediator variables as deemed necessary.

There have been some attempts to relating talent management to societal goals. In this regard, Boudreau and Ramstad (2005) offer the argument that organizations should strive for a societal goal: sustainability. The authors note that the concern for sustainability has been very rare in talent management. Ulrich and Ulrich (2010) also discuss the importance of linking talent management to community results, where an increased community reputation can enable firms to attract better employees.

4.4. Talent Management (TM) Systems

As outlined above, TMS refer to information systems that facilitate the management of talents within organizations. These systems were an offshoot of the technological developments in the last decade and assume importance in the face of the transformational changes disrupting the business and society currently (Alsharhan et al., 2022; Harris et al., 2010; Nayak et al., 2018; Schulker et al., 2022; Tufts et al., 2015; Walford-Wright & Scott-Jackson, 2018; Whysall et al., 2019; Wiblen & Marler, 2021).

Talent management systems are noted to have guiding philosophies that determine and explain the variation in the occurrence, meaning, and implementation of talent management processes and, ultimately, the effectiveness of TMS (Gallardo-Gallardo et al., 2020; Mayrhofer et al., 2019; Sumelius et al., 2020; Tyskbo, 2021). The extant literature discussing applications of information systems to talent management initiatives reveals scattered focus on the various aspects related to the engineering of these systems towards supporting talent management processes in organizations. Concerning planning,

the studies have focused on identifying the requirements (e.g., Bahar et al., 2022) to support the needs to be fulfilled out of these systems. Inquiries also deal with the supporting technologies for developing these systems (e.g., Yu et al., 2018). Technological innovations in areas, for example, data science, artificial intelligence (AI), analytics – are in consideration in the talent management sphere (Chamorro-Premuzic et al., 2019; Faqihi & Miah, 2023; Johnson et al., 2020; Kim-Schmid & Raveendhran, 2022), and attend to initial concerns around technology availability and appropriateness (Birchall et al., 2008b; Garavan et al., 2012).

Discussions on TMS design have considered the structural and functional aspects. Structure-wise, some of the essential considerations (e.g., need, data collection, planning, activity, and results) (Ashton & Morton, 2005) are already listed. Faqihi and Miah (2023) propose an AI-based talent management framework demonstrating the necessary components (e.g., talent acquisition, talent development, talent retention, etc.) contributing to an AI-driven talent intelligence solution. Concerning TMS functionalities, efforts have focused on identifying the functions that should characterize a TMS (e.g., recruiting, unfilled job position analysis, skill inventory, training and development, learning management, performance management, talent demand and supply gap analysis, succession planning) (Odintsova, 2023; Paycor, 2018; Snell, 2008), classification of existing talent management suites (e.g., in matrix format based on vision and execution capabilities) (Hanscome et al., 2014b). However, Wiblen and Marler (2021) question the role these functionalities play as their research observes talent to be identified differently even when the same digital talent management technology was employed, even within the same organization. Sakka et al. (2022) highlight that these systems are faulty but promising, and considerable effort must be made to improve them.

Discussions around TMS implementation point at integration-related issues (of functionalities and systems) (Douthitt & Mondore, 2014; Farndale et al., 2010; Vaiman et al., 2012; Wiblen et al., 2012; Zielinski, 2014). Zielinski (2014) observes that many firms are at the beginning of the ‘talent management’ systems integration. Birchall et al. (2008a), Vaiman et al. (2012), and Douthitt and Mondore (2014) also stress the need for the integration of the processes so that a linkage may be arrived between talent decisions and organizational goals. However, Wiblen et al. (2012) challenge the extent to which the data from systems inform talent decisions. The authors discovered that because decision-makers tended to make both individual and collective sense of their surroundings, these individuals challenged and marginalized the role of IT. Table 2 summarizes the literature review findings according to the broad themes following our conceptual model (Figure 1).

Table 2. Summary of the Literature Review Findings

Themes	Broad Categories	Summary of Findings
Talent Manageme Process	Talent	Talent conceptualization in the literature has b varied, portraying two broad categorizations - bin (“talent” as qualities) or composite (“talent” a relational concept).
	Talent Management Practices and Activiti	The talent management literature has focused more workforce planning and presents the associa attributes, strategies, and uncertainties. There is als recognition of the context, internal (e.g., firm-speci or external (i.e., to the firm), and its relevance.
Factors affecting Talent Manageme	Internal Factors	These factors represent specific characteristics of firms affecting talent management.
	External Factors	These factors relate to the broader context wherein organization operates.
Talent Manageme Outcomes	Individual Level	The primary objective of talent management has b to attract, develop, motivate and retain talent. T impact of talent management on various employ specific outcomes has been reported to be positive.
	Organization Level	The contributions of talent management organization-specific variables are also reported to positive.
	Societal Level	Few societal-level outcomes of talent management be noted relating to sustainability. The importance linking talent management to community results also been stated, which can attract better employees
Talent Manageme Systems	Structure	Regarding the structure of TMS, some of the essen considerations have been identified. Howev concerns regarding the appropriateness of the exist systems and the need for supporting technologies infrastructures to develop the systems are a mentioned.
	Functionalities	Concerning functionalities being addressed by TMS, efforts have focused on identifying the functi that should characterize a TMS and the classificatio existing talent management suites. The issue integration is acknowledged as a limitation of the TM

5. Organizational Talent Management Systems – Opportunities for Exploration

Information systems (IS) designed to support talent management needs to complement and enhance the talent management activities carried out in firms. The review of the domain allow us to propose avenues for future explorations concerning organizational talent management systems. The existing coverage on TMS concentrates, in a limited manner, mostly on the structure (e.g., elements of TMS), functionalities (e.g., what is the system expected to do), and the integration aspects (which can be the integration of functionalities as various systems may provide different capabilities, integration of TMS with other IS, etc.). Accordingly, we classify the future exploration possibilities broadly into TMS development, structure and functionalities of TMS, and outcome of TMS.

5.1. TMS Development

Pertaining to the development of TMS, the preceding discussions indicate several opportunities. The existing literature already emphasizes the need and role of technologies in the face of technological disruptions (for example, Harris et al. 2011, Nayak et al. 2018, Tufts et al. 2015, Whysall et al. 2019). Table A1 (Appendix) offers a snapshot of technological offerings supporting organizational talent management. Accordingly, the planned inquiries can investigate concerns related to the use of the existing technologies, the appropriateness of the technologies and explore the choices related to selection, design, and integration of the futuristic technologies (for example, artificial intelligence (AI) and analytics, machine learning) around the development of TMS. The current disruption calls for reengineering existing talent management (Claus 2019).

The heterogeneity around talent conceptualization further creates ambiguity concerning its implementation in TMS. The challenge lies in including and operationalizing this construct in the TMS to integrate the various perspectives on talent described in the literature. This assumes importance as then, based on the operationalization of talent in TMS, it may be possible to map them automatically to suitable opportunities and roles. Most TMS can represent the knowledge, experience, and effort, and the operationalization of talent is confined to attributes like skill proficiency, performance appraisal rating, etc. (Vural et al. 2012). Current TMS are limited in terms of representing the innate abilities (intrinsic qualities) of the talent, which is difficult given the nature of these characteristics (Dries 2013, Howe et al. 1998), and hence offer a scope of future explorations.

Talent management research has not investigated the document artifacts that are the byproduct of the talent management processes in organizations. Organizations might generate, store, and maintain various kinds of information that relate to information on talent and talent management processes, and the design of TMS needs to facilitate these processes. Overall, these investigations can potentially reveal the current state of information technologies to support talent management and showcase opportunities around TMS development across organizations.

5.2. Structure and Functionalities of TMS

Here we focus on the organization of the TMS and the functionalities provided by the system. From the structural viewpoint, TMS is expected to integrate its components discussed above towards a unified view of talents, lacking in many organizations (Hejase et al., 2012). Talent management in organizations has a strategic imperative of aligning people with the intended job roles. However, the existing systems do not adequately focus on the strategic aspects, which will need stronger business intelligence and forecasting capabilities (Sucharita et al. 2020).

TMS needs to facilitate organizations to periodically track the impact of relevant contextual factors (internal, external) to appreciate the positive aspects better. The TMS should allow the possibility to configure these factors into the system for assessing and monitoring as per requirements. Further, having the option to track these through TMS periodically will permit the organization to evaluate the nature of variation of the impact, if any. A TMS in this way can potentially act as a mirror that demonstrates what changes or developmental intervention needs to be planned.

TMS also needs to incorporate features that address talent fluctuations Just in Time (JIT) (Cappelli, 2010). With rising uncertainties like attrition (Ready, Hill, Conger 2008), more focus on employee retention activities and increased external subcontracting for quick backfills may be required and needs to be supported through TMS. Aspiration tracking (like talents wanting to work in a different area, need a transfer, etc.) is also essential towards addressing attrition and needs to be enabled through TMS.

Talent management has not adequately attended to social aspects. Attending to societal considerations may be possible if the linkage between talent management and societal goals is established. Thereby, the opportunity exists to investigate issues such as the effect of social, ethical, and regulatory norms on TMS structure and functionality, the nature of the competitive job market and the TMS characteristics, and several others. Organizations benefit from TMS usage if the TMS provides the desired functionalities to establish and assess the necessary linkages.

5.3. Outcome of TMS

The outcome of TMS can be broadly connected to the benefits provided by the systems. The list of benefits from using TMS is already available in various websites or company reports (e.g., ELMO 2016, Quirk 2018). This listing necessarily encompasses the benefits that are attainable with the talent management processes in organizations and the benefits that the presence of the systems (i.e., talent management systems) provides. Besides, the presentation of these benefits is also besieged with problems given that the benefits are primarily stated in a generic way, presented in an unstructured manner, and are also at a different level of granularities (for example, some benefit item may be at an organizational level, (i.e., organizational trust) while some may be attributes of employees (i.e., employee experience)). Future explorations in this regard can be directed at the assessment of the benefits (i.e., how the benefits can be quantified and measured more appropriately), the realization of the benefits (i.e., how the benefits relate to stakeholders at various levels), the prioritization of the benefits (i.e., assigning more importance to specific benefits over others), the contributions of the benefits to

organizational objectives, and the management of the benefits, to address the existing limitations.

Figure 2 shows an interpretive framework where we link these future opportunities around TMS to the observations from the literature related to talent management for the benefit of the readers.

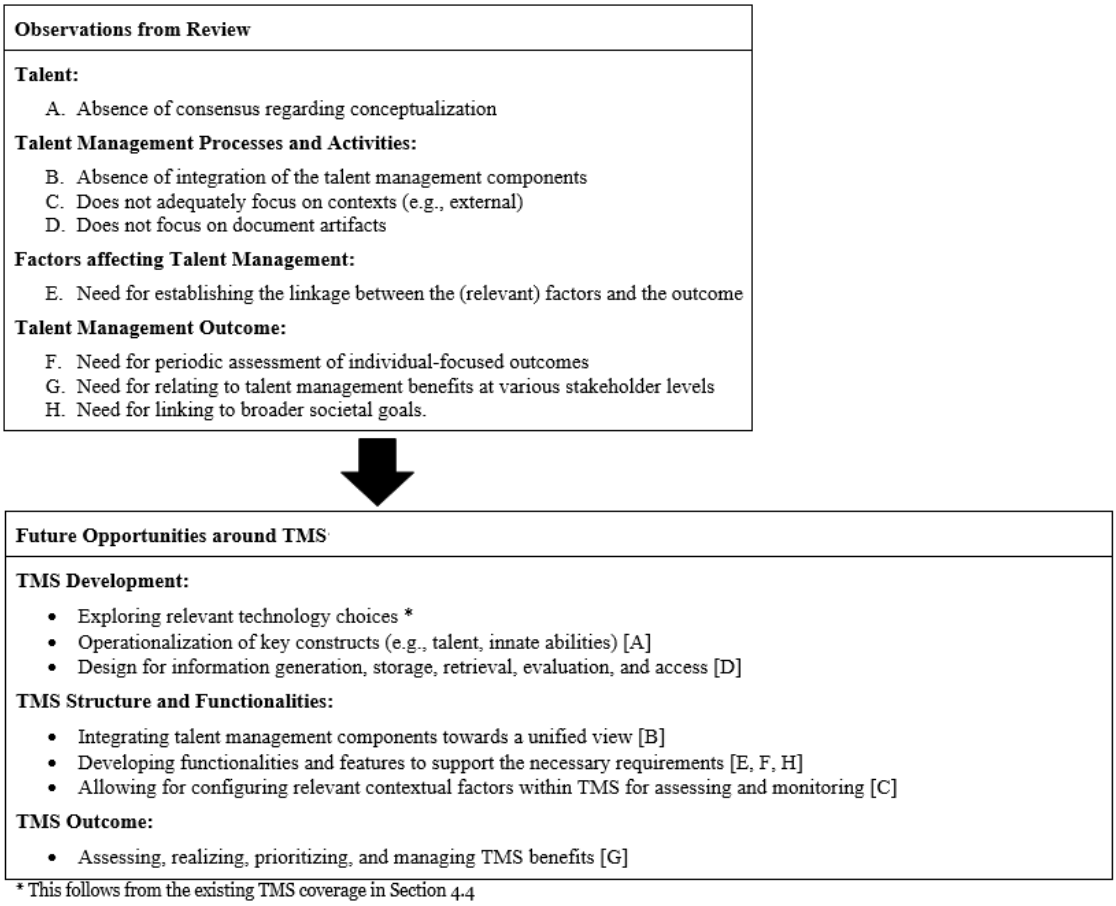

Figure 2. Interpretive Framework

6. Discussion

Developments around talent management have been noteworthy for some time now. The evidence from our review showcases this while also observing that the focus on organizational talent management systems needs to be expanded. Our suggestions on future possibilities have implications for both HR and IS fields, which we discuss below:

Implications for Human Resources

The revelations from the literature suggest both opportunities and challenges for HR managers and the HR profession concerning TMS in talent management processes. First, we observe diverse perspectives regarding how talent is identified by HR and recognize new possibilities around the digital context. HR may be able to identify high-performing workers using technological tools, such as TMS, with embedded AI-cognitive insight capabilities (Johnson et al., 2020). However, the validity and acceptability of these systems are called into question by the incoherence with which the concept of talent may

be articulated while using technological assistance (Wiblen & Marler, 2021). This implies the significance of social processes in shaping how businesses, particularly HR managers, are transitioning to digitalization and managing the ever-more complicated human-technology interaction. Second, in the face of rising global competition for talent, HR is faced with an uphill task to attract, manage, and retain talent. The literature also acknowledges several AI-assisted technologies and applications.to support businesses on the aforementioned challenges (Faqihi & Miah, 2023), and it is imperative that HR practitioners, specifically the leadership, are mindful of this. Third, digital competencies are expected to be critical for leveraging technological advancements and supporting systems (Colbert et al., 2016). Thereby, HR must establish the procedures necessary to enable knowledge and skill growth for interacting with these modern systems. Examples of potential engagements include working with academic institutions and holding training sessions for knowledge impact (Bennett & McWhorter, 2021; Herczeg, 2021; Klus & Müller, 2021).

Implications for Information Systems

The study flags several opportunities for IS practitioners in connection with the TMS. We understand that existing TMS have various limitations; for example, some systems lack a convenient user interface, some are criticized for complexity, some are now updated, some have integration issues, etc. (Gartner Peer Insights, 2023). Thereby, the avenues for exploration around TMS discussed above showcase the scope to continue improving the systems to cater to organizational talent management needs. For the IS organization or IS/IT departments (within organizations) responsible for manufacturing or maintaining these systems, these pertain to software engineering considerations, which can be pursued. This benefits from the technological trends and several available apps and platforms to support various emerging talent management needs (Albert, 2019; Saad et al., 2021). Liaisoning with the HR department is vital for the success of the TMS. Joint ownership is needed involving the leadership of both IS and HR to ensure the systems align with the context and serve the intended needs.

7. Conclusion

In this paper, we have presented a discussion related to talent management and systems based on a review, interpretation, and synthesis of a broad range of relevant literature. We organize the literature review based on a conceptual model that we adapt. The evidence revealed the complexity and multi-faceted nature of talent and talent management. Various perspectives on talent and talent management concepts could be identified. The dominant practices and activities in the field of talent management focus on activities to attract, develop and retain talent. In this context, the existing research has also investigated the factors and outcomes associated with talent management at various levels i.e., individual, organizational, etc. The talent management initiatives in firms are presently driven primarily through information systems, yet the focus on organizational talent management systems has been limited. Accordingly, we offer our suggestions on

future exploration possibilities that broadly relate to the development of TMS, the structure and functionalities of TMS, and the outcome of TMS.

Our work is not without limitations. First, the relevance of the articles that formed our literature review can be questioned. By restricting our search to only two databases, we admit the risk of missing out articles that are relevant to the objectives of this research. Given that the different outlets have specific aims and objectives, this selection is expected to influence the results and the interpretations we make out of the analysis. Second, the sample of the articles that constitute our review is the result of using our search keywords in the channels that were short-listed. Even though we ensured a lot of care in framing the search query and also referred to other appropriate sources based on the list of citations, it still does not guarantee that the search results return all the articles associated with talent management and systems. For example, an article can use the keyword "skill" to discuss aspects related to talent or talent management, but such an article might not get identified if the terms used in our search keywords are not part of the other identifiers being scanned during the article retrieval process.

The contribution of this essay has been to highlight some of the opportunities around organizational talent management systems. We hope that the ideas, discussion, and exploration opportunities outlined in this essay will stimulate interest and future work related to talent management and systems.

Appendix

Table A1. Technological Trends around Talent Management

Technology	Contributions
Analytics	The importance of analytics in talent management lies in gaining relev insights into key functions such as talent acquisition, engagement and retenti demand planning, talent trait assessment, and succession planning.
Artificial Intelligence (A Systems	The usage of AI systems in organizations can be observed in relation to tal acquisition, chatbots (for candidate interaction, automated resume screeni and personalized support), talent development, performance management, predictive analytics.
Cloud	The adoption of cloud-based TMS enables remote access, scalability, and c security.
Digital Platfor	Digital platforms, for example, talent experience platforms have contribute enhancing the overall talent experience, including employee self-serv feedback, and recognition.
Machine Learning	Machine learning and associated developments (e.g., deep learning) can as in analysing unstructured talent data based on techniques such as sentim analysis and natural language processing. These can contribute to identify patterns, predicting employee behaviour, and personalizing learn experiences.

Mobile	Mobile technologies have the potential to facilitate increasing collaboration engagement. These technologies can be utilized for talent acquisition, learn and development, and performance management.
Social	Integration with social media, for example, LinkedIn, Facebook, and Twi may assist the organization in employer branding, talent attraction acquisition, employee engagement, knowledge sharing, collaboration, networking.

Consent for Publication

Not applicable.

Conflict of Interest

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