The nature of the human resource development research–practice gap: Text data mining and topic modeling analysis of three decades of professional and academic literature from 1990 to 2022

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Ying Feng

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Advisor: Dr. Kenneth R. Bartlett

Department of Organizational Leadership, Policy, and Development

University of Minnesota

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The pursuit of a PhD is often described as an educational journey. To me, however, it has felt like an ultramarathon. As a former semi–professional badminton player, I’m no stranger to competition. Yet, during my studies, my advisor taught me the invaluable lesson of refraining from constant comparisons. This, however, does not imply that I was alone in my ultramarathon. Quite the contrary.

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Abstract

The rapidly evolving field of Human Resource Development (HRD) places substantial importance and ongoing dialogue around the gap between research and practice. However, empirical studies addressing this crucial issue remain notably deficient. This dissertation helps fill this knowledge gap using quantitative descriptive analysis to explore topic representation and the change in topic prevalence over time in both professional and academic HRD journals. Utilizing structural topic modeling (STM) and a 50/50 training–test dataset split approach, this study scrutinizes latent topics and the prevalence in five HRD–related professional journals and five academic journals from 1990 to 2022. The results highlight the multifaceted, evolving, and dynamic nature of the gap between HRD research and practice. Key insights from this study reveal a significant overlap with core topics identified in previous HRD research, while offering broader coverage of topics compared to prior studies. In addition, this study suggests highly synchronized interest in 26 topics related to HRD research and practice in both professional and academic journal publications. The results also illustrate aligned interests with shifting priorities over time in 18 topics, while 16 topics showed substantial disparity between professional and academic journal publications. The topic trends uncovered in this study extend and challenge previous research. Some trends corroborate earlier studies on HRD research but provide fresh perspectives on the shifting prevalence of certain topics in professional journals. However, certain topic trends significantly deviate from earlier studies, suggesting inconsistencies among the various scholarly investigations. This study acknowledges the current undersupply and undervaluation of quantitative descriptive knowledge related to the HRD research-practice gap. By identifying and assessing topics across professional and academic journals over the past three decades, this dissertation provides a nuanced descriptive evaluation of the HRD research–practice gap, providing a more comprehensive understanding of this pivotal phenomenon.

Keywords: HRD research–practice gap, topics, trends, professional journals, structural topic modeling

Table of Contents

List of Figures

List of Tables

Chapter 1: Introduction

Human Resource Development (HRD) is a field of applied and multidisciplinary scholarly and professional practice (Kormanik & Shindell, 2014; Swanson & Chermack, 2013). Both the HRD professional and academic communities underscore the practical orientation and the common objective of advancing HRD practice through solid foundational support from research (Ross et al., 2020; Swanson & Holton, 2009). Despite the focus on integrating research to guide professional application, researchers have consistently identified a persistent gap between research and practice as a significant challenge in HRD (Brown & Latham, 2018; Short, 2006). This study on the characteristics of the HRD research–practice gap conducted a quantitative descriptive analysis of specific areas of focus by employing structural topic modeling (STM). STM, an innovative data intensive inductive approach, was used to analyze five HRD professional journal publications and five academic journal publications between 1990 and 2022. The HRD research–practice gap can be broadly described as the tension between theory and practice, research and practice, and rigor and relevance (Wang, 2017).

This chapter first presents an introduction that frames the background of the HRD research–practice gap and highlights the need for the study, followed by the presentation of the purpose and research questions of this study. Subsequently, the research design is outlined both in text and through the use of a CONSORT flowchart to provide a clear view of the workflow of the study. Then, the significance of the study is discussed, followed by a list of definitions of key terms to ensure a shared understanding of the terminology. This chapter concludes with a summary.

Need for the Study

This section presents the need for this dissertation study, which was driven by three main gaps in the existing literature. The first overarching need for the study is related to calls from leading HRD scholars and scholar-practitioners for a deeper investigation and more detailed quantitative descriptive analysis of the HRD research–practice gap. The second need reflects an inadequate level and breath of analysis of the major and highest circulation professional journals in the HRD field and how this analysis could increase our understanding of the research–practice gap. To date, our understanding has been over-reliant on analysis from scholarly journals. The third need for this study is a direct response to the call for expanding the comparison of topic interest areas in HRD professional and academic journal publications.

While the HRD research–practice gap is a well-identified phenomenon that has attracted attention in publications and discussion at conferences for several years, a dearth of quantitative descriptive analysis still exists in many aspects and attributes of the HRD research–practice gap (Keefer & Stone, 2009; Short, 2006). Tkachenko et al. (2017) reviewed 221 articles related to the research–practice gap in HRD, management, and applied psychology, and found a mere 3% of empirical articles examining the HRD research–practice gap between 2000 and 2016. Most exploration on the research–practice gap has been nonempirical, consisting of editorials (e.g., Shindell, 2005; Torraco & Yorks, 2007), conceptual papers (e.g., Gold et al., 2011; Gray et al., 2011), and essays (e.g., Lombardozzi, 2007; Myers, 2008). Short (2006) noted that this dominance of opinion rather than empirical findings indicates that scholars and practitioners have often depended on their intuition and informal networks when evaluating and describing the HRD research–practice gap. The lack of empirical studies on this gap has given rise to significant concerns on the impacts, such as the transformation and application of HRD knowledge within the field (Wang, 2018).

In addition, there is a notable insufficient analysis of professional oriented journal publications in HRD to understand the research–practice gap, with a few noted exceptions (e.g., Ardichvili & Oh, 2013; Wang, 2018). Ardichvili and Oh (2013) also emphasized the importance of analyzing professional journals to understand the research–practice gap. They argued that HRD practitioners tend to be consumers of professional journals. Although some studies on the research–practice gap have primarily had an academic focus, they have often been written on behalf of the perceived practitioner perspectives (Bartunek and Rynes, 2014). Consequently, scholars have called for researchers to acknowledge the equal importance of both perspectives in exploring the research–practice gap (Van de Ven & Johnson, 2006).

Finally, scholars have called for expanding comparisons of topic interest areas to evaluate the research–practice gap (Ardichvili & Oh, 2013; Deadrick & Gibson, 2007; Rynes et al., 2007). For example, Deadrick and Gibson (2007) compared topics in two academic journals and two professional journals between 1986 and 2005. Rynes et al. (2007) compared the extent and consistency of coverage of two academic journals and three professional journals between 2000 and 2005. Ardichvili and Oh (2013) conducted the analysis of publications and the curriculum of higher education in their comparison of the focus areas of two professional journals and 10 HRD academic programs in the United States between 2009 and 2012. These seminal works related to the current study highlight the need to expand the comparisons and include more influential professional and academic journals. Given that the scope and visibility of HRD practice have expanded in organizations, it is crucial to continue to conduct the systematic examinations of areas of interest (Anderson et al., 2020) and the volume of publications (Salganik, 2019).

This dissertation study responds to these calls and builds on previous studies by conducting a quantitative descriptive analysis of the HRD research–practice gap. The analysis encompassed more than three decades, and a more extensive range of sources for analysis of the gaps in topic interest. The study contributes to the descriptive foundation for the phenomenon of the HRD research–practice gap. The following section presents the purpose of the study and the research questions.

Purpose of the Study and Research Questions

The purpose of this dissertation study was twofold. First, the study focused on the identification of the key topics as presented in HRD–related professional and academic journals over the past three decades. Second, this study aimed to analyze the changes in topic prevalence across HRD professional and academic journal publications over time. Rather than attempting to bridge this gap or engage in an examination or evaluation of potential root causes, such as ineffective knowledge transfer, the overarching purpose of this study was to explore key characteristics by comparing the focus areas of professional and academic journal publications in the HRD field. The phenomenon under investigation in this study is the HRD research–practice gap, recognizing the importance of this issue to HRD scholars and practitioners as a significant fundamental phenomenon (Bartunek & Rynes, 2014). Consequently, the following research questions were established based on these purposes:

Research Question 1: What topics were discussed in HRD professional and academic journal publications between 1990 and 2022?

Research Question 2: How did these topics evolve and change in different types of publications (professional versus academic) between 1990 and 2022?

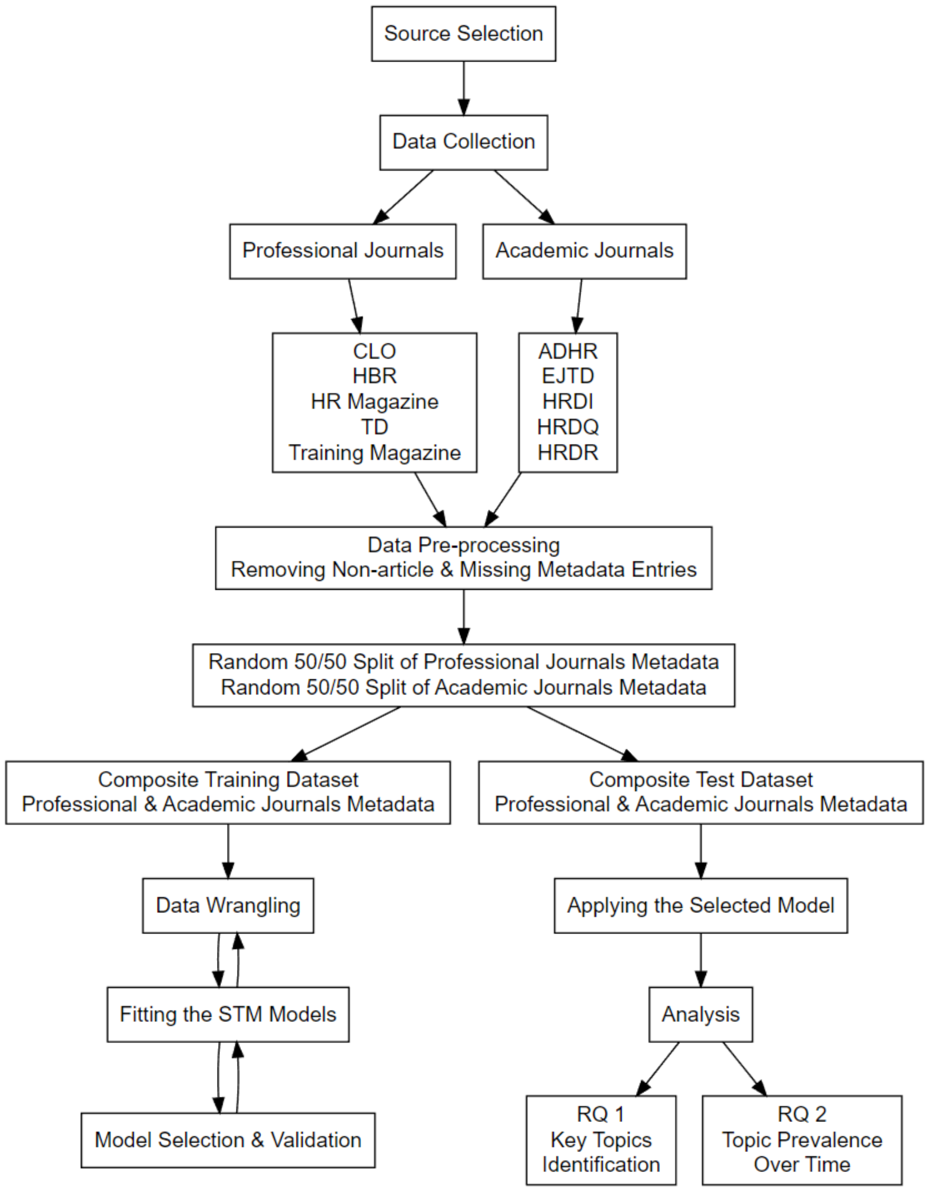
These research questions provided a direct response to the needs of this study, offered a roadmap to explore the characteristics and dynamics of the HRD research–practice gap. The following section presents an overview of the research design, outlining a clear workflow for the dissertation study.

Research Design Overview

This study applied structural topic modeling (STM) to identify and analyze topics and topic prevalence across HRD–related professional and academic journal publications for the past three decades. An overview of the study design is presented in the consolidated standards of reporting trials (CONSORT) flowchart (see Figure 1). The research process began with the identification and selection of relevant HRD professional and academic journals. Metadata, including the title, abstract, and publication year, were collected from all articles published in the selected journals from 1990 to 2022. The next phase was comprehensive text pre–processing, eliminating non–article or missing metadata entries. A 50/50 training–test dataset split procedure was adopted to address identification issues and overfitting problems inherent in text as data research (Egami et al., 2022). This split involved randomly dividing the post–processed metadata from professional and academic journals into separate training and test datasets. Notably, rather than creating separate corpora for professional and academic journals for separate analysis, metadata from both types of publications were combined for the training dataset and the test dataset. The rationale behind this approach is further elaborated in Chapter 3.

Figure 1

CONSORT Flowchart of Study Design Overview



Notes. For a detailed explanation of the abbreviations used for journal names, please refer to the "Source Selection" section in Chapter 3.

After preparing the training and test datasets, an iterative data wrangling process was undertaken including tokenization and the removal of stop words. The training dataset was first used to identify appropriate STM topic models. As the optimal number of topics for the topic model could not be predetermined based on existing theory or prior research (Roberts et al., 2019), an iterative model selection and validation process was conducted. The selected optimal model was then applied to the test dataset to develop the final topic model for analysis addressing the research questions. The first stage of analysis addressed Research Question 1 and identified the key topics, which applied key outcomes from the final topic model that were strongly associated with each topic. The subsequent analysis for Research Question 2 explored the relationship between the expected prevalence of each topic and document–level covariates, including the publication year and the type of publication (coded as binary factors differentiating professional from academic journals).

Significance of the Study

This study analyzed the five frequently read HRD professional journal publications, and five major academic journal publications. The selection of publications was in response to the call for expanding comparisons of areas of focus in analyzing the HRD research–practice gap (Ardichvili & Oh, 2013; Wang, 2018). The study embraces the view of both parties with equal importance and competence in understanding the gap between research and practice (Van de Ven & Johnson, 2006). This study addresses the need to empirically examine the HRD research–practice gap and offers a quantitative descriptive analysis of the gap, as represented in the topics of interest in professional and academic journal publications from 1990 to 2022.

This study also offers an additional methodological avenue that addresses the increasing volume and extreme heterogeneity of journal publication data (Bosco, 2022), thereby keeping pace with the continuously expanding body of HRD professional and academic literature. It employed a data intensive approach, STM, to analyze the extensive metadata collection from the 10 selected journals. This method allowed the researcher to harness the recent advancements in computational social science, which has been effective in identifying topics and incorporating contextual information (Roberts et al., 2019). Specifically, this study estimated and compared topic prevalence across different types of journals over the past three decades.

Lastly, this study provides a quantitative descriptive analysis of the HRD research–practice gap, laying the groundwork for the future identification of crucial questions, as well as the generation and testing of hypotheses about the phenomenon to further theory building efforts. The lack of descriptive knowledge about a phenomenon hinders hypothesis generation, obstructs the identification of important questions, and limits the generalizability of the findings (Munger et al., 2021). By offering a quantitative descriptive analysis of the HRD research–practice gap, this study aids in the empirical analysis and theorizing related to the HRD research–practice gap, thereby promoting evidence–based HRD practices (Gubbins et al., 2018).

Definitions of Key Terms

Corpus: A large dataset of a collection of documents or text used for statistical analysis (Blei et al., 2003).

HRD practitioners: Individuals who strive to “identify, develop, deliver, and evaluate effective solutions and strategies for addressing challenges and problems faced by individuals, groups, and organizations” (Kormanik & Shindell, 2009, p. 539).

HRD scholar–practitioners: Individuals who “stand in the breach and [are] interpreters for scholars and practitioners” (Moats & McLean, 2009, p. 508).

HRD scholars: Individuals who “use and advance theory… they are more learned and/or more likely to have a deep knowledge of something and are more inclined to use more rigorous principles and practices to make their knowledge claims as trustworthy as possible” (Ruona & Gilley, 2009, p. 440).

Human Resource Development (HRD): HRD is “any process or activity that, either initially or over the long term, has the potential to develop adults” work-based knowledge, expertise, productivity and satisfaction, whether for personal or group/team gain, or for the benefit of an organization, community, nation or, ultimately, the whole of humanity" (McLean & McLean, 2001, p. 322).

Metadata: Information about journal publications, including publication year, journal type (professional versus academic), title, and abstract (Evans & Aceves, 2016).

Topics: Latent semantic themes associated with the probability of the co–occurrence of words in the corpus (Vayansky & Kumar, 2020).

Chapter 1 Summary

This chapter opened with a presentation of the existing gaps in the exploration of the HRD research–practice divide, thereby underlining the need for this dissertation study. Subsequently, the purpose of this study and two research questions that guided the inquiry were introduced. Next, a preview of the research design was provided to offer a clear overview of the structure and sequence of the study. The significance of the study was discussed, highlighting the anticipated relevance and worthiness of the study within the broader context of HRD research and practice. To conclude the chapter, key terms used throughout the study were defined to ensure clarity of understanding and maintain consistency in interpretation.

Chapter 2: Literature Review

The debate regarding the HRD research–practice gap has been ongoing since the early 1970s. Campbell (1971) was among the first to discuss the lack of sound theory application in training and development practices. Over time, observations of the HRD research–practice gap have extended and fueled broader concerns. Passmore (1983) commented on the disconnect among researchers, trainers, and managers, each perceiving the other group as unproductive or out of touch. Scholars, (e.g., Latham,1988) pointed out the scarce application of advanced knowledge in training practice. Others (e.g., Camp et al., 1991) questioned the practical relevance of training research. Discussions about the HRD research–practice gap intensified in the 2000s. More recent commentary, discission, and writing related to the HRD research–practice gap have focused on diverse aspects such as the causes and impact of this gap (e.g., Moats & McLean, 2009), maintaining rigor and relevance (e.g., Brown & Latham, 2018), the roles of different stakeholders (e.g., Jacobs, 2014), the notion of the gap as unbridgeable (e.g., Kieser & Leiner, 2009, 2011), and strategies to bridge the gap (e.g., McLean, 2010).

Despite these extensive discussions and a considerable body of literature about the research–practice gap, there is a deficiency in quantitative descriptive analysis on the HRD research–practice gap (Short, 2006; Wang, 2018). Tkachenko et al. (2017) analyzed 221 articles on the research–practice gap, published from 2000 to 2016 in 15 academic journals in the fields of HRD, management, and applied psychology. Their findings showed that only 23% of these articles were empirical, and a mere 3% empirically addressed the HRD research–practice gap (Tkachenko et al., 2017).

Chapter 2 provides a comprehensive literature review of the gap between HRD research and practice. This chapter includes three main sections. The first section discusses the connection between research and practice. The second section presents a review of the gap between HRD research and practice, adopting a narrative approach (Glibkowski et al., 2014). The final section reviews mainstream studies on analyzing the HRD research–practice gap through a comparison of the topics of interest.

To manage the scope of this review, the primary focus of the reviewed literature was publications that have specifically focused on or addressed the research–practice gap related to the core HRD topics. It should be noted that this review does not attempt to cover the HRD research–practice gap in the broader societal context such as national HRD (McLean & McLean, 2001).

Connection Between Research and Practice

The connection between research and practice has always been a core and integral aspect for applied fields of inquiry. Kurt Lewin (1952), one of the pioneers of social, organizational, and applied psychology, asserted that, “There is nothing so practical as good theory” (p. 169). Van de Ven (1989) elaborated on this axiom, stating that “Good theory is practical precisely because it advances knowledge in a scientific discipline, guides research toward crucial questions, and enlightens the profession of management” (p. 486). This principle is equally applicable to the field of HRD, signifying a profound connection between research and practice as a distinguishing dimension of both scholarship and professional practice.

The connection between HRD research and practice has been observed from the following three perspectives. First, HRD, as an applied discipline, inherently has a practical orientation (Packard, 2017). While there are debates regarding the definition of HRD, with some arguing for a refusal to define it (e.g., Lee, 2001) and others advocating for greater definitional clarity (e.g., Swanson & Holton, 2009), the universal aim of advancing HRD practice is underscored by both professional and academic communities (Kormanik & Shindell, 2014; Ross et al., 2020; Swanson & Chermack, 2013). Instances of shared objectives for the aims of HRD research and practice can be seen in the following characteristics: enhancing individual, group, and organizational efficacy; nurturing skills, competencies, and knowledge; and maximizing human potential (Hamlin & Stewart, 2011).

In addition, the development of HRD practice and interventions requires research, while the progression of HRD research requires experience in practice. Jacobs (1990) observed that "After practice is established, the need arises to formalize the knowledge gained in practice into some logical structure. Such activity helps legitimize the profession and increases the reliability of practice" (p. 66). More recently, Jacobs (2014) noted that "HRD research cannot exist in isolation of the context in which it seeks to influence, and an understanding of the major players involved in the process is critical for making the research happen successfully" (p. 15). Torraco and Yorks (2007) highlighted that, "The work of theorists and practitioners is enriched as it is infused with each other's perspectives" (p. 5).

Lastly, there is a profound connection between the professional associations of HRD practitioners and scholars. The Association for Talent Development (ATD), formerly the American Society for Training and Development (ASTD), was founded in 1945 as the first HRD professional association with the primary objective of developing standards and enhancing the prestige of industrial training (Kraiger & Ford, 2007). The Professors Network, a subgroup from ATD, led to the formation of the Academy of Human Resource Development (AHRD) in 1993 (McLean, 2016). Despite their distinct foci, ATD and AHRD have engaged in numerous dialogues, collaborations, and partnership endeavors since their foundation (Torraco & Yorks, 2007).

In conclusion, the link and interplay between research and practice is deeply embedded in the HRD field. The connection between HRD research and practice can be viewed from these three aspects: practical orientation, mutual dependency for advancement and development, and the historic and ongoing relationship between professional associations. Given the historical and continuous focus of research and practice, the field of HRD would seem well positioned to have a broad knowledge base from which to support efforts to bridge research and practice (Bierema, 2009). However, despite the connection, a gap persists between HRD research and practice. The subsequent sections present various aspects of the HRD research–practice gap, guided by a narrative approach.

Viewing the Gap Through a Narrative Approach

Using a narrative approach (Glibkowski et al., 2014), the second part of this chapter presents various yet interrelated aspects of the HRD research–practice gap. This section of the literature review focuses on four key narrative questions (i.e., what, why, how, and who) to address the HRD research–practice gap: a) What characterizes the perceived HRD research–practice gap; b) Why does this gap persist?; c) How can strategies be developed and deployed to bridge this gap, and what inherent challenges could make it unbridgeable?; and, d) Who are the stakeholders involved in this phenomenon? These narrative questions, metaphorically referred to as the fingertips of a hand, form the structure of the review and underscore the interconnectedness of these elements of the phenomenon (Glibkowski et al., 2014). Reviews of the literature on the HRD research–practice gap are framed based on these narrative questions. The underlying perspectives are presented in the following sub–sections.

The "What" Question

The concept of a gap between research and practice, often depicted as a wall, tension, or divide, has been a recurring theme in HRD literature (Short, 2006). This perspective of the research–practice gap primarily focuses on rigor and relevance (Brown & Lathan, 2018). Two divergent perspectives have shaped this discussion. One school of thought stresses the need to maintain both rigor and practical relevance in research (e.g., Gubbins & Rousseau, 2015; Van de Ven, 2007). In contrast, the alternate viewpoint suggests that rigor and relevance are mutually exclusive (e.g., Daft & Lewin, 2008). Advocates of this perspective argue that scholars should concentrate on ensuring rigor and academic relevance, dismissing the need for practical relevance (Daft & Lewin, 2008).

This divergence traces back to contrasting perspectives on the nature of research. Specifically, the mainstream perspective characterizes management–related research as applied research (Van de Ven, 2007), while the other regards it as basic research (Daft & Lewin, 2008). The third perspective is that organizational research can be viewed as fundamentally grounded in phenomena (Tushman & O'Reilly, 2007). These disparate viewpoints on the nature of research determine whether practical relevance is expected and should be maintained in research.

From a Relevance Perspective. The discussion in this section centers on the practical relevance of HRD research, which involves three main issues. These issues include a misalignment with practical needs, a lack of actionable guidance in academic publications, and the absence of clearly communicated benefits, such as return on investment (ROI) information to support HRD decision making.

First, HRD research has been criticized for a perceived lack of attention to practical needs and interests (Stewart, 2007). Ruona and Gilley (2009) noted a common critique, stating that

“Practitioners continued to criticize scholars for being disconnected from their challenges... and misdirected in the issues they chose to address” (p. 438). Thus, many research initiatives have paid primary attention to filling the gaps in existing academic literature (Ross et al., 2020). However, research questions often overlook practice–related problems due to a predominant focus on the academic community and a lack of interest in addressing practical needs (Keefer & Stone, 2009).

In addition, a significant portion of research falls short in providing concrete application steps and actionable guidance, thereby diminishing its relevance (Packard, 2017). Moats (2017) took an HRD practitioner’s perspective and highlighted that while academic publications have served as crucial avenues for knowledge dissemination, many of them have failed to propose meaningful implications for HRD practitioners seeking effective solutions. Brown and Latham (2018) also noted that from their experience as journal editors, the implications of published research articles were often superficial and seemed to be added merely to fulfill journal submission requirements. This issue is exacerbated when scholars themselves have struggled to suggest quality implications due to their disconnection from practical contexts (Bartunek & Rynes, 2010).

Lastly, clear communication of benefits, including an impact analysis of HRD research–based interventions has frequently been missing (Keefer & Stone, 2009; Keefer & Yap, 2007). Critics have argued that there has been a noticeable absence of return on investment (ROI) information or data–driven results to inform decision–making in HR/HRD activities (Cappelli, 2017; Gubbins & Rousseau, 2015). Myers (2008) posited that estimating ROI from the adoption of research findings is crucial from a practitioner’s perspective. However, it is equally important to acknowledge the challenges associated with measuring the ROI of HRD interventions.

Torraco and Lundgren (2020) noted that “The benefits of HRD are long–term, manifested in skills that are difficult to measure, and less tangible than costs, which inevitably results in underinvestment in HRD” (p. 41).

In summary, the perceived HRD research–practice gap from a relevance perspective is influenced by various factors, including the misalignment of research with practical needs, lack of actionable guidance, and lack of articulation of clear benefits. The next section presents the research–practice gap from a rigor perspective.

From a Rigor Perspective. The discussion in this section focuses on issues concerning the lack of rigor in HRD practice, as well as criticism regarding an overemphasis on rigor in research. This disconnect purportedly widens the research–practice gap.

One significant concern levelled by scholars is the apparent lack of scientific foundations in HRD practice. Swanson and Holton (2001) suggested that HRD practitioners have often favored unproven theories and faddish practices, and they have neglected to consult valid evidence. They derided this foundation for HRD practice as the preference for “frivolous and invalid armchair theories” (Swanson & Holton, 2001, p. 12). A key issue exacerbating the lack of rigor in practice is practitioners’ limited motivation to incorporate research findings into their work (Kuchinke, 2004). Packard (2017) reflected this argument from HRD practitioners’ perspective, noting that they “did not get promoted by testing theory, but by achieving performance results…” (p. 264). The evaluation and reward systems for practitioners largely hinge on the quality, timeliness, cost effectiveness, and impact of their initiatives and solutions (Kormanik & Shindell, 2009). Time constraints pose a significant challenge to the adoption of research or the emphasis on rigor in practice (Moats & McLean, 2009; Packard, 2017). This is particularly evident in organizations with performance–driven cultures, which often prioritize short–term, immediate solutions over the integration of research findings (Keefer & Stone, 2009). While there is a valid critique about the overemphasis on rigor in research, the extent and dimensions have attracted a range of viewpoints. Starkey et al. (2009) claimed that the overemphasis on rigor has often resulted in research conducted primarily to serve the academic community, potentially neglecting practical needs and interests.

In summary, the debate around rigor presents two consistent themes related to HRD practice: a diminished interest in the application of research and the contextual constraints hindering the adoption of research findings. This is juxtaposed with critiques about an excessive focus on rigor in research. This divergence in the perspective on rigor further characterizes the HRD research–practice gap. The next section discusses the underlying reasons that contribute to the persistence of this gap.

The "Why" Question

This section provides a review of the causes underpinning the HRD research–practice gap to address the "why" question. This section focuses on three primary causes proposed by Van de Ven and Johnson (2006): the knowledge divide, knowledge transfer, and knowledge production. This section also presents additional causes of the HRD research–practice gap that do not directly relate to the knowledge management perspective.

Knowledge Divide. This perspective frames the causes of the research–practice gap on the premise that "knowledge of theory and practice are distinct types of knowledge" (Van de Ven & Johnson, 2006, p. 802). The knowledge of theory seeks generality and strives to establish laws and principles describing the fundamental nature of phenomena (Van de Ven & Johnson, 2006). In contrast, the knowledge of practice is typically customized, linked to experience, and adapted to the specifics of individual cases (Van de Ven & Johnson, 2006).

Although both research and practice involve the creation and dissemination of knowledge, what qualifies as knowledge in each domain is judged by different standards (Kuchinke, 2004). Scholars predominantly focus on what and why and grapple with abstract theory, whereas practitioners primarily are concerned with how and apply knowledge in action (Glibkowski et al., 2014). Essentially, research aims for a precise understanding of the world, while practice emphasizes simplicity, swift diagnosis, and solutions to address real world problems (Jacobs, 2014).

Knowledge Transfer. The ineffective transfer of knowledge is one of the causes of the gap between research and practice (Van de Ven & Johnson, 2006). This viewpoint assumes that the knowledge required in professional domains stems, at least partially, from academic research (Van de Ven & Johnson, 2006). This section presents issues related to knowledge transfer from research to practice, with the recognition of the relatively unexplored area of knowledge transfer from practice to research (Glibkowski et al., 2014).

Practitioners often have limited access to find and read academic journals and materials, which prompts them to seek more readily available resources, such as professional journals, industry or business reports, and expert blogs in popular media (Packard, 2017). Furthermore, scholars infrequently publish their findings in non–academic press or mainstream media outlets (McLean, 2010). The absence of publications on accessible platforms further disconnects research findings from policy decision–making processes (Malin & Lubienski, 2015). Malin and Lubienski (2015) highlighted how influential groups, such as the Heritage Foundation and the Cato Institute, tend to cite popular media experts over distinguished scholars when attempting to influence educational policy. Rynes et al. (2007) also noted that major research findings have diminished in terms of their influence over practitioners and policy makers as sources of ideas and advice for practice.

This "death of expertise" was thoroughly explored by Nichols (2017). Building on an earlier article published in *The Federalist* (Nichols, 2014), Nicols' book traced the emergence and rise in power of the forces that undermine the authority of experts in the United States. An element of this process is exacerbated by the academic community's resistance to change in knowledge dissemination, especially when the scholars are striving for academic promotion by publishing in quality journals (Ross et al., 2020). The practices around publishing and knowledge dissemination have a substantial impact on the gap between HRD research and practice. McLean (2010) contended that,

> We will never see the mistakes within our own publishing practices if we are held hostage to what I have argued is a meaningless taskmaster. And I am guilty of playing the game. I list impact factor of the journal when it is available; I indicate which journals I have published in that are SSCI. But as long as we play this game, we continue to stay in the last generation rather than discovering or creating the next generation of knowledge. (p. 318)

An additional concern regarding publishing practices and existing knowledge dissemination efforts is the peer review process of academic journals that are predominantly governed by academic standards. This process has further widened the gap (Nicolai et al., 2011). More importantly, the time required to complete and publish research is often much longer than practitioners can afford to wait (Bartunek & Rynes, 2014). By the time research is published, it is often outdated and irrelevant to current practice (McLean, 2010). Consequently, practitioners often turn to timely industrial reports and professional magazines, as these publications release their findings immediately after completion (McLean, 2010).

While much of the literature emphasizes the issue of knowledge transfer from research to practice, it is imperative to acknowledge that knowledge transfer can, and should, also occur from practice to research (Glibkowski et al., 2014). However, little research has examined knowledge transfer issues from this alternate perspective (Glibkowski et al., 2014).

Knowledge Production. Issues surrounding knowledge production primarily arise from an ineffective collaboration between scholars and practitioners (Van de Ven & Johnson, 2006). As Van de Ven and Johnson (2006) argued, organizations should function not merely as sites for data collection but as “a learning workplace (idea factory) where practitioners and scholars coproduce knowledge on important questions and issues by testing alternative ideas and different views of a common problem” (p. 809).

However, initiating and maintaining a consistent dialogue and partnership between scholars and practitioners often presents challenges (Wang, 2017). Empirical evidence has highlighted the limited involvement of practitioners in research. For instance, only 9% of journal articles have featured practitioners as co–authors over a span of ten years (Morgan & Lightner-Laws, 2013). Chae et al.’s (2020) social network analysis of HRD publications between 1990 to 2014also found a consistent low level of scholar–practitioner collaborations. An inflated value placed on research can also create unrealistic expectations among practitioners, which then leads to disappointment and can hinder the development of productive partnerships. Kuchinke (2004) argued that,

> The modernist belief in the power of science and the institutional pressures of science–driven research universities lead to an inflated belief in the value of scientific research

> and unrealistic expectations by the public about the contributions of social scientists to solve organizational, social and human problems… This modernist mindset contributes to the disappointment of practitioners who … find few of their questions answered and come away with the impression that researchers simply write and speak to and for themselves… This also hinders the establishment of partnerships and true dialogue between academicians and practitioners. (p. 538)

Beyond the misaligned expectations of research, the contrasting cultural norms and expectations between scholars and practitioners often obstruct effective interaction and collaboration (Packard, 2017). It is important to note that scholars and practitioners belong to different communities, and each community is driven by their unique reward structures and incentive systems (Kuchinke, 2004).

Additional Causes. Beyond the causes tied to knowledge management, several other factors contribute to the widening gap between HRD research and practice. These additional causes include: 1) insufficient training or educational prerequisites for HRD practitioners, 2) a disconnect in understanding research and research findings, 3) misplaced ontological assumptions, and 4) differing modes of communication within professional and academic communities. This section discusses these additional causes of the HRD research–practice gap.

First, the training and educational background of HRD practitioners pose significant challenges. Bartlett (2003) argued that the HRD profession often overly relies on the "accidental trainer" and suggested that the absence of mandatory educational prerequisites for entering the HRD profession potentially exacerbates the research–practice gap. As Moats and McLean (2009) questioned: "Is theory impractical and thus to be disregarded by practitioners, or is theory the most pragmatic approach to adopt, necessitating practitioner input for maturation and increased utility?” (p. 512). The dilemma of appropriate education and/or preparatory experience leads to important questions about what competencies and qualifications are necessary to be an HRD professional (Bartlett, 2003). However, establishing universally accepted qualifications or even minimum standards for recognition as an HRD practitioner is a substantial challenge given the wide diversity in backgrounds, educational levels, and experience among HRD practitioners (Ruona & Gilley, 2009).

In addition, a disconnect in understanding research and practitioners’ perception of their inability to understand research findings further widens the gap. The understanding of what constitutes “research” also varies between HRD practitioners and scholars (Keefer & Stone, 2009). Moats (2017) noted that from the practitioner’s perspective, the act of researching and applying best practices in their daily work is often considered by professionals as conducting or adhering to research.

Furthermore, practitioners may struggle to comprehend research findings. Klein and Zedeck (2004) contended that “construct[s] that seem clear and meaningful to the author who has been thinking about it for months or years may seem vague and confusing to the reader first exposed to it” (p. 932). Research findings dispersed across numerous academic journals can seem daunting and unapproachable to practitioners, and they may struggle to assimilate a cohesive understanding of the literature and implement it effectively in their work (Keefer & Stone, 2009). Kieser and Leiner (2011) further asserted that “The ‘body of scientific evidence’ which our critics refer to contains an abundance of contradictory findings and recommendations and is therefore not of much help for practitioners” (p. 891).

Misguided ontological assumptions can also skew results and thereby widen the research–practice gap. Research with misplaced ontological considerations may not resonate with practitioners, as the findings could present things “in ways they simply don't comprehend” (Gioia, 2022, p. 175). Gioia (2022) exemplified this with the contrasting cases of Boeing Aerospace and Ford. Despite being engineering companies with similar organizational structures, these two organizations’ operations varied substantially. Boeing functions according to a formal design, enabling studies to apply realist assumptions, such as examining its organizational charts. However, Ford’s operations do not align precisely with its design, necessitating more subjectivist assumptions to account for its informal organization (Gioia, 2022).

Finally, the communication modes within professional communities differ significantly from those within academic communities. Practitioners often perceive academic language as “artificial” and laden with jargon (Keefer & Stone, 2009, p. 465). While academic journal publications typically commence with comprehensive literature reviews for problem framing (Nielsen, 2010), professional magazine articles often prioritize quickly presenting problems and offering practical recommendations (Packard, 2017). Moreover, communication about concepts like statistical significance may hold little practical value (Kuncel & Rigdon, 2012). These differing modes of communication within professional and academic communities further widen the research–practice gap.

The “How” Question

The preceding sections present the underlying reasons for the HRD research–practice gap. While many scholars have discussed this gap and proposed potential bridging strategies, others have questioned whether the gap can be bridged. The subsequent sections transition from understanding the gap to literature that has presented strategies aimed at narrowing this gap, while also discussing the concerns surrounding the gap that some consider unbridgeable.

Bridging Strategies. The fundamental assumption of bridging strategies is that rigor and relevance do not stand in opposition or substitute for each other; instead, they complement each other (Brown & Latham, 2018). Various bridging approaches have been proposed. Some focus on calls for engaged research and collaborative projects (e.g., Tsui, 2013; Van de Ven, 2007), and others advocate for evidence–based perspectives and practices (e.g., Gubbins & Rousseau, 2015; Hamlin, 2007). Other strategies include using education and appropriate training to narrow the gap (Ardichvili & Oh, 2013; Bartlett, 2003) and developing professional partnerships (Hamlin et al., 1998). Some strategies also consider the roles of agents who act as bridges between HRD research and practice (e.g., Kormanik & Shindell, 2009; Short & Shindell, 2009; Wang, 2017), as well as modified approaches in communication (Moats & McLean, 2009; Packard, 2017). The prevalent bridging approaches/themes and exemplary work are presented in Table 1.

Table 1

Summary of Bridging Approaches of Research–Practice Gap

Bridging approaches/themes	Exemplary contributions
Appropriate writing styles	Packard (2017)
Changing publishing practices	McLean (2010)
Community engaged scholarship	Morrison (2020)
Developing scholar–practitioners	Short & Shindell (2009), Wang (2017)
Education as a means to narrow the gap	Ardichvili & Oh (2013), Bartlett (2003)
Engaged scholarship	Van de Ven (2007)
Engaged research	Tsui (2013)

Evidence–based HRD	Gubbins et al. (2018)

Bridging approaches/themes	Exemplary contributions
Grounded in a pragmatist philosophy	Korte & Mercurio (2017)
Mode 2 research	Gray et al. (2010)
Professional partnerships	Hamlin et al. (1998)
Relational scholarship	Bartunek (2007)
Speaking a commonly understood language	Moats & McLean (2009)
Translational research	Gubbins & Rousseau (2015)

Given that the purpose of this dissertation study was not to study strategies to bridge the gap by developing new frameworks, an extensive review and assessment of the existing bridging recommendations are not deemed relevant or useful. Hence, this literature review does not include an extensive review of each bridging strategy.

Unbridgeable Concerns. Although many have advocated for narrowing the research–practice gap, as reviewed in the preceding section, other literature has questioned the feasibility of doing so. This section presents the arguments and potentially insurmountable barriers in bridging research and practice.

From a system theory perspective, Kieser and Leiner (2009) argued that the communication elements of one system cannot be easily integrated into the communication processes of another system. They highlighted that “social systems are self–referential or autopoietic, which means that communication elements of one system, such as science, cannot be authentically integrated into communication of other systems, such as the system of a business organization” (Kieser & Leiner, 2009, p. 516).

Furthermore, bridging research and practice, or reconciling rigor with relevance, often involves a compromise that may lead to shortcomings at both ends. Nicolai et al. (2011) rhetorically questioned "to what extent the pursuit of truth, which is pivotal in science, can be reconciled with the pursuit of applicable knowledge, which is central to the expectations and cognitive norms of practitioners" (p. 56). The attempts to bridge the research–practice gap require a compromise between rigor and relevance, raising concerns about the possibility of producing both rigorous and relevant outcomes (Nicolai et al., 2011).

Lastly, Daft and Lewin (2008) argued that relevance extends beyond practical relevance to end users/practitioners. It also resonates with academic subcommunities, referred to as academic relevance. Academic relevance and practical relevance serve different subcommunities, and knowledge migration occurs at various levels, which eventually contributes to practical impact. Daft and Lewin (2008) described the differences:

> Academics often think of relevance as meaning the practical value for end users such as managers in organizations, but knowledge is also relevant to one's own and other academic subcommunities…Perceived relevant knowledge can be connected with knowledge or experience already in the receiving subcommunity to create new knowledge for publication or improved practice… The receiving subcommunities have their own idiosyncratic selection processes for determining what knowledge is relevant to their research interests or managerial work. (p.108)

Daft and Lewin (2008) argued that academic communities and subcommunities have varying degrees of linkage to practice and thus they create different practical impacts. Consequently, bridging research and practice through practical relevance should not be a concern (Daft & Lewin, 2008). Interestingly, Daft and Lewin (1993) initially advocated for maintaining practical relevance in an editorial in the *Organization Study* journal. Over time, however, they recognized a publication trend towards narrowness in academic subcommunities. This observation was based on their citation analysis of articles published in the same journal, and they used this trend to argue for the potential unbridgeable nature of the research–practice gap (Daft & Lewin, 2008).

The "how" question section provided a review of the prevalent bridging approaches to research and practice, as well as the concerns surrounding the possibility and feasibility of bridging the gap. These concerns include perspectives rooted in system theory, highlight the inherent challenges of reconciling rigor with relevance, and acknowledge the varying levels at which knowledge migration occurs to ultimately create practical impact. The subsequent section presents a review of the stakeholders involved in the phenomenon of the HRD research–practice gap.

The "Who" Question

The major stakeholders, including HRD practitioners, scholars, and scholar–practitioners, have each played distinct yet vital roles in the research–practice gap. The subsequent sections discuss the roles and involvement of these groups of stakeholders.

HRD Practitioners. HRD practitioners are defined as individuals who strive to "identify, develop, deliver, and evaluate effective solutions and strategies for addressing challenges and problems faced by individuals, groups, and organizations" (Kormanik & Shindell, 2009, p. 539). Rather than being constrained to a specific functional area, the roles of HRD practitioners often transcend multiple functions and encompass tasks performed by various agents in the workplace (Gold et al., 2011; Torraco & Lundgren, 2020).

There are two perspectives of assessing practitioners' roles and involvement in the HRD research–practice gap. One perspective subdivides HRD practitioners into more granular categories, while the other views practitioners as a whole and unified group. Ruona and Gilley (2009) proposed a continuum to categorize the different types of HRD practitioners involved in the research–practice gap. They identified the following categories: a) practitioners who lack the ability to interpret, consult, and apply sound resources, research, and theory; b) practitioners with beginner-to-competent levels of knowledge and capability to analyze and employ research/theory in practice; c) practitioners who possess proficient knowledge and the ability to consult scholarly resources to improve practice; and d) practitioners who could generate theories and implement evidence–based practice (Ruona & Gilley, 2009).

The alternative perspective considers practitioners as a whole and a unified group. Keefer and Stone (2009) suggested that practitioners might not be aware of the research–practice gap, or the problems associated with not applying theory and research to practice. They posited that practitioners, who are focused on their immediate tasks and securing their value within organizations, often perceive the research–practice gap as irrelevant to their professional success (Keefer & Stone, 2009). Moats (2017) echoed this perspective. Arguing from a practitioner's perspective, practitioners would not have taken steps to bridge the research–practice gap on their own.

HRD Scholars. HRD scholars are defined as individuals whose focus and purpose are to "create, integrate, synthesize, and disseminate new knowledge and information" (Kormanik & Shindell, 2009, p. 539). Ruona and Gilley (2009) further described HRD scholars as individuals who "use and advance theory... learned and/or more likely to have a deep knowledge of something and are more inclined to use more rigorous principles and practices…to make their knowledge claims as trustworthy as possible" (p. 440).

The significance of the research–practice gap may resonate more strongly with scholars than practitioners, thus underscoring the pivotal role of scholars in this context (Bartunek & Rynes, 2014). Their involvement includes theorizing the gap, calling for action, and initiating changes to bridge the gap (e.g., Ardichvili & Oh, 2013; Bartlett, 2003; Brown & Lathan, 2018; Gubbins & Rousseau, 2015; Keefer & Yap, 2007; McLean, 2010). However, Bartunek and Rynes (2014) observed that some research efforts on the research–practice gap "are actually about and aimed at other academics, and whether or not the other academics hold what the author considers the proper viewpoint… sometimes speaking on behalf of what they perceive to be practitioner perspectives" (p. 1188).

Despite these efforts, a metaphorical invisible wall exists between HRD scholars and practitioners, and this divide "conceptually, practically, and attitudinally separates many scholars and practitioners" (Kormanik & Shindell, 2009, p. 538). The construction of this divide is attributed to a variety of factors, including, but not limited to, differences in the rigor and relevance of research, variances in interests and incentives, and mismatches in evaluation and expectation, as presented above. Recognizing the invisible wall emphasizes the need for concerted efforts for development of those in HRD scholar–practitioner roles (Wang, 2017).

HRD Scholar–Practitioners. Scholar–practitioners have been discussed for several years in the field of HRD (Short, 2006; Wang, 2017). They are often referred to as research–practitioners (Lynham, 2002) and scholarly practitioners (Moats & McLean, 2009; Short & Shindell, 2009), and this group has a distinct presence in the HRD community. The AHRD has highlighted their significance and even established a special interest group: the scholar–practitioner special interest group.

Scholar–practitioners are defined by Moats and McLean (2009) as those who “stand in the breach and [are] interpreters for scholars and practitioners” (p. 508). Short and Shindell (2009) described HRD scholar–practitioners as individuals who:

> operate as a bridge between HRD research and HRD practice to improve the understanding and practice of HRD. They ground their practice in research and theory, they are champions of research and theory in the workplace and in professional associations, they conduct research, and they disseminate findings from their own research and practice. In doing these, they are partners with academics and practitioners alike. (p. 478)

In terms of the research–practice gap, scholar-practitioners’ roles typically involve forging meaningful relationships, conducting collaborative research and practice, enhancing knowledge dissemination, and acknowledging contributions from other groups (Wang, 2017). In other words, the roles of HRD scholar–practitioners are to function as a bridge, translator, and interpreter between research and practice (Moats & McLean, 2009). Scholar–practitioners recognize and uphold the impact of research on practice, appreciating the benefits of evidence–based decision making in the workplace (Kormanik & Shindell, 2009).

Notably, recent efforts have moved beyond discussion of the definitions, roles, and unique needs of scholar–practitioners to the identification of development strategies. For instance, Kormanik et al. (2009) developed a competency model for HRD scholar–practitioners, and, more recently, Moats (2017) presented a six–step course development guide to cultivate their unique knowledge and skills. Additional development strategies for HRD scholar–

practitioners have focused on enhancing higher engagement at both professional and institutional levels. These strategies include offering joint certifications and continuing education programs through AHRD and ATD, and the inception of a scholar–practitioner focused journal (Kormanik & Shindell, 2009; Moats & McLean, 2009). Nonetheless, the development of HRD scholar–practitioners remain an acknowledged challenging task (Moats, 2017).

The second part of this chapter illuminated various facets associated with the HRD research–practice gap, organized through narrative questions. It offered an integrated perspective of these aspects within this phenomenon. The next section provides a review of prior studies that analyze the research–practice gap by comparing focus areas.

Exploring the Gap by Comparing Areas of Focus

Given this study's goal of evaluating the characteristics of the HRD research–practice gap, it is important to review the existing research that has examined the gap by identifying and comparing areas of focus. This section reviews these studies in chronological order.

Deadrick and Gibson (2007) examined the research–practice gap in human resource management (HRM) by investigating if topics that practitioners consider important have received corresponding attention from scholars. They analyzed 2,691 articles from two professional journals (i.e., *Human Resource Management*, and *HR Magazine*) and 1,665 articles from two HRM academic journals (i.e., *Journal of Applied Psychology*, and *Personnel Psychology*) from 1986 to 2005. Through content analysis, Deadrick and Gibson identified 15 general and 49 specific topics and compared areas of focus based on the sheer number of articles published in the selected journals. Their findings highlighted a divergence between HR practitioners and HRM scholars regarding the importance of most topic areas. For instance, the two most prevalent topics in professional journals were compensation and rewards, and HR department issues. However, the two dominant topics in the academic journals were organizational behavior and motivation, and staffing.

Rynes et al. (2007) evaluated the research–practice gap in HRM by examining the extent to which important research findings received coverage in professional journals and the consistency of the message these journals transmitted from research. They first predetermined three topics that contained clear and significant research findings and illustrated the gap between scholars and practitioners' evaluation of these findings, namely intelligence, personality, and goal setting. They then performed content analysis of articles from three professional journals (i.e., *Harvard Business Review*, *Human Resource Management*, and *HR Magazine*) and academic journals (i.e., *Journal of Applied Psychology* and *Personnel Psychology*) published between 2000 and 2005 to analyze research coverage and consistency. Their findings were that professional journals offered little coverage of these topics. Furthermore, when the professional journals did cover these topics, the messages conveyed were sometimes very different from those presented in academic journals.

Ardichvili and Oh (2013) analyzed the HRD research–practice gap by examining the divergence between topics discussed in professional journals and those featured in HRD academic programs. Using content analysis, they analyzed 999 articles published between 2009 and 2012 in two professional journals (i.e., *Chief Learning Officer* and *Training Magazine*), and evaluated 234 courses in ten leading HRD graduate programs in the United States (Ardichvili & Oh, 2013). Upon comparing the topics in professional journals with those in HRD programs, Ardichvili and Oh identified a significant gap between the topics of interest to HRD practitioners and the focus areas of HRD academic programs. For instance, they observed that HRD academic programs largely overlooked emerging topics that were frequently featured in the selected professional journals. Instead, the HRD academic programs predominantly centered on traditional subject matter (Ardichvili & Oh, 2013).

Wang (2018) explored the HRD research–practice gap by comparing the pressing issues identified in Deloitte's annual Global Human Capital Trends surveys conducted between 2013 and 2017 and compared these reports to analytic work on the historical trends of HRD research. Her review suggested positive optimism indicating that HRD scholars had conducted research and reported results related to numerous pressing professional issues. However, Wang (2018) also reported that several practical areas had received insufficient attention in HRD research. For instance, technology–based research exhibited a declining trend even though industrial reports highlighted the significant impact of technological advancement on the workplace and workforce (Wang, 2018).

Chapter 2 Summary

This chapter provides a comprehensive literature review on the phenomenon of HRD research–practice gap. The first part of the literature review discussed the connections between research and practice. The second part presented reviews of various studies and commentaries on interrelated aspects of the complex phenomenon of HRD research–practice gap organized around narrative questions. This second part of the review included an exploration of the perceived gap from different perspectives, a discussion on potential causes, strategies for bridging the gap, along with unbridgeable concerns, and a review of the critical roles and involvement of key stakeholders. The third part of the literature review presented seminal studies that explored the research–practice gap by comparing the areas of interest that are important to both professionals and academics.

The literature review illustrated the need for future research to further explore the HRD research–practice gap. First, the review identified the competing theories and perspectives regarding the gap. While it is common for competing theories to attempt to explain a phenomenon, the review highlighted the need for more empirical studies to help establish descriptive knowledge about the characteristics of the gap. Moreover, the review highlighted seminal work evaluating the gap by comparing areas of topical interest that are important to HRD professionals and scholars. It emphasizes the importance of including professional publications in a gap analysis and suggests the need to expand these comparisons to encompass a broader range of sources over an extended period of time. Understanding of the current landscape of the HRD research–practice gap research played a vital role in shaping the design of this dissertation study. The next chapter presents a detailed outline of the study design.

Chapter 3: Method

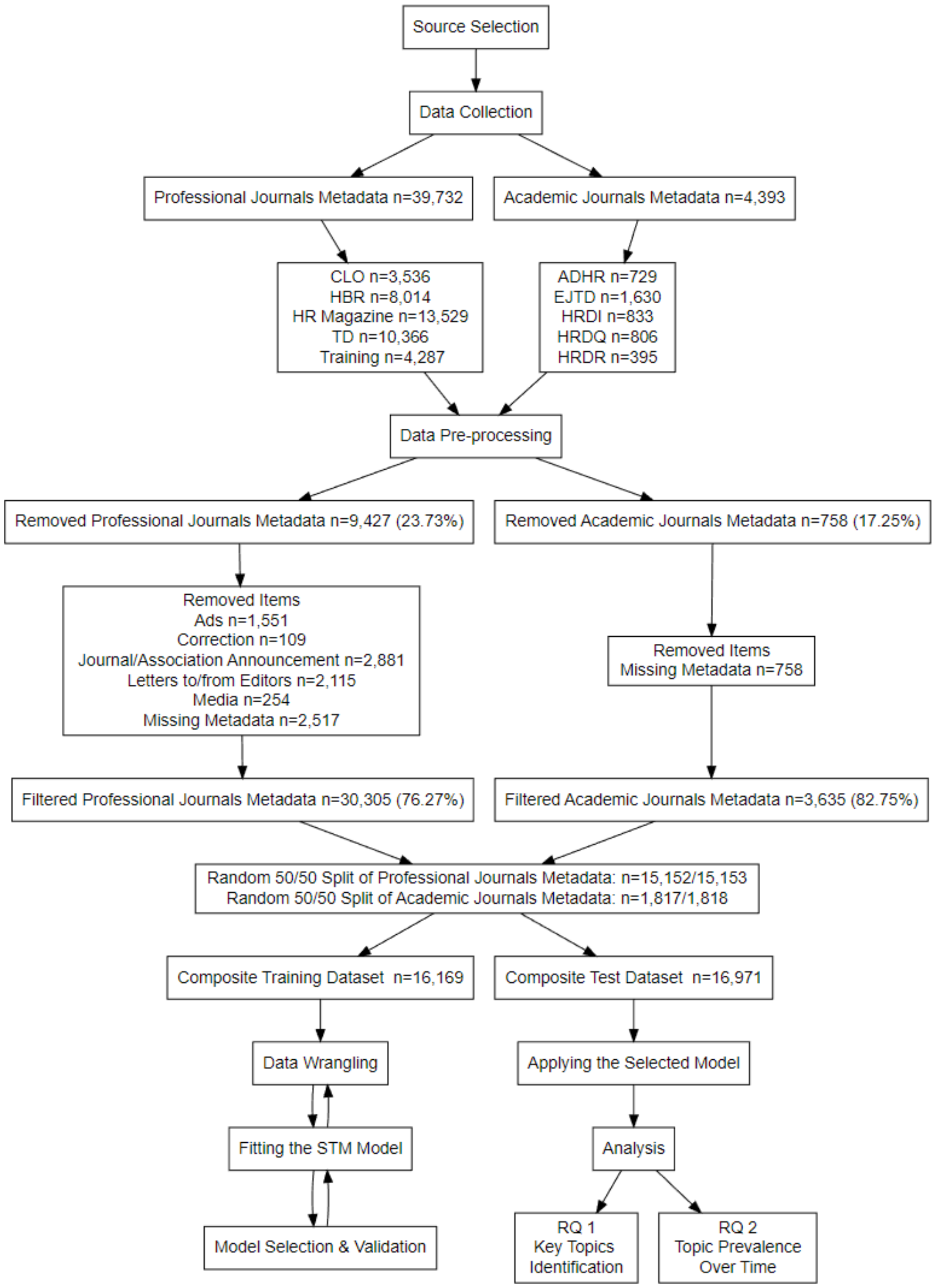
This study aimed to investigate the characteristics of the HRD research–practice gap by employing structural topic modeling (STM) to analyze topics and the prevalence of the topics across HRD–related professional and academic journals from 1990 to 2022. The first section presents the research design and explains the rationale behind the design. The second section provides an overview of the STM method. The next sections describe the phases of the research method in detail including source selection, data collection, data pre–processing, 50/50 training and test data split, data wrangling, fitting topic models, topic model selection and validation, topic model labeling, and estimating topic prevalence across professional and academic journal publications over time.

Research Design

This section outlines the research design of this dissertation and presents a clear structure of the study. The first step involved identifying HRD–related professional journals and academic journals and collecting the metadata for all articles published in the selected journals between 1990 and 2022. Following data collection, text pre–processing was conducted to eliminate non–article data entries and entries with missing metadata. Once the data collection and pre–processing stage were completed, a 50/50 training–test dataset split procedure was applied for analysis, following the approach described by Egami et al. (2022). Specifically, the post–processing professional journal and magazine metadata were randomly split 50/50, and the same process was applied to the post–processing academic journal metadata. This process ensured that the training dataset consisted of a 50% random selection of post–processing magazine metadata and a 50% random selection of post–processing academic journal metadata. An overview of the research process presented in Figure 1 is updated as Figure 2 to show the data and other key descriptive statistics at each phase of the study design.

Figure 2

CONSORT Flowchart of Study Design and Data



Data wrangling was then performed on the training dataset. This wrangling process aimed to transform the raw data to a form that could be used for analysis. The training dataset was utilized for topic model selection and validation. The results were then applied to the test dataset to address Research Question 1 (identification of key topics) and Research Question 2, (estimation of contrasts in the change of topic prevalence over time) in HRD professional and academic journals. The subsequent sections provide a detailed description of each phase in the research design.

It is worth noting that instead of using separate tables, data collection with frequency counts and number of removed articles are presented in Figure 2, and then the details are described in the corresponding sections of the text. Adopting the CONSORT flowchart (Figure 2) provides essential information efficiently (Hopewell et al., 2011). The CONSORT flowchart is also recognized in the APA 7th edition guidelines as an acceptable format for reporting data collection and is featured in one of their recommended sample figures.

Rationale Behind the Research Design

Both professional and academic journal publications were combined into a single corpus for analysis, instead of creating a distinct corpus for each publication to compare topic models. This design was driven by both methodological and theoretical considerations. From a methodological perspective, topic models are derived from the data, and there is no assurance that topics identified in professional journals would correspond directly to those in academic journals. Hence, separating and comparing the topics could limit the potential to establish links between them. The use of the STM, however, facilitates the integration of contextual information with conventional Latent Dirichlet Allocation (LDA) topic modeling (Blei et al., 2003). This approach fits a Bayesian model that permits topic parameters to fluctuate based on document–

level covariates, thereby enabling the estimation of topic prevalence variations in relation to the type of publication (professional or academic) and the publication year (Roberts et al., 2014).

From a theoretical perspective, scholars are internal stakeholders or producers of research, while practitioners are external stakeholders who consume the knowledge derived from research (Tsui & McKiernan, 2022). In contrast, practitioners are internal stakeholders of practice, while scholars are external stakeholders of practice. Despite this interplay, a notable discrepancy in expectations between these two groups persists, with various factors contributing to the HRD research–practice gap, as discussed in Chapter 2. This study integrates both professional and academic journals into the entire corpus in recognition of the increasing acceptance of the drivers of the HRD research–practice gap. This strategy enables a comprehensive exploration of topics produced and consumed by stakeholders of research and practice across the same time period, and acknowledges the equal importance and competency of both groups in the research–practice gap (Van de Ven & Johnson, 2006).

Previous studies have also incorporated both professional and academic journals in their analyses to ensure the inclusion of both practitioner and academic topics when examining the gap (Deadrick & Gibson, 2007; Rynes et al., 2007). This dissertation study was designed in light of these past studies and was informed by both theoretical and methodological considerations. As a result, the topics identified in this dissertation likely exhibit a broader diversity than typically expected in HRD research. Nevertheless, these topics represent areas of critical importance to both HRD practitioners and scholars. Moreover, the comparison of topic prevalence across professional and academic journals from 1990 to 2022 provides valuable insights into the difference in coverage and the shifts in areas of interest.

Overview of the Structural Topic Modeling (STM)

STM has gained increasing attention in recent years in social science as an appropriate method to analyze the latent structure of a large corpus of text (Hannigan et al., 2019; Yoon, 2021). STM is a probabilistic topic model, which involves defining "a data generating process for each document and then use [of] the data to find the most likely values for the parameters within the model" (Roberts et al., 2019, p. 2). Similar to using factor analysis to infer traits from survey responses, STM provides a set of topics/themes, in this case, to represent the corpus, complementing the long tradition of a manual content analysis approach.

The core advantage of STM is its ability to take into account extra contextual information (i.e., document–level covariates such as publication year) when discovering topic models. The STM specifies the priors, which can be conditioned on the document–level covariates. This process provides an estimation of the relationships among topics, document–level covariates, and words in the corpus (Roberts et al., 2014). Specifically, this approach considers the document–level covariates (e.g., source, date, author, researcher assigned ratings such as positive and negative statements) in the estimation of topical content and topical prevalence (Roberts et al., 2019).

There were four main reasons for applying STM as the method to examine the research questions. First, the use of STM is an effective tool to inductively discover the latent presentation of large collections of text data. Thus, this method can improve the effectiveness of analysis. Unlike traditional topic modeling approaches such as LDA, STM can incorporate contextual information in topic modeling. In addition, STM can be used to analyze various types of data, including diverse sources, in this case, both academic and professional journal publications. Other methods such as bibliometrics (e.g., citation analysis, keyword analysis, and bibliographic coupling) can offer a holistic understanding of the research landscape. However, these methods may not effectively manage data from professional journal publications. This limitation arises primarily because most professional journals do not publish detailed bibliographic information. Furthermore, performance benchmark studies have shown that STM performs better than other topic modeling techniques in terms of calculation speed (e.g., the total calculation time and time per iteration) and the quality of the topic models (Roberts et al., 2019). Lastly, prior studies have suggested that STM provides superior performance on the analysis of text data with a large number of topics (Mozer et al., 2020), which aligns with the assumptions and sample size of this dissertation.

Source Selection

The selection of sources is a critical component encompassing both HRD–related professional journals and academic journals. The selection of sources was carried out with attention to various factors to ensure alignment with the scope and purpose of this dissertation. Factors such as applicability, availability, representativeness, temporal considerations, language, content type, authorship, and publication purposes were critically examined to assess the source alignment (Hannigan et al., 2019). Guided by recommendations from HRD scholars and practitioners and inspired by previous studies (e.g., Ardichvili & Oh, 2013; Rynes et al., 2007; Shirmohammadi et al., 2021; Tkachenko et al., 2017), the selection process ensured that the selected sources were reflective of and compatible with established HRD research and practice as documented in journal publications.

The selection of professional journals for this study encompassed five of the most frequently read publications among HRD practitioners: *Chief Learning Officer* (CLO), *Harvard Business Review* (HBR), *HR Magazine*, *Talent Development* (*TD) Magazine*, and *Training*

Magazine. A brief overview of the content and target audience of each of the five selected HRD practitioner publications follows. CLO provides actionable insights specifically designed for learning leaders and executives. HBR, a renowned and high-profile magazine, covers various aspects of business management (Rynes et al., 2007). *HR Magazine,* sponsored by the Society for Human Resource Management, is a leading publication that caters to HR practitioners (Rynes et al., 2002). *TD* (i.e., *Training & Development*, 1991–2001, and *T+D*, 2001–2014) serves as the ATD monthly publication, providing HRD practitioners with valuable insights into emerging trends and best practices in the field (Dooley, 2004). *Training Magazine* is a practitioner–oriented publication focusing on professional training and workforce development. These five magazines are individually and collectively considered valuable resources for HRD practitioners as they provide significant updates, insights, and guidance to those working in or interested in the field.

The academic journal selection for this study comprised five highly rated HRD academic journals: *European Journal of Training and Development* (EJTD), *Human Resource Development Quarterly* (HRDQ), *Human Resource Development International* (HRDI), *Advances in Developing Human Resources* (ADHR), and *Human Resource Development Review* (HRDR). A brief description of the history and sponsoring organization of each of the five selected HRD research publications follows. EJTD, formerly known as the *Journal of European Industrial Training*, was founded in 1975. HRDQ was established in 1988, followed by HRDI in 1998, ADHR in 1998, and HRDR in 2001. The selected journals play a pivotal role in advancing HRD scholarship and practice (Garavan et al., 2012). These journals have an established reputation as the most prominent HRD peer–reviewed publications and have been extensively used in previous studies to study aspects of the state of HRD research (Shirmohammadi et al., 2021).

Data Collection

This study collected the metadata of the selected journal publications for analysis, including titles, abstracts, and publication years, from 1990 and 2022. The metadata of professional journal publications was collated from the EBSCO Host (https://www.ebsco.com/products/ebscohost-research-platform). EBSCO Host is known for its extensive multi–disciplinary resources and provides access to various content sources including journals, magazines, and newspapers. The searches included the names of the five selected journals and the publication years from 1990 to 2022. The resulting metadata were then exported and saved in a comma–separated values (CSV) format.

The metadata collection of academic journal publications was collated from Scopus (https://www.scopus.com/home.uri), which is operated by the publishing firm Elsevier. Scopus is a comprehensive database dedicated to academic journals. Searches were conducted using criteria including the journal names, publication years, and were restricted to articles only. The decision to use two separate databases was because the metadata of professional journals resides in EBSCO Host, while Scopus houses the metadata of HRD academic journals. The metadata from professional journal publications (totaling 39,732 metadata entries) and academic journal publications (totaling 4,393 metadata entries) were subsequently exported and saved in a CSV format. All metadata were also uploaded to Dropbox to ensure the preservation of the original datasets collected for this study.

The use of metadata in this study fulfilled three key objectives. First, STM incorporates contextual information such as the source type and publication year, which is found in the metadata, thereby enabling an accurate estimation of the topic models. Second, the titles and abstracts are vital elements of the articles. They often serve as a reliable proxy for comprehending the key content and contributions of the articles (Atanassova et al., 2016). Finally, due to copyright restrictions set by publishers, the availability of full text data for analysis is currently restricted. Therefore, use of metadata in this study ensured a comprehensive analysis while adhering to copyright limitations and maximizing the use of available information from the selected journals.

Data Pre–processing

This study undertook a detailed and iterative process of data pre–processing and preparing prior to analysis, including review, removing, and data entry accuracy checks. Initially, documents that were missing crucial metadata elements (e.g., titles, publication years, and abstracts) were eliminated from the dataset. This process involved removing 2,517 documents from the professional journal metadata collection and 758 from the academic journal metadata collection.

Subsequently, data entries of titles and abstracts in the professional journal metadata collection were manually reviewed and checked over three rounds. This task required more than 100 labor hours to gain a comprehensive understanding of the nature and format of the various formats of magazine articles. This process facilitated the identification and removal of non–article documents, including: a) advertisements (n=1,551) related to products, services, books, software, and ranking lists; b) various types of letters (n=2,115), such as letters to or from editors, editor excerpts, and reader or expert comments and responses; c) professional association announcements (n=2,881), such as conference schedules, member profiles and interviews, member awards, program updates, and obituaries; and d) corrections (n=109). The cleaned professional and academic journal datasets, and the datasets with the removed data entries, were uploaded to Dropbox for preservation. A combination of a spreadsheet and R statistical analysis software tools were utilized in the data pre-processing process.

50/50 Training–Test Dataset Split

After completing the data pre–processing phase, a 50/50 training–test dataset split was applied to both the cleaned professional and academic journal datasets. The reason for following this split procedure is that text data is inherently complex and highly dimensional making it crucial to identify appropriate low representation (e.g., topics) for analysis (Evans & Aceves, 2016). However, text as data research poses potential risks, including identification problems and overfitting issues (also referred to as fishing), which arise when using the same corpus to discover the latent representation and estimate effects (Egami et al., 2022). Egami et al. also explained how identification and overfitting issues can arise when the same documents are used:

> By using the same documents to discover *g* [codebook function] and estimate effects, the analyst creates a problem where the categories obtained depend on the particular randomization. Consequently, each randomization could create a different codebook function *g*. Because this different codebook function could contain categories with a different substantive interpretation or even a different number of categories, it is impossible to compare estimates across different randomizations. As a result, properties of estimators, such as bias, variance, and consistency, are not defined without further assumptions. (p. 1)

In this study, *g* represents the number of topics in the corpus. However, determining the number of topics within the corpus based on theory or prior research is nearly impossible (Schmiedel et al., 2019). Thus, the number of topics must be identified through an iterative process.

The application of the training–test split procedure in this study enabled the use of the training dataset for the discovery, interpretation, and finalization of the optimal model. The optimal model was then applied to the test dataset for analysis. This approach helps to mitigate the risks mentioned above and enhance the validity of the analysis. In terms of the split procedure, the metadata of the post–processed professional and academic journals were randomly and evenly split. This allowed the training dataset to consist of a 50% random selection of post–processing professional journal metadata and a 50% random selection of post–processing academic journal metadata. The 50/50 random split ensured a balanced and representative allocation of data for training and testing (Egami et al., 2022). This random split process was performed via R programming language.

Data Wrangling

To facilitate the modeling process, the title and abstract data from each article were combined into a new column of data to serve as the final corpus for analysis. Subsequently, data wrangling of the corpus was undertaken, beginning with the process of tokenization where the text was split into tokens. In text analysis, a token is the unit of analysis and can take the form of words, phrases, sentences, paragraphs, and other attributes depending on the analysis needs. In this study, tokens were defined as individual words.

The iterative data wrangling process involved removing tokens including stop words (e.g., “the,” “a”), numbers and punctuation, and converting words from upper case to lower case (Silge & Robinson, 2017). Additionally, tokens/words that occurred frequently in the metadata but contained little semantic meaning (e.g., many, response) were removed. It is worth noting that despite the common use of word stemming in many studies, it was not incorporated in this analysis. Studies showed that word stemming may not be beneficial and, in fact, can have negative effects on topic modeling (Schofield & Mimno, 2016). After comparing topic models with and without word stemming, it was found that models without word stemming allowed for better interpretation. The “quanteda” R package (Benoit et al., 2018) was used for data wrangling, which is recognized for its precise text preparation capabilities.

Fitting Topic Models

The use of STM allowed for the incorporation of contextual information into the topic model analysis, yielding more nuanced insights into the relationships between topics and their prevalence over time in different types of publications (Roberts et al., 2019). In this dissertation study, topic models were initially fitted using the training dataset, considering both the publication year and the type of sources.

An additional document–level variable was added to each metadata entry to categorize metadata entries as either professional journal publications (coded as 0) or academic journal publications (coded as 1) for analysis. The corpus for modeling was constructed from the title and abstract of each publication’s metadata. The topic model fitting accounted for the influence of the publication year and type of metadata entries. The model fitting was guided by the premise that the publication year and publication type could potentially influence topic prevalence. The statistical R packages “stm” (Roberts et al., 2019) were used for fitting the STM models.

Model Selection and Validation

Model selection and validation were conducted after the models were fitted using the training dataset. The model selection procedure started with setting up the initial point of the parameters so the same topic model results would be generated no matter how the seed was set up (Roberts et al., 2019). This study used spectral initialization for model initializations (Roberts et al., 2019). Then the model selection was based on the model search across a number of topics.

As with other topic modeling techniques, there is no objective “correct” or definitive answer regarding the appropriate number of topics in a given corpus (Grimmer & Stewart, 2013). Hence, model fit statistics measures were used to evaluate the performance of the models across different numbers of topics, ranging from 10 to 120 (see Table 2).

Table 2

Model Selection Diagnostic Values of the Topic Numbers from 10 to 120

Number of topics	Exclusivity	Semantic coherence	Held-out likelihood	Residual
10	9.372529	-102.315	-7.33184	20.78081
15	9.597062	-113.329	-7.29254	18.14176
20	9.69312	-115.321	-7.26098	16.63416
25	9.764576	-126.805	-7.23974	15.30802
30	9.800499	-137.474	-7.23621	14.41703
35	9.836196	-142.99	-7.23027	14.17742
40	9.854076	-141.161	-7.21649	13.74562
45	9.870877	-145.191	-7.23807	13.19745
50	9.888504	-144.878	-7.21068	13.52626
55	9.888687	-152.037	-7.2206	12.83572
60	9.88917	-156.808	-7.21723	11.86115
65	9.893763	-159.895	-7.21017	11.53139
70	9.896812	-158.026	-7.23054	11.49581
75	9.912149	-156.406	-7.17509	12.17161
80	9.917836	-155.909	-7.16496	12.41904
85	9.919784	-156.912	-7.16228	12.45691
90	9.922572	-157.904	-7.17137	12.6254
95	9.89491	-155.51	-7.3308	10.0145
100	9.927808	-167.741	-7.21663	12.77474
105	9.90021	-161.556	-7.37459	10.37936

Number of topics	Exclusivity	Semantic coherence	Held-out likelihood	Residual
110	9.934658	-170.953	-7.19078	13.87552
115	9.903539	-160.024	-7.38403	10.95441
120	9.90594	-158.093	-7.38916	11.42605

Prevalent model fit diagnostic measures include the held-out likelihood, residuals, semantic coherence, and exclusivity. The held-out likelihood is used to assess the model's ability to predict the probability of the held-out portion of the data (Mohr & Bogdanov, 2013). Residuals, on the other hand, quantify the dispersion of the model's errors, providing insights into the overall fit of the model (Taddy, 2012). Semantic coherence indicates the degree to which words associated with a particular topic co-occur within the same document (Mohr & Bogdanov, 2013). The measure of exclusivity considers the frequency and exclusivity of the most common words in a topic (Roberts et al., 2019).

Based on the evaluation, the results of the model fit diagnostic measures (see Table 1) indicated that models with around 60 and 90 topics demonstrated favorable results. These models exhibited relatively low residual and minimal changes in high held–out likelihood. In terms of semantic coherence and exclusivity, it was observed that as the number of topics increased, semantic coherence tended to decrease, while exclusivity showed a slight increase. This finding aligns with previous studies showing that models with a smaller number of topics tend to exhibit higher coherence and lower exclusivity, as they are often dominated by common words (Asmussen & Møller, 2019). In other words, the results of the semantic coherence and exclusivity were anti–correlated.

This result also raises the concern that triangulating all of the model fit diagnostic measures can be challenging (Grimmer & Stewart, 2013). Ying et al. (2022) highlighted the nature of model selection.

> Readers may naturally want to assess some cut–off heuristic where models or labels that score below a particular threshold are not acceptable for publication. We note that this would be problematic and would fall into many of the traps that bedevil the debate over p–values. Thus, finding the right way to compare evidence across datasets remains an open challenge although one that exists for any kind of validation metric (including model fit statistics and bespoke (semantic) evaluations. (p. 585)

To determine the optimal number of topics, studies suggested including semantic validation for making decisions about the candidate models (Ying et al., 2022). This study employed semantic validation to compare the candidate models based on topic numbers of 60 and 90. The process of semantic validation involved visualizing the topic models through R packages including “LDAvis” (Sievert, 2022) and “stminsights” (Schwemmer, 2021), and interpreting key topic results. The decision was made to select 60 as the optimal number of topics.

Topic Model Labeling

The preceding section detailed how the training dataset was employed for the model selection and validation, resulting in the selection of 60 as the optimal number of topics. This number was subsequently used for the final model using the test dataset, which set the stage for the subsequent analysis aimed at addressing Research Question 1 and Research Question 2.

A topic is a mix of words with varying probability, and a document is a composition of topics, also with differing probabilities (Roberts et al., 2019). To address Research Question 1, a valid interpretation and labeling of topics was necessary. Thus, a crowd sourcing approach was employed for the labeling process. This approach incorporates three key outcomes of topic models (i.e., high probability words, FREX words, highly associated documents) for the interpretation and labeling of topics. This approach has been shown to be superior to relying solely on high probability and FREX words (Ying et al., 2022). High probability words are words that are highly associated with each topic. FREX words are words that frequently occur within a specific topic and are exclusive and highly associated with each topic. Highly associated documents are the data entries of titles and abstracts that are highly associated with each topic. The procedure for labeling each topic was established following a crowdsourcing approach with three rounds of identification and verification. The topic model results and labels are presented in the next chapter.

Estimate Effects

To address Research Question 2, the subsequent analysis focused on examining the contrasting changes in individual topics in professional and academic journal publications over the past thirty years. In particular, the analysis estimated the prevalence of specific topics as a linear function of document–level covariates including the time and type of data in the model. This process involved specifying the priors using the type of data (professional versus academic journal publications) and publication year to estimate the relationships between topics, journal types, time, and words (i.e., titles and abstracts of each article) in the corpus.

The analysis extracted a group of topic proportions from the variational posterior, computing the coefficients, and conducting simulations in each set of coefficients; these simulations were then averaged (Roberts et al., 2019). The estimated effects incorporated the draws from the covariance matrix of each simulation. Given its substantial length (i.e., exceeding

12,000 rows) and the limited interpretability of the estimated effects in a tabular format, the effects table was uploaded to Dropbox instead of including it directly in the manuscript. For a more accessible visualization and interpretation, the results of the topic prevalence over time are presented in the figures in the next chapter.

Chapter 3 Summary

This chapter presented the research method of the study. This study used STM to analyze various topics and their prevalence in HRD–related professional and academic journals from 1990 to 2022. The research process, elaborated in separate sections in this chapter, included design planning, an overview of the STM method, and a detailed explanation of the research stages. The process included source selection, data collection, preprocessing, splitting of training and test data, data wrangling, fitting and validating topic models, labeling of topic models, and estimation of topic prevalence over time across the journal publications. The next chapter reports the results for Research Questions 1 and 2.

Chapter 4: Results

This chapter presents the findings of this study. The findings are divided into two main sections in accordance with the two primary research questions. The first portion of this chapter reports the output of the final topic model along with the identified conceptual topic labels. This section corresponds to Research Question 1, which aimed to identify the topics that were extensively discussed in the selected HRD professional and academic journals between 1990 and 2022. The second section of this chapter addresses Research Question 2, revealing the estimated prevalence of each topic over time across professional and academic journal publications. This section also highlights the contrasting changes in the temporal trends of individual topics across professional and academic journal publications.

Topic Model Results and Topic Labels

This section presents the results for Research Question 1: "What topics were discussed in HRD professional and academic journal publications between 1990 and 2022?" Table 3 and the accompanying text presents the final topic model output and the identified topic labels. The final topic model output consists of elements that are highly associated with each topic: a) highly associated terms including both words with the highest probability and FREX words that are commonly found in a specific topic and unique to that topic; b) one exemplary document, encompassing the title and abstract in the metadata entry; c) topic labels; and d) topic proportions, shown as percentages to indicate the prevalence of topic distribution in the test dataset. The presentation order aligns with the automatically assigned topic identification (ID) numbers for each topic in the topic model.

Table 3

Final Topic Model Results and Conceptual Labels

Topic ID	Highly Associated Terms	Exemplary Highly Associated Documents	Topic Label	Topic Proportion
1	Highest Prob: work, working, life, stress, family, environment, balance FREX: work, remote, working, work–life, life, COVID-19, well–being	*Work/Life balance: Is it possible?* The article discusses the need for employees to work at creating and preserving a space in their lives for the things that matter most to achieve work/life balance. Topics include the blurred line between work and life, and steps to take to balance work and life including learning to decline with gratitude, finding time to disconnect in order to remember priorities, and how to become more resilient and increase one's margins.	WLB	1.9%
2	Highest Prob: communication, skills, communications, language, writing, meetings, effective FREX: communication, writing, communications, language, English, communicating, interpersonal	*Improve your communication to reduce conflict.* Also, in this issue, communication, and conflict resolution go hand in hand. Eliminate but substitute. The mind is engaged by certain words that make what one says more interesting and compelling (e.g., saying a person's first name), while other words are powerful rapport–busters that are best used with caution.	Communication	1.6%
3	Highest Prob: management, business, service,	*LMS Lessons.* The article examines innovative methods of technology integration and re–	Customer relationship management	2.7%

	customer, system, company, learning management systems (lms) FREX: management, lms, customer, service, enterprise, partnerships, introduces	engineering in learning management systems (LMS) intended to train employees. The efforts of trainers in various industries are referenced, including senior manager Tamara Ganc implemented an LMS for Vanguard, a financial services firm, and April West helped The Mirage, a Las Vegas, Nevada–based resort, develop an LMS.	(CRM) & training/learnin g	
4	Highest Prob: sales, growth, author’s, business, selling, companies, market FREX: author’s, sales, growth, salespeople, selling, enablement, assets	*Creating an organic growth machine.* Getting better at organic growth does not require a new business model; it requires engaged leaders. Many CEOs do not seem to care about organic growth. They either give up on it believing that their companies will inevitably become low growth, or they cede responsibility for it to the operating units. Both options are big mistakes. In an uncertain business environment, all corporate leaders need to be actively engaged in organic growth. Four rules can help them support the operating units in the quest for the best opportunities: (1) Keep an eye on the big picture by setting standards and assembling data that steer the company toward promising areas, nurturing an enterprise-wide organic growth capability, and looking across markets and businesses for small opportunities that can be bundled; (2) Fight short–term pressures of the business cycle by earmarking	Business growth	1.6%

		local cost savings for local investment and demonstrating, through a special corporate fund, that good ideas can always attract resources; (3) Resist typecasting some units as “growth engines” and others as “cash cows.” These labels shape beliefs about growth and affect the operating units’ behavior; and (4) Create a language for organic growth that helps the company clarify its priorities and develop a coherent, high–performing pipeline of opportunities.		
5	Highest Prob: workplace, harassment, sexual, century, workplaces, behavior, issues FREX: 21st, workplace, violence, century, workplaces, abuse, literacy	*From the bully pulpit.* This article discusses the concept of bullying in the workplace. The author claimed that bullies in the company are usually high–ranking officials and are playing vital roles in the organization. These officials normally jeopardize, abuse, and restrain personnel. They also exhibit self–importance around the office. Bullying, torment, and hostility in the workplace are becoming serious and widespread issues. The author suggests the need for the condition to be dealt with to assist employees who are victims of such destructive behavior, and for the sake of productivity. The Workplace Bullying and Trauma Institute reported that this type of behavior is distinctive.	Workplace violence	1.8%
6	Highest Prob: practice, HRD, research, action, critical, reflection, theory	*Who is not sleeping with whom? What’s not being talked about in HRD?* Human resource development (HRD) occupies some interesting educational territory. Given the rapid pace of	Defining HRD	1.1%

FREX: practice, reflection, reflective, discourse, metaphors, practitioner	development and innovation in education and in the practice of HRD, alternative approaches to learning and evaluation of HRD, might be expected to be prominent topics in the discussion of future HRD practices. However, there has been a growing demand in academic literature over the last few years for management educators to engage more critically with their subject matter than has been the tradition in business schools. Scholars have argued that there is a need to strengthen the critical perspectives in contributory disciplines in management and to revise management more generally. However, although more examples of critical pedagogies are emerging, they seldom exhibit corresponding changes in HRD practices. Where HRD does depart from mainstream practices, alternatives are typically based on humanistic student–centered aspirations for social equality, rather than on an analysis of HRD in terms of power, politics, and social dynamics. The intention of this paper is to highlight what is not being talked about in HRD in order to illuminate the importance of power in the study of HRD. The paper explores the significance of power in HRD, drawing on ideas from critical and post-modern perspectives. By illuminating social and power relations embedded within HRD practices, the aim is to present a more contextualized and processual account than the

		proceduralist recipes that currently dominate the study of this vital aspect of educational and organizational practice.		
7	Highest Prob: training, programs, skills, development, trainers, industry, virtual FREX: training, simulation, trainers, trainees, trainer, games, simulations	*Making the switch.* Educators must beware of creating a webinar when converting instructor–led training (ILT) program in a virtual classroom. Central to the conversion process is a course audit, a method that ensures that the results of a conversion is an effective virtual classroom course aligned with the objectives and content of the ILT course. Educators/trainers must determine how long it takes to deliver the subtasks. A common misconception about converting ILT to the virtual classroom is that instructors can deliver the course content in less time in a virtual classroom.	Training & development (TD)	3.8%
8	Highest Prob: culture, organizational, corporate, values, change, organization, ethics FREX: culture, ethics, values, ethical, cultures, integrity	*The contradictions that drive Toyota's success.* It is assumed that Toyota has become one of the world's greatest companies only because it developed the Toyota Production System (TPS). However, Takeuchi, Osono, and Shimizu of Hitotsubashi University in Tokyo disagree. Another factor that has been overlooked until now is just as important to the company's success: Toyota's culture of contradictions. TPS is a "hard" innovation that allows the company to continuously improve the way it manufactures vehicles. Toyota has also mastered a "soft" innovation that relates to human resource practices and corporate	Organizational culture & commitment	1.5%

culture. The authors claim that the company has succeeded because it deliberately fosters contradictory viewpoints in the organization and challenges employees to find solutions by transcending differences rather than resorting to compromises. This culture generates innovative ideas that Toyota implements to pull ahead of its competitors, both incrementally and radically. The authors' research reveals six forces that cause contradictions inside Toyota. Three forces of expansion have led the company to change and improve: impossible goals, local customization, and experimentation. Not surprisingly, these forces make the organization more diverse, complicate decision making, and threaten Toyota's control systems. To prevent the winds of change from blowing down the organization, the company also harnesses three forces of integration: the founders' values, "up–and–in" people management, and open communication. These forces stabilize the company, help employees make sense of the environment in which they operate, and perpetuate Toyota's values and culture. Emulating Toyota is not about copying any one practice. It is about creating a culture. Because the company's culture of contradictions is centered on humans, who are imperfect, there will always be room for improvement.

9	Highest Prob: marketing, brand, customers, product, products, consumers, consumer FREX: brand, marketing, consumers, brands, consumer, goods, marketers	*Your brand's best strategy.* Conventional wisdom holds that market share drives profitability. Market share and profitability are inextricably linked in some industries, such as chemicals, paper, and steel. However, when the authors studied the profitability of premium brands–brands that sell for 25% to 30% more than private–label brands–in 40 categories of consumer goods, they found that market share alone does not drive profitability. Instead, a brand's profitability is driven by both market share and the nature of the category, or product market, in which the brand competes. A brand's relative market share has a different impact on profitability depending on whether the overall category is dominated by premium brands or by value brands. If a category is composed largely of premium brands, then most of the brands in the category are–or should be quite profitable. If the category is composed mostly of value and private–label brands, then returns will be lower across the board. Thus, developing the most profitable strategy for a premium brand means reexamining market share targets in light of the brand's category. Managers must think about their brand strategy along two dimensions at the same time: (1) Is the category dominated by premium brands or by value brands? and (2) Is the brand's relative market share low or high? The authors devised a matrix using these two dimensions to	Branding & marketing	1.2%

		help managers map the position of any premium brand in one of four quadrants: hitchhiker, high–road brand, low–road brand, and dead–end brand. Each quadrant has different implications for a brand’s profit potential, and each requires a different strategy.		
10	Highest Prob: information, technology, data, provides, digital, contact, security FREX: information, contact, technology, videos, cybersecurity, tech, records	The article focuses on the democratization and accessibility of data. The amount of information being produced has changed and material that was available only to an elite group a few decades ago can now be retrieved or used by almost anyone. Research indicates that the capacity of giant corporate data warehouses is only about 16 percent of the world’s total digital storage; 56% is in single–user personal computers. For example, about 410,000 terabytes of photographs and 300,000 terabytes of videotapes are being produced daily by ordinary people.	IT issues & products	2.0%
11	Highest Prob: program, education, university, programs, students, school, college FREX: program, university, onboarding, education, MBA, universities, curriculum	*Creating conscious capital.* The article reports on the collaborations between big business enterprises and universities to help their employees obtain college degrees in the U.S. and thus create conscious capital The topics discussed include a partnership between Uber and the Arizona State University to fund a college degree for their drivers and their families, the College Achievement Program launched by Starbucks, and a partnership between Guild Education and	Education & certification programs	2.4%

		Walmart to offer employees access to online courses.		
12	Highest Prob: systems, technologies, tools, analytics, AI, intelligence, artificial FREX: AI, systems, artificial, analytics, technologies, Cisco	*To recognize risks earlier*, *invest in analytics.* Recently analytics has become the unloved stepchild of data sciences. Kozyrkov, Google's chief decision scientist, says "that is a shame" because during turbulence, analytics is essential. When a disaster strikes, data that goes into statistical and AI models can quickly become obsolete, rendering them useless. Analytics, in contrast, helps users determine where events are heading and what questions to ask. Analysts are explorers who keep their finger on the pulse of what's happening by scanning the horizon and searching internal and external data sources. Effective analytics functions cannot be cobbled together overnight, however, and firms need to commit to building an environment in which they will flourish.	AI & analytics	1.1%
13	Highest Prob: workplace, bias, resilience, incivility, individual, conflict, organizational FREX: incivility, resilience, unconscious, deviant, bias, socialization, biases	*Unconscious bias training that works.* To become more diverse, equitable, and inclusive, many companies have turned to unconscious bias (UB) training. By raising awareness of the mental shortcuts that lead to snap judgments—often based on race and gender—about people's talents or character, companies strive to make hiring and promotion fairer and improve interactions with customers and among colleagues. However, research shows that most UB training is ineffective. The	Identity & diversity	0.6%

		problem is, increasing awareness is not enough—and can even backfire—because sending the message that bias is involuntary and widespread may make it seem unavoidable. UB training that achieves results, in contrast, teaches attendees to manage their biases, practice new behaviors, and track their progress. It gives them information that contradicts stereotypes and allows them to connect with colleagues whose experiences are different from theirs. It is not a one–time session but entails a longer journey and structural organizational changes. In this article the authors describe how rigorous UB programs at Microsoft, Starbucks, and other organizations help employees overcome denial and act on their awareness, develop empathy that combats bias, diversify their networks, and commit to improvement.		
14	Highest Prob: supply, business, companies, traditional, computers, chain, scorecard FREX: scorecard, balanced, computers, supply, ecosystem, algorithms, recycling	*Strategy as ecology*. Microsoft’s and Wal–Mart’s preeminence in modern business has been attributed to several factors from the vision and drive of their founders to the companies’ aggressive competitive practices. However, the authors maintain that the success of these two very different companies is due only partly to the organizations themselves. A bigger factor is the success of the networks of companies with which Microsoft and Wal-Mart do business. Most companies today have ecosystems with loose networks that include (1) suppliers, distributors, and	Green HRD	0.7%

outsourcers; makers of related products or services; (2) providers of relevant technology; and (3) other organizations that affect and are affected by the creation and delivery of the company's offerings. Despite being increasingly central to modern business, ecosystems are still poorly understood and even more poorly managed. The analogy between business networks and biological ecosystems can help us understand ecosystems by vividly highlighting certain pivotal concepts. The moves that a company makes will—to varying degrees—affect the health of its business network, which in turn will ultimately affect the organization's performance for good or bad. Because a company, like an individual species in a biological ecosystem, ultimately shares its fate with the network as a whole, smart firms pursue strategies that will benefit everyone. So how can companies promote the health and the stability of their ecosystem, determine their place in it, and develop a strategy to match their role, and help ensure the company's well–being? It depends on their current and potential role in the network. Is the company a niche player, a keystone, or a dominator? The answer to this question may be different for different parts of the business. It may also change as the ecosystem changes. Knowing what to do requires the organization to understand their ecosystem and their role in it.

15	Highest Prob: thinking, creative, question, creativity, innovation, answer, solving FREX: creative, thinking, creativity, street, question, answer	*Better brainstorming. (Cover story)* Great innovators have long known that the secret to unlocking a better answer is to ask a better question. Applying that insight to brainstorming exercises can vastly improve the search for new ideas—especially when a team is feeling stuck. Brainstorming for questions rather than answers helps teams avoid group dynamics that often stifle voices, and it lets them reframe problems in ways that spur breakthrough thinking. After testing this approach with hundreds of organizations, MIT's Hal Gregersen developed it into a methodology. They recommend starting by selecting a problem that matters, invite a small group to help consider it, and describe it in two minutes at a high level so it does not constrain the group's thinking. Make it clear that people can contribute only questions and that no preambles or justifications are allowed. Then, they should set the clock for four minutes, and generate as many questions as their can, aiming to produce at least 15 questions. Next, they should study the questions generated, and look for those that challenge their assumptions and provide new angles on the problem. If they commit to actively pursuing at least one of these, chances are, they will break open a new pathway to unexpected solutions.	Breakthrough thinking	1.0%

16	Highest Prob: paper, limited, design, approach, purpose, findings, research FREX: small & medium enterprises (SMEs), SME, organizations, program, vocational, organizational	*Development of pedagogical competencies of the vocational teachers in Italy and Lithuania: implications of competence–based VET curriculum reforms.* This study aims to reveal common and diverging trends in the development of pedagogical competences of vocational education and training (VET) teachers and trainers in Italy and Lithuania with implications for competence–based VET curriculum reforms. The design/methodology/approach is a structured survey that was administered to Italian and Lithuanian teachers. The collected data were analyzed and compared and the results showed that there are many common challenges and problems in the development of pedagogical competencies of VET teachers in both countries, e.g., the marginalization of the VET teacher's work and working conditions, especially dissatisfying wages and poor career opportunities, and the absent or weak institutionalization of the VET teacher's qualifications and training. The results can be useful for directors of VET centers and VET schools to manage training and pedagogical growth of teachers both in Italy and in Lithuania. Moreover, the outputs are a set of suggestions for policymakers both at national and European levels.	Adult learning	1.5%
17	Highest Prob: company,	*Waking up IBM.* In the early 1990s, IBM was declining.	Transforming strategy	1.3%

business, companies, strategy, CEO, innovation, customers

FREX: oil, HP, Merck, turnaround, Nissan, Ghosn, electric

Fujitsu, Digital Equipment, and Compaq were strong competitors and reducing IBM's hardware margins. EDS and Andersen Consulting were stealing the hearts of CLOs. Intel and Microsoft were running away with PC profits. Today, IBM is back on top, and is a leader in e–business services. This is the story of how IBM, which had lagged behind every computer trend since the mainframe, caught the Internet wave. Much of the credit for the turnaround goes to a small band of activists who led the company to see the potential. It started in February 1994, when a lone mid-level IBM programmer watched Sun Microsystems pirate IBM's Winter Olympics data for its own rogue website. Dave Grossman knew that IBM's executives were clueless about the Internet, but he was convinced that if nothing changed, Sun would quickly surpass IBM. Frustrated in his attempts to warn executives over the phone, he drove to Armonk, walked into headquarters with a UNIX workstation in his arms, set it up in a closet, and demonstrated the future of computing to three IBM execs. One of them was John Patrick, head of marketing for the hugely successful ThinkPad, who quickly became his mentor. Together, building simultaneously from the top and the bottom of the organization through an ever–widening grassroots coalition of technicians and executives, they put IBM on the Web and morphed it into an

		e–business powerhouse. People who want to instigate similarly successful insurrections can learn a lot from their example.		
18	Highest Prob: team, teams, members, project, virtual, group, business FREX: team, teams, members, agile, team's, project, tests	*Why teams don't work.* The belief that teams make us more creative and productive and are the best way to get things done is deeply entrenched. However, Hackman, a professor of organizational psychology at Harvard and a leading expert on teams, questions this assumption. He says hat research consistently shows that teams underperform despite all their extra resources. In an interview with senior editor Diane Coutu, Hackman explains where teams go wrong. Shockingly, most of the time members do not agree on what the team is supposed to be doing or even on who is on the team. The belief that bigger is better also compounds problems; as a team grows, the effort needed to manage links between members increases almost exponentially. Leaders need to be ruthless about defining teams and keeping them small (fewer than 10 members), and some individuals (like team destroyers) should simply be forced off. Leaders also must set a compelling direction for teams, but in so doing, the leaders may encounter intense resistance that puts the teams at great risk. Hackman explores other fallacies about teams, for instance, that teams whose members have been together a long time become stale. In fact, research reveals that new teams make 50% more mistakes	Work teams	1.5%

		than established teams. However, to avoid complacency, every team needs a deviant member who is willing to make waves and open up the group to more ideas. Unfortunately, such individuals often get thrown off the team, robbing it of the opportunity to be magical. Leaders cannot make a team do well. However, by being disciplined about how a team is set up and managed, instituting the right support systems, and providing coaching in group processes, they can increase the likelihood that a team will be great.		
19	Highest Prob: vision, business, mission, goals, presentation, leaders, audience FREX: presentation, mission, vision, art, audience, statement, speaking	*Present your business case using your voice.* The article presents vocal tips for those planning to make a business presentation. Topics include the purposeful use of pitch for expressing interest and the pace of the presentation to highlight the positive aspects of the proposal. Also mentioned are the need to create pause to build anticipation and engagement that results from careful projection.	Public speaking	1.2%
20	Highest Prob: September, late, periodical, attacks, pays, defense, business FREX: late, terrorist, September, periodical, attacks, pays, venture capital (VC)	*Why be honest if honesty doesn't pay?* Conscience, not calculation, explains why most businesspeople keep their word and deal fairly with one another. There is no evidence that honesty pays, despite the best efforts of economists, ethicists, and business sages to argue otherwise. Businesspeople tell themselves that dishonesty is punished or that E.E Hutton failed because it kited checks and not because it was abysmally managed, or that if	Building trust	0.7%

		their overcharge customers when supplies are scarce, they will go elsewhere when the next glut comes. However, it is hard to find cases in which retaliation is swift and sure, even when wrong has clearly been done. For the most part, the facts of business life undercut retaliation in many ways. The balance of power may favor the wrongdoer, and truth may be hard to discern. There are few incentives to waste time and money on revenge. Thus, taking people at face value is a highly useful rule–of–thumb. Is this a problem? Not as long as most of people continue to live by an honorable moral compass. If bad faith were not financially rewarding, trust would be an empty concept. It is the absence of predictable financial rewards that makes honesty a moral quality people hold dear. Moreover, “unprincipled” tolerance encourages enterprise along with the occasional blackguard. Societies exist in which the untrustworthy face certain retribution, but in those societies, risk taking, new ideas, and innovation rarely emerge.		
21	Highest Prob: development, organizational, change, problem, solution, model, organizations FREX: solution, competency, publications, reserved,	*Economic foundation of human resource development Advancing the theory and practice of the discipline. The problem and the Solution.* This article presents a rationale for focusing on economics and an introduction to selected specific economic theories that are relevant to human resource development. Economics theory together with	Theoretical foundations	1.7%

	competencies, theories, problem	systems and psychological theories are together considered the core theories to create the foundation for the human resource development discipline. However, few human resource development scholars have explored the full potential of the economics and the implications for human resource development theory, research, and practice.		
22	Highest Prob: coaching, evaluation, investment, return, business, measurement, measuring FREX: coaching, evaluation, measuring, return, return on investment (ROI), measurement, investment	*ROI best practices.* This article lists best practices in use of return on investment (ROI) as a measurement tool for learning and development (L&D). It also described the implementation of ROI as a process–improvement tool and not a performance–evaluation tool. It advocates for the integration of ROI methodology data to create a macro scorecard for the L&D function.	Evaluation	1.7%
23	Highest Prob: social, media, network, networking, networks, community, responsibility FREX: corporate social responsibility (CSR), networking, media, social, Facebook,	*How French innovators are putting the "social" back in social networking.* Media entrepreneur Kramer looks at three French companies that use low–tech ways to better connect with customers. For example, luxury–goods maker Boucheron hosts intimate dinners with a small number of key customers. Nespresso's French subsidiary is making big investments in telephone call centers–despite the fact that most orders come through other channels. They are also training staff members to	Social capital	1.3%

	network, networks	spend more time talking to customers. Vente Privee treats its key suppliers like customers by forging personal connections with them. Kramer argues that even in an era when many companies are obsessed with social networking and trying to amass millions of followers on Twitter and Facebook, the deepest relationships between businesses and customers continue to be formed offline, where they are better able to engage in true dialogue.		
24	Highest Prob: recommendations, travel, York, city, business, places, England FREX: travel, England, York, recommendations, Manchester, visit, places	*Tales from a nonconformist company*. Rosenbluth Travel in Philadelphia has dealt successfully with change for 100 years. By repeatedly redefining its business and by using people and technology to exploit change to its own advantage, the company has survived and prospered from the end of its original immigrant–oriented business, the advent of mass–market leisure travel, the growth of business travel, and the price and route wars that airline deregulation instigated. When Hal Rosenbluth entered the family business in 1974 as a new graduate, three–quarters of the company's business was vacations. However, four years later, when deregulation began transforming the travel business into a stew of continuously changing fares, routes, limitations, and opportunities, Hal had several insights that transformed Rosenbluth Travel and the way it did business. He	Navigating changes	0.7%

		saw that the company's most valuable product was not tickets but information. He grasped the critical importance of information systems that were independent of the airlines. He realized that companies could control and manage their travel expenses if they had adequate cost and travel data to work with. He sensed that there was no good reason an airline could not negotiate special fares directly with an agency, and he accomplished this goal. He had the good luck to find and the good sense to use an untapped business resource on the plains of North Dakota. Most importantly, he understood how much his own company asked of its people and determined to put them ahead of customers in setting company priorities. Today, the company does $1.3 billion in annual bookings, and 92% is in corporate travel.		
25	Highest Prob: survey, U.S., found, percentage, companies, respondents, executives FREX: percentage, survey, respondents, surveyed, vacation, half	*More plan to unfreeze salaries, restore 401(k) matches.* This article reveals that a survey by consultancy firm Watson Wyatt shows that almost half of all large U.S. companies that froze salaries in 2009 planned to unfreeze them in 2010. The survey also concluded that more than a third of companies that lowered 401(k) matching contributions planned to restore them. The survey was conducted in October 2009 and elicited responses from 201 large U.S. companies.	Compensation & rewards	3.1%
26	Highest Prob: plan, plans,	*Managing climate change: Lessons from the U.S. Navy.* This	Non-industrial sectors	1.2%

	retirement, defined, pension, nonprofit, goals FREX: plan, nonprofits, pension, plans, retirement, nonprofit, defined	article examines the Navy's approach to climate change and reflects on the implications for business. The U.S. Navy operates on the front lines of climate change. It manages tens of billions of dollars of assets on every continent and on every ocean. The assets take many years to design and build and then have decades of useful life. This means that the Navy needs to understand what types of missions it may be required to perform in 10, 20, or 30 years and what assets and infrastructure it will need. Put another way, it needs to plan for the world that will exist at that time. The Navy is clear about the challenges climate change poses, and it knows that the effects of a warmer world will expand the geographic scope of its mission and increase demand for its military and humanitarian services. Climate change will also decrease its capacity to deliver those services, as the risk of damage to its bases and ports increases.		
27	Highest Prob: software, outsourcing, companies, company, vendors, project, Corp FREX: outsourcing, software, vendor, vendors, outsource,	*Why use workflow automation?* This article provides information on workflow automation. Concepts include several business benefits of workflow automation, finding a workflow solution, technologies available for workflow application development, and factors to consider in deciding what software to use.	Enterprise software	1.3%

	offshore, in-house			
28	Highest Prob: human, HR, resource, professionals, resources, society, role FREX: HR, resources, society, human, professionals, resource, human resources information system (HRIS)	*Shaping M&As for the best fit.* This article focuses on the significant role of human resources (HR) to promote the success of mergers and acquisitions (M&A). Adam Rosenberg of Mercer, a human resources and financial services firm, mentioned that most companies have some people from HR to sit on their deal–steering committee. Peta Fry of accountancy firm Monahans suggests the need for HR to be involved early on in M&A transactions.	Role of HR professionals	3.7%
29	Highest Prob: performance, organizational, relationship, job, support, commitment, transfer FREX: motivation, mediating, variables, intention, perceived, appraisal, performance	*Perceived purposes of performance appraisal: Correlates of individual and position focused purposes on attitudinal outcomes.* Performance appraisals have traditionally been directed at individuals, serving either an administrative or developmental purpose. They may help define the purpose as well. This study sought to identify and more broadly define the purposes of performance appraisals to include this role definition purpose. This study also examined the purposes of performance appraisals as perceived by the role incumbent, as opposed to the stated organizational purposes. They reported the relationships between these perceived purposes with several attitudinal outcomes, including satisfaction with the performance appraisal, job	Performance management	2.2%

		satisfaction, affective commitment, and role ambiguity. Data from 599 retail service employees were used to test the hypothesized relationships. The results suggested support for a model consisting of three performance appraisal purposes having differential relationships with the outcomes examined. The results suggest that the purpose of the performance appraisal may influence ratees' perceptions of and attitudes toward their jobs.		
30	Highest Prob: job, hiring, jobs, employers, U.S., pay, recruiting FREX: hiring, recruiting, applicants, candidates, job, seekers, recruitment	*Do 'Ban-the-Box' laws help expand employers' candidate pools?* The authors debate efforts in several U.S. states to establish what are referred to as ban–the–box laws, which remove a check box on job applications that indicate whether a job applicant has been convicted of a crime. The authors discuss whether such efforts will expand the pool of job candidates for employers and whether more people with criminal histories have entered the labor market.	Selection & staffing	2.8%
31	Highest Prob: learning, e–learning, content, learners, informal, organizations, design FREX: learning, e–learning, learners, learner, blended, instructional, experiential	*Flipped learning: Maximizing face time.* The article details the flipped learning model, an instructional method that allows instructors to enhance classroom experience with less lecturing and more activity. It notes that the basic premise behind this method is that direct instruction and lecture are more effective when delivered to individuals online rather than in the group learning space. The article reports the	Learning & development	4.0%

		move toward a flipped learning model in the corporate sector.		
32	Highest Prob: diversity, research, differences, inclusion, gender, groups, diverse FREX: diversity, inclusion, Korean, comparative, justice, invariance, behavioral	*Responding to low coefficient alpha: Potential alternatives to the file drawer to the detriment of human resource development (HRD) theory building and research.* Many scholars may think that research data with a low coefficient alpha is destined for the file drawer, but this does not have to be the case. Contemporary literature suggests that many scholars do not know how to move forward with data that yields α <.70. In addition, an investigation revealed that many scholars practice the method of item deletion to increase the alpha. The authors support the case that discarding research simply because of low coefficient alphas may be unnecessary. They present a guide to demonstrate how scholars and scholar–practitioners may be able to analyze data when an initial estimate of internal reliability is low. Deleting items may increase reliability, but at the cost of validity. As an alternative, this study demonstrates that eliminating subjects can increase alpha and maintain the integrity of the scale. This guide presents generalizability theory as a means to identify the source of error variance in data as well as a step–by–step process to correct for low coefficient alpha. The guide is illustrated with data and R syntax.	Methodology & measurement	1.2%
33	Highest Prob: employees,	*Motivate employees according to temperament*, This study reports	Workforce retention	2.8%

	employers, company, helping, engaged, keep, providing FREX: employees, helping, engaged, quit, recognition, retain, motivating	that by learning how to motivate employees according to their personalities, managers can provide recognition and rewards that fit each personality. The study describes the importance of manager–initiated recognition, provides guidelines for managers when giving recognition, stresses the importance of temperament as the foundation of personality in relation with motivation, and describes ways to motivate four types of personalities: preservers, strategists, mavericks, and energizers.		
34	Highest Prob: benefits, programs, services, financial, costs, companies, cost FREX: benefits, assistance, wellness, incentives, offered, bonuses, tuition	*Smarter domestic partner benefits.* The article focuses on the issues surrounding employers in relation to domestic partner benefits in the U.S. The author notes that the debate over the legalization of same–sex marriage makes it difficult for employers to understand what domestic partner benefits mean. They explore the factors that influence the decision of employers to offer domestic partner benefits. The article also describes the eligibility criteria for domestic partner benefits.	Employee benefits	2.5%
35	Highest Prob: HRD, research, development, human, literature, resource, review FREX: literature, HRD, NHRD, integrative, conceptual, review, journals	*Global scientific literature on human resource development: A bibliometric analysis using Scopus database.* The purpose of this paper is to analyze the development of global human resource development (HRD) articles published in journals indexed in the Scopus database since the 1960s until the present time. The design/methodology/approach is a	Mapping HRD research	1.7%

		collection of 1,905 articles from the Scopus database that were downloaded and analyzed using bibliometric techniques available in the VOSviewer and Biblioshiny software. The findings identified three different development stages of HRD research: a seeding stage between 1962 and 1989, a growth stage between 1990 and 2007 and a development stage from 2008 onward. The US and the UK were the largest contributors of 30.02% and 12.55%, respectively, of articles in the collection and received 43.82% and 19.54%, respectively of the total number of citations. Scholars with the most publications and citations are mostly from the US and the UK, and nine out of ten most cited articles have first authors' affiliations in these two countries. The Emerald Group is the most popular publishing house, as five out of ten most popular journals belong to this publishing house. The originality/value is that after six decades of development, it is necessary to examine the evolution of HRD research, its characteristics and its intellectual framework as this type of analysis is not yet available in the literature. This study helps scholars better understand this research field, and better prepare for future work in HRD.		
36	Highest Prob: internet, online, web, site, electronic, united, sites	*Intranet news.* The authors present news developments concerning intranets. They describe reasons to use the intranet and then give advice on	New products & invention	1.7%

	FREX: web, internet, site, intranets, portals, sites, on–line	how to promote the intranet and list six popular ways that companies use the intranet.		
37	Highest Prob: managers, downsizing, relationship, fear, relationships, people, empowerment FREX: downsizing, commitments, empowerment, fear, intuition, emotions, anger	*A better way to deliver bad news.* In an ideal world, subordinates would accept critical feedback from managers with an open mind. They would ask a few clarifying questions, promise to work on certain performance areas, and show signs of improvement over time. However, this ideal is not generally the reality. Such conversations can be unpleasant, emotions can run high and tempers can flare. Fearing that the employee will become angry and defensive, the boss may inadvertently sabotage the meeting by preparing for it in a way that stifles honest discussion. This unintentional and unconscious, stress–induced habit makes it difficult to deliver corrective feedback effectively. Professor Jean–Francois Manzoni discusses how managers can change their mind–set in terms of how to develop and deliver negative feedback, and thus increase their odds of having productive conversations without damaging their relationships. Manzoni describes two behavioral phenomena that color the feedback process: the fundamental attribution error and the false consensus effect. The article presents real–world examples to demonstrate how bosses' critiques can go astray.	Empowerment	0.8%

		Managers tend to frame difficult situations and decisions in a way that is narrow (alternatives are not considered) and binary (there are only two possible outcomes–win or lose). During the feedback discussion, managers' framing of the issues often remains frozen, regardless of the direction the conversation takes. Manzoni advises managers not to settle on the first acceptable explanation for a behavior or situation they have witnessed. Bosses also need to consider an employee's circumstances rather than attributing weak performance to a person's disposition. In short, delivering more effective feedback requires an open–minded approach that will convince employees that the process is fair and that the boss is ready for an honest conversation.		
38	Highest Prob: quality, system, manufacturing, improvement, six, process, standards FREX: quality, sigma, lean, manufacturing, standards, improvement, benchmarking	*Six sigma pricing.* This article discusses the advantages of applying Six Sigma efficiency and quality standards to pricing. Six Sigma is a collection of measurements developed by Motorola to achieve a high degree of product quality and organizational efficiency. The authors study the application of Six Sigma practices at an unnamed international industrial equipment manufacturer. The company applied Six Sigma guidelines to the pricing of a single product and found that revenues on that product increased by the required amount in the time set. In addition, the application of the system did	Quality management	1.0%

		much to relieve tensions in the organization by conferring the authority for pricing on a specific management group.		
39	Highest Prob: health, U.S., care, employers, act, federal, insurance FREX: health, care, coverage, Occupational Safety and Health Administration (OSHA), legislation, reform	*DOL continues to clarify FLSA issues.* This article focuses on opinion letters issued by the Wage and Hour Division of the U.S. Department of Labor in 2005 about coverage and exemption issues under the Fair Labor Standards Act (FLSA). Employers were allowed to substitute or reduce the accrued leave of employees in partial or full day increments during office closures because of inclement weather. Academic advisers and intervention specialists and museum curators are among those who were also exempted in the minimum wage and overtime provisions of the FLSA.	Employment law and regulations	3.9%
40	Highest Prob: power, corporate, business, directors, governance, companies, boards FREX: governance, shareholders, power, directors, boards, activist, hierarchies	*Lessons in power: Lyndon Johnson revealed.* No one can lead if they do not first acquire power, and no leader can be great if they do not know how to use that power. However, the combination of the two skills is rare. Amassing power requires ambition, focused pragmatism, and a certain ruthlessness that is often at odds with the daring, idealistic vision needed to achieve great things with that power. The tension is as real in business as it is in politics. This magazine article is replete with examples of successful senior managers who could not make the switch from ambitious executive to corporate leader because they did not know	Power play	1.0%

		what to do with the power they had so expertly accumulated. Robert Caro is a student of power. For the past 27 years, the two-time Pulitzer prize winning biographer Robert Moses of Lyndon Johnson has focused on the question of how Johnson amassed and wielded power. Caro's deep understanding of the inner workings of power offers senior executives a nuanced picture of leadership at the highest level. In this wide–ranging conversation, Caro shares his insights about the nature of power, the complexity of ambition, and the role that the greater good can play in the making of a leader. He insists that power does not always corrupt, but what it invariably does is reveal a leader's true nature. "Today, when CEOs have acquired more and more power to change our lives," Caro says, "they have become like presidents in their own right, and they, too, need to align themselves with something greater than themselves if they hope to become truly great leaders.		
41	Highest Prob: advice, president, vice, listening, active, conversation, talk FREX: vice, advice, listening, president, active, listen, habits	*Are you really listening?* Senior leaders, particularly CEOs, confront a central paradox in their work. They generally have access to more lines of communication than anybody else, but the information that flows to them is suspect and compromised. Warning signals are tamped down. Key facts are omitted. Data sets are given a positive spin. All of these factors isolate leaders in	Feedback & negotiation	1.0%

		a dangerous information bubble. However, the authors argue that leaders can escape that bubble by working actively to create a more expansive “listening ecosystem.” They first have to learn how to listen actively themselves, without distraction or judgment, purely for comprehension. Then, they have to create systems and processes all around them that elevate listening to a constant state of hypervigilance. This sort of sustained attention to listening allows leaders to pick up on early signs of both danger and opportunity, which, in turn, allows them to do their jobs and serve their organizations better. The authors conclude by sharing advice gleaned from interviews and personal experience about how leaders can learn to listen better.		
42	Highest Prob: story, short, brain, attention, research, happiness, people FREX: sleep, story, brain, happiness, short, memory, stretch	This article presents 5 simple steps to telling business stories. Business stories should be told with intent so they feel relevant. Storytellers should wait for the appropriate time during the conversation to tell the story, and use a lead–in phrase that makes the story feel like a logical extension of what came before. Relevance matters, so they should finish the story with the established goal.	Narrative/story	0.9%
43	Highest Prob: workers, workforce, labor, older, business, age, U.S.	*Reinventing labor: An interview with union president Lynn Williams.* Lynn Williams, president of the United Steel workers of America since 1984 announced that he will retire next	Union/labor relations	2.0%

FREX: older, baby, workers, boomers, younger, shortage, skilled

year just as labor seems to be on the brink of reinventing itself. After a decline in influence during the Reagan–Bush years, the labor movement is infused with a new sense of optimism. Admittedly, however, labor’s numbers are bad and getting worse. Unions represent only 11.5% of the private labor force, down from 16.8% 10 years ago and 35% 40 years ago. Williams’s own union is no exception. Pushed by the extraordinary implosion of the U.S. steel industry, membership has dropped precipitously from 1.2 million members in 1980 to the current figure of 560,000. However, as Williams points out in his interview with Barbara Presley Noble, labor’s influence extends far beyond its numbers. Politically, its concentration in certain regions makes it a formidable force. The USWA helped deliver votes that secured President Clinton’s victory in critical industrial states. And labor seems to have found an ally in the new secretary of labor, Robert Reich. Amidst this more hospitable environment, many of the ideas that Williams thought about and fought for over the years are finding an audience and becoming a reality: cooperation between labor and management, worker participation in decision making, and employee ownership of successful industrial ventures. Williams has also been instrumental in helping establish the AFL–CIO Organizing Institute. With Williams’s help,

		unions are sloughing off their ambivalence toward organizing and, through the work of the Institute, are attracting a new generation of activists who will lead them in the next century.		
44	Highest Prob: executive, chief, CEO, officer, executives, officers, CEOs FREX: officer, chief, executive, officers, clos, ceo, ceos	*Motivator in chief.* The article discusses Muhtar Kent, chief executive officer of beverage producer Coca-Cola. He left the company in 1999 and returned in 2005 to become chief operating officer. Along with then chief executive Neville, Isdell, he worked to revamp Coca-Cola’s corporate culture. Since assuming the chief executive role in 2008, Kent has sought to chart a long–term strategy for the company and improve sales in North America.	Challenges facing the C–suite	2.1%
45	Highest Prob: companies, business, markets, value, market, competitive, customers FREX: markets, multinationals, competitors, ventures, rivals, portfolio, Japanese	*How strategy shapes structure.* When executives develop corporate strategy, they nearly always begin by analyzing the industry or environmental conditions in which they operate and the strengths and weaknesses of their competitors. They then set out to carve a distinctive strategic position from which they can outperform their rivals by building a competitive advantage. The underlying logic = is that a company’s strategic options are bounded by the environment. In this structuralist approach, structure shapes strategy. However, Kim and Mauborgne, the authors of Blue Ocean Strategy, point out that history reveals numerous situations in which firms’ strategies have	Strategic management & HRD	1.8%

		shaped the structure from Ford's Model T to Nintendo's Wii. The authors developed this reconstructionist approach over 15 years into the blue ocean strategy, which reflects the fact that a company's performance is not necessarily determined by an industry's competitive environment. In this article they explain the key differences between the two approaches, identify the circumstances under which each one is appropriate, and discuss cases of blue ocean strategies. The authors conclude by observing that most large and diversified businesses operating in multiple industries will need to learn to apply both approaches, depending on the strategic needs of their various units.		
46	Highest Prob: leadership, leaders, women, development, men, female, gender FREX: women, leadership, men, women's, male, female, transformational	*Breaking through the glass wall: The experience of being a woman enterprise leader*. This article describes the results of a phenomenological study to understand women enterprise leaders' experiences. Women leaders' experiences are challenging due to an imbalance in the representation of female executives, barriers to advancement, and disconnects in development strategies. In-depth interviews were conducted with 12 participants resulting in five essential themes that provide deeper insights into their experiences. The five themes resonate across all enterprise leadership positions and industries: (1) driven by a desire to control their destiny; (2) aspire	Leadership development & inclusion	2%

		to leadership positions with impact; (3) achieve influence through a connect–and–collaborate style; (4) initiate culture change while staying focused on results; and (5) apply self–knowledge and resiliency to address challenges. The findings provide further clarity on how women have approached their careers and lives, the roles of women enterprise leaders, the manner in which women have led and managed, and the issues they have confronted on their journey to become enterprise leaders.		
47	Highest Prob: development, talent, business, strategy, workforce, organizations, strategic FREX: talent, succession, bank, initiatives, development, alignment, strategy	*Unlocking the talent development puzzle.* The article discusses the highlights of a research study conducted by the Association for Talent Development (ATD) and full–service consulting firm Rothwell and Associates (R&A) to determine how organizations structure and align talent development functions. Topics covered include the process of building a talent development structure, the noted challenges encountered by talent development professionals, and how talent development professionals are affected by emerging industry trends.	Talent development	3.0%
48	Highest Prob: people, change, world, organization, poor, business, organizations FREX: people, Hong, Kong,	*Persuading the unpersuadable. (Cover story).* We live in an age of polarization. Many of us may be asking ourselves how, when people disagree with or discount us, can we persuade them to rethink their positions. The author, an organizational psychologist, has spent time with	Managing conflict	1.3%

	poor, blame, world's, Africa	a number of people who succeeded in motivating the notoriously self–confident Steve Jobs to change his mind. The author and analyzed the science behind their techniques. Some leaders are so sure of themselves that they reject good opinions and ideas from others and refuse to abandon their own bad ones. However, the author writes, "it is possible to get even the most overconfident, stubborn, narcissistic, and disagreeable people to open their minds." He offers some approaches that can help encourage a know–it–all to recognize when there's something to be learned, a stubborn colleague to make a U–turn, a narcissist to show humility, and a disagreeable boss to agree with others' ideas.		
49	Highest Prob: career, careers, transition, success, advancement, professional, employability FREX: career, careers, transitions, employability, advancement, transition, paths	*Intelligent career navigation.* The article reports that the idea of the intelligent career picks up where the intelligent organization leaves off. The emergent and knowledge–driven economy insists on constant change in the way organizations function and in the career opportunities that arise. It is imperative that organizations and individuals are aware of and able to succeed in the economic circumstances of the time. The concept of intelligent careers provides a way for individuals to find their bearings and personally navigate their careers.	Career development	0.9%
50	Highest Prob: employee, engagement,	*Come on, get happy*. The article focuses on how employee happiness or satisfaction	Employee experience	2.0%

	policies, turnover, retention, productivity, improve FREX: engagement, employee, turnover, relocation, retention, morale, policies	translates to productivity and loyalty. Topics discussed include the definition of happiness, the factors that contribute to job satisfaction, and the factors that contribute to employee engagement. The article also mentioned the lower turnover and fewer safety incidents that result from employee engagement and the need for employers to recognize individual achievements and provide just compensation.		
51	Highest Prob: leader, emotional, intelligence, feedback, leaders, behaviors, behavior FREX: emotional, emotional intelligence (EI), leader, syndrome, impostor, self–awareness, intelligence	*Leading by feel.* Leaders need to manage the mood of their organizations. The most gifted leaders accomplish this goal by using a mysterious blend of psychological abilities known as emotional intelligence. They are self–aware and empathetic. They can read and regulate their own emotions while intuitively grasping how others feel and gauging their organization's emotional state. However, it is unclear where emotional intelligence comes from, and how leaders learn to use it. In this article, 18 leaders and scholars (including business executives, leadership researchers, psychologists, an autism expert, and a symphony conductor) explore the nature and management of emotional intelligence including the sources, uses, and abuses. Their responses varied, but some common themes emerged: the importance of consciously and conscientiously honing one's skills, the double-edged nature of self-awareness,	Emotional intelligence	1.0%

		and the danger of letting anyone's emotional intelligence skill dominate. Some of their observations including the following. Psychology professor John Mayer, who codeveloped the concept of emotional intelligence, warns managers not to be confused by popular definitions of the term. He suggests that if they have a certain set of personality traits then they automatically possess emotional intelligence. Neuropsychologist Elkhonon Goldberg agreed with professors Daniel Goleman and Robert Goffee that emotional intelligence can be learned but only by people who already show an aptitude for it. Cult expert Janja Lalich pointed out that leaders can use their emotional intelligence skills for ill in the same way they can use it for good. She claimed that "Sometimes the only difference is [the leader's] intent." Business leaders Carol Bartz, William George, Sidney Harman, and Andrea Jung (of Autodesk, Medtronic, Harman International, and Avon, respectively) describe situations in which emotional intelligence traits such as self–awareness and empathy have helped them and their companies perform at a higher level.		
52	Highest Prob: managers, manager, managerial, line, senior, middle, effective	*Managers can't do it all.* Over the past few decades, sweeping changes include re-engineering, digitization, agile initiatives, and the move to remote work, which have dramatically transformed managers' jobs. Change has come	Middle manager challenges	1.1%

	FREX: managers, managerial, manager, middle, line, manager's, senior	along three dimensions: power, skills, and structure. Managers now have to think about making their teams successful rather than being served by them. They need to coach performance, not oversee tasks, and they need to lead in rapidly changing, more–fluid environments. These shifts have piled more responsibilities onto managers and required them to demonstrate new capabilities. Research shows that most managers are struggling to keep up. Gherson, a former corporate chief human resources officer, and Gratton, a London Business School professor claim that a crisis is looming. Some organizations, however, are heading it off by reimagining the role of managers. This article looks at three companies—Standard Chartered, IBM, and Telstra—that have helped managers develop new skills, rewired systems and processes to better support their work. They have even radically redefined managerial responsibilities to meet the new priorities of the era.		
53	Highest Prob: principles, business, political, people, world, something, problems FREX: principles, resolve, beings, improvisational, wicked,	*The new CEO activists.* Although corporations have been lobbying the government and making campaign donations for a long time, a dramatic new trend has emerged in U.S. politics: CEOs are taking very public stands on thorny political issues that have nothing to do with their firms' bottom lines. Business leaders like Tim Cook of Apple, Howard Schultz of Starbucks, and Marc Benioff of Salesforce—among	Organizational environment	0.7%

	evolutionary, warfare	many others—are passionately advocating for a range of causes, including LGBTQ rights, immigration, the environment, and racial equality. CEOs speaking out and flexing their firms' economic muscle by threatening to move business activities out of states that pass controversial laws. However, does CEO activism actually change public opinion and policies? What are the risks and rewards? And what is the playbook for leaders considering speaking out? The authors of this article examine those questions and explain the takeaways of their own research. One finding is that consumers tend to view CEO activism through the lens of their own political affiliations, so it can provoke both negative and positive responses. Nevertheless, in the age of Twitter, silence on an issue can be conspicuous and consequential.		
54	Highest Prob: relationships, mentoring, formal, experiences, mentors, mentor, informal FREX: mentoring, formal, mentors, mentor, relationships, storytelling, adapted	*Mentoring: More than just a match.* The article examines the multiple roles of mentoring administrators. Topics covered include the roles of mentoring administrators such as coach, facilitator, support network, and matchmaker, the need for mentors to help participants build self-awareness to gain deeper growth opportunities through mentoring, and the factors that must be considered in building a mentoring program's communication cycle.	Mentoring	0.7%

55	Highest Prob: knowledge, expertise, transfer, intellectual, skills, organizational, organizations FREX: knowledge management (km), knowledge, tacit, intellectual, expertise, transfer	*Leveraging intellectual capital for organizational gain.* This article reports on the significance of intellectual capital, which plays an important role in the contribution of organizational gain. Unfortunately, the role requires an expanded perspective on learning and a robust set of technical and social skills. In a business environment driven by innovation, the key creators of value are knowledge and relationships. The role requires a wide–range of technical and social skills, and the ability to adapt to a changing climate and adjust to responsibilities.	Knowledge management	1.0%
56	Highest Prob: court, U.S., act, discrimination, circuit, appeals, claims FREX: 9th, plaintiff, court, upheld, appeals, supreme	*Color bias claim survives absent race discrimination.* This article discusses the 5th U.S. Circuit Court of Appeals case of Etienne v. Spanish Lake Truck & Casino Plaza LLC. A district court case that had rejected the discrimination claim of Esma Etienne, a black woman, against her former employer, Spanish Lake Truck & Casino Plaza LLC, was remanded. According to the 5th Circuit, the U.S. Civil Rights Act of 1964 prohibits discrimination based on skin color, including the intra–racial color bias that Etienne experienced.	Workplace lawsuits	2.5%
57	Highest Prob: employment, risk, opportunity, legal, compliance, risks, equal	*I–9 compliance crackdowns.* This article provides a guide on how employers can comply with the Immigration Reform and Control Act of 1986 in terms of Form I–9 compliance. According to the article, by establishing and	Compliance & risk management	1.3%

	FREX: compliance, commission, risk, employment, U.S. Equal Employment Opportunity Commission (EEOC), legal, equal	maintaining effective Form I–9 compliance policies, employers can adopt human resource (HR) practices to identify and prevent liability and mitigate many violations. The article explains the different versions and filing of Form I–9, the process of I–9 audits, the violations, and penalties.		
58	Highest Prob: mobile, computer, service, customers, client, devices, store FREX: mobile, devices, device, client, computer, store, email	*4 ways to reinvent service delivery*. Innovations that radically redefine how a service is delivered can create tremendous value for customers and for providers. However, service delivery requires deep insights into clients' needs and revising basic assumptions. It is possible, for example, that a doctor can treat more than one patient at a time. Organizations can redefine service delivery along four dimensions, but a change in one may unlock—or block—possibilities for innovation in the others. In terms of the structure of the interaction, sometimes the service becomes more valuable to clients if they share it with others or if multiple providers coordinate closely to deliver it. For the service boundary, if a segment of clients uses the same complementary services and has trouble accessing them, a provider might consider integrating them into its offering. For the allocation of tasks, who actually delivers the service? Employees' expertise might not match their assigned tasks. Finally, the delivery location	Technology & business models	1.0%

		should be defined by the client's needs, not the provider's needs.		
59	Highest Prob: global, international, firms, economic, countries, companies, small FREX: international, global, China, expatriate, countries, multinational, assignments	*Learning in Latin America.* The article reports on the challenges of global enterprises with offices in Latin America. Global enterprises with operating offices in Latin America have to overcome language barriers. Global enterprises also face the challenge of having an adequate number of people together in a training classroom due to the vastness of the region. They claim that the greatest challenge includes straddling the cultural differences in Latin America since Latin culture is interactive and social.	The global context	1.9%
60	Highest Prob: business, organization, organizations, company, issues, companies, corporate FREX: issues, related, looks, focusing, organization, business, changes	*Out of sight, but on HR's mind.* This article discusses the significance of managing and preserving digital data in a business enterprise in the U.S. The author mentions that the initiatives have become especially important in light of amendments to the Federal Rules of Civil Procedure that increase the duty of an organization to preserve and produce electronic data and to address issues related to electronic discovery early in a case.	Investing in tomorrow's issues	0.4%

Descriptions of Topics

In the following section, brief descriptions of all 60 topics are presented. Topic 1, Work–life balance (WLB), (1.9%) emphasized the significance of maintaining a healthy equilibrium between one's professional and personal lives. Topic 2, communication (1.6%), highlighted effective business communication strategies, encompassing techniques for engagement with stakeholders and collaborating with colleagues. Topic 3, customer relationship management (CRM) and training/learning, (2.7%) discussed strategies and tools for effective management of customer interactions, such as the utilization of customer relationship management (CRM) solutions, as well as the implementation of learning management systems (LMS) to provide training and learning opportunities. Topic 4, business growth, (1.6%) encompassed discussions related to various aspects of business growth, such as financial performance, market share, and overall operational efficiency. Topic 5, workplace violence, (1.8%) signified the escalating concern regarding acts of violence occurring within work environments.

Topic 6, defining HRD, (1.1%) explored the fundamental principles of HRD, including the definitions, research, and practice of HRD, as well as reflections on the field. Topic 7, training and development (TD), (3.8%) encompassed various facets of designing, implementing, and evaluating training programs aimed at enhancing employee skills and knowledge. Topic 8, organizational culture and commitment, (1.5%) emphasized the impact of organizational culture on employee commitment and satisfaction levels. Topic 9, branding and marketing, (1.2%) delved into the strategies and tactics employed by organizations to establish a strong brand identity and effectively promote their products or services. Topic 10, IT issues and products, (2%) highlighted the challenges associated with information technology, such as cybersecurity and ethical considerations surrounding data management, while also containing promotional content.

Topic 11, education and certification programs, (1.1%) referred to various educational programs, including master's degrees, MBA programs, online learning initiatives, and professional certifications. Topic 12, AI and analytics, (1.1%) explored the increasing impact of artificial intelligence (AI), data analytics, big data, and machine learning on the workplace and workforce. Topic 13, identity and diversity, (0.6%) focused on how organizations can promote diversity and inclusion within the workplace. Topic 14, green HRD, (0.7%) emphasized the role of HRD in the integration of environmentally conscious practices into organizational strategies and operations. Topic 15, breakthrough thinking, (1%) highlighted techniques to stimulate brainstorming and foster creative thinking within teams and organizations.

Topic 16, adult learning, (1.5%) delved into theories, research, and practices associated with adult learning as well as the related programs such as European vocational education and training. Topic 17, transforming strategy (1.3%) referred to the strategic approach employed by the top management team of an organization to implement fundamental shifts in various areas of the organization, such as operations, structure, culture, and market positioning. Topic 18, work teams, (1.5%) highlighted the dynamics, structure, group processes, development, intergroup relations, conflict management, and effectiveness of teams within the workplace. Topic 19, public speaking, (1.2%) underscored the importance of effective presentation and communication skills in professional contexts. Topic 20, building trust, (0.7%) emphasized the significance of trust in fostering positive relationships, collaboration, and relationship building.

Topic 21, theoretical foundations, (1.6%) focused on the fundamental theories and principles of the field of HRD. Topic 22, evaluation, (1.7%) highlighted the utilization of metrics such as ROI to assess the effectiveness of HRD interventions, programs, and initiatives. Topic 23, social capital, (1.3%) emphasized the significance of social relations and the acquisition of various resources embedded within these relations, as well as social capital at the national level. Topic 24, navigating challenges, (0.7%) focused on how organizations successfully overcome obstacles and address the changing landscape. Topic 25, compensation and rewards, (3.1%) explored salary structures, incentive programs, and the impact of these on employee performance, satisfaction, and retention. Topic 26, non-industrial sectors, (1.2%) highlighted the unique challenges and opportunities sectors have faced such as non-profits, public administration, and the military in terms of employment and HRD practices.

Topic 27, enterprise software, (1.3%) explored the transformative impact of enterprise software solutions on businesses, including how they streamlined operations, enhanced productivity, and supported decision–making processes, while also containing promotion content. Topic 28, the role of HR professionals, (3.7%) delved into the significant roles and contributions of HR professionals in today’s organizations. Topic 29, performance management, (2.2%) underscored the importance of effective performance management systems, performance appraisals, and feedback mechanisms in driving employee engagement, productivity, and continuous improvement. Topic 30, selection and staffing, (2.8%) delved into the process of recruiting, selecting, and placing employees within an organization, addressing issues such as job analysis, expanding candidate pools, and managing immigration work authorization.

Topic 31, learning and development, (4.0%) is the most prominent topic in the corpus of selected HRD professional and academic journals. It encompassed a wide range of areas related to learning and development, including theories, models, contextual factors, instructional design, delivery methods, learner characteristics, and the value and outcomes of learning and development. Topic 32, methodology and measurement, (1.2%) referred to various research methods, techniques, measurements, and instruments used to test, validate, and evaluate HRD related theories and practices. Topic 33, workforce retention, (2.8%) explored different aspects of employee retention within organizations, such as motivation, employee engagement strategies, and the implementation of effective retention policies.

Topic 34, employee benefits, (2.5%) focused on non-monetary rewards offered to employees to enhance their job satisfaction and retention, including transportation, housing, concierge services, fringe benefits, family related benefits, and well-being programs. Topic 35, mapping HRD research, (1.7%) explored the assessment of HRD scholarship. Topic 36, new products and invention, (1.7%) referred to early inventions like Wi-Fi and intranet, as well as recent innovations such as blockchain. Topic 37, empowerment, (0.8%) emphasized the key elements of empowerment and addresses the challenges of providing critical feedback. Topic 38, quality management, (1%) focused on designing, implementing, and sustaining quality management systems within organizations, such as Six Sigma and Lean Management.

Topic 39, employment law and regulations, (3.9%) discussed the legal issues, policies, and costs related to employment and regulations, such as the Fair Labor Standards Act and Family and Medical Leave Act. Topic 40, power play, (1%) highlighted different aspects of power that manifests at different levels in the context of a large corporate setting, such as politics, networking, control over resources, and decision making. Topic 41, feedback and negotiation, (1%) explored ways to enhance feedback loop and negotiation processes, emphasizing techniques such as active listening and empathy. Topic 42, story/narrative, (0.9%) discussed the utilization of narrative and storytelling techniques to convey ideas, values, and experiences.

Topic 43, union/labor relations, (2%) discussed the complex relationship between labor and management, employee participation in decision making processes, and the concept of employee ownership. Topic 44, challenges facing the C-level executives, (2.1%) discussed the diverse responsibilities and challenges C-suite executives face in today's dynamic business environment. Topic 45, strategic management and HRD, (1.8%) explored the process of defining, implementing, and evaluating an organization's strategy to accomplish its mission and objectives while aligning internal and external forces. Topic 46, leadership development and inclusion, (2%) focused on different leadership styles, the development of leadership skills, and the importance of fostering diversity and inclusion in the leadership landscape. Topic 47, talent development, (3.0%) highlighted the process and challenges involved in identifying, nurturing, and advancing talents within the dynamic context of change.

Topic 48, managing conflict, (1.3%) encompassed various aspects related to conflict resolution, negotiation, and handling disagreements in different contexts. Topic 49, career development, (0.9%) covered the process of assisting individuals in identifying and achieving their career goals while aligning them with organizational objectives. Topic 50, employee experience, (2%) explored the significance of recognizing employees as individuals with unique experiences, needs, and expectations, moving beyond considering them solely as resources or assets, which leads to positive outcomes for both employees and organizations. Topic 51, emotional intelligence, (1%) discussed the importance for leaders and HR professionals to recognize, understand, and manage their own emotions and those of others.

Topic 52, middle manager challenges, (1.1%) highlighted how changes in functions, decision processes, and the overall context impact middle managers. Topic 53, organizational environment, (0.7%) delved into how organizations are influenced by and interact with their external and internal environments, including politics, industrial policy, economic conditions, and crises. Topic 54, mentoring, (0.7%) encompassed various aspects of mentoring, including mentor–mentee relationships, effective mentoring practices, and the mutual benefits that mentoring offers to both parties involved. Topic 55, knowledge management, (1%) discussed theories and practices in knowledge management, such as knowledge–sharing motivation and the role of intellectual capital in driving organizational innovation.

Topic 56, workplace lawsuits, (2.5%) addressed court cases related to workplace discrimination and accommodation, such as bias, pregnancy discrimination, and disability. Topic 57, compliance and risk management, (1.3%) focused on organizational risks and ensuring compliance with laws, regulations, and policies. Topic 58, technology and business models, (1%) explored the impact of technological advancements on business strategies and operations. Topic 59, the global context, (1.9%) addressed the challenges and roles of organizations and HRD in the global environment, discussing challenging tasks such as overseas assignments and training. Topic 60, investing in tomorrow's issues, (0.4%) discussed emerging issues and trends in response to technological advancements and changing workforce demographics and regulations.

Summary of Topic Model Results

A total of 60 topics were identified in this study based on the STM analysis of the metadata entries from the selected professional and academic journals from 1990 to 2022. The topic proportions of the identified topics ranged from the highest 4.0% (Topic learning and development to the lowest 0.4% (Topic investing in tomorrow' s issues) which indicated the prevalence of topic distribution within the test dataset. The 60 topics meaningfully describe the test dataset of HRD professional and academic journal publications over the past three decades. The top ten topics are as follows: Learning and development (4.0%), Employment law and regulations (3.9%), Training and development (3.8%), The role of HR professionals (3.7%), Compensation and rewards (3.1%), Talent development (3.0%), Selection and staffing (2.8%), Workforce retention (2.8%), CRM and training/learning (2.7%), and Employee benefits (2.5%). The next section presents the results of exploring the changes in the topics that have been most prevalent in professional and academic journals over the past three decades.

Contrasting Changes in Topics Over Time

This section of the findings reports the evolution of individual topics within professional and academic journal publications over time, addressing Research Question 2: "How did these topics evolve and change in different types of publications (professional versus academic) between 1990 and 2022?" The prevalence of each topic was plotted as a linear function of time, across different types of journals. The results detailing topic trends are visually represented in figures throughout the subsequent sections for more direct observation and interpretation.

Each topic exhibited one of three distinct patterns over time within one type of publication: rising, declining, or constant/steady trend. The rising trend indicates an increase in topic prevalence over time, meaning the topic was increasingly discussed in the corresponding type of journal publications over time. The declining trend signifies a decrease in the distribution of the topic. In other words, the corresponding type of journal publications initially discussed this topic substantially, but over time, the topic diminished in salience. The constant/steady trend suggests that the prevalence of the topic remained relatively unchanged over time. The topics are characterized into different groups based on the observed combination of patterns.

The evolution of topic trends in different types of journals (i.e., professional vs. academic) is classified into the following categories: (1) concurrent rising trends, (2) concurrent declining trends, (3) rising–declining trends, (4) constant-volatility trends (divided into sub–

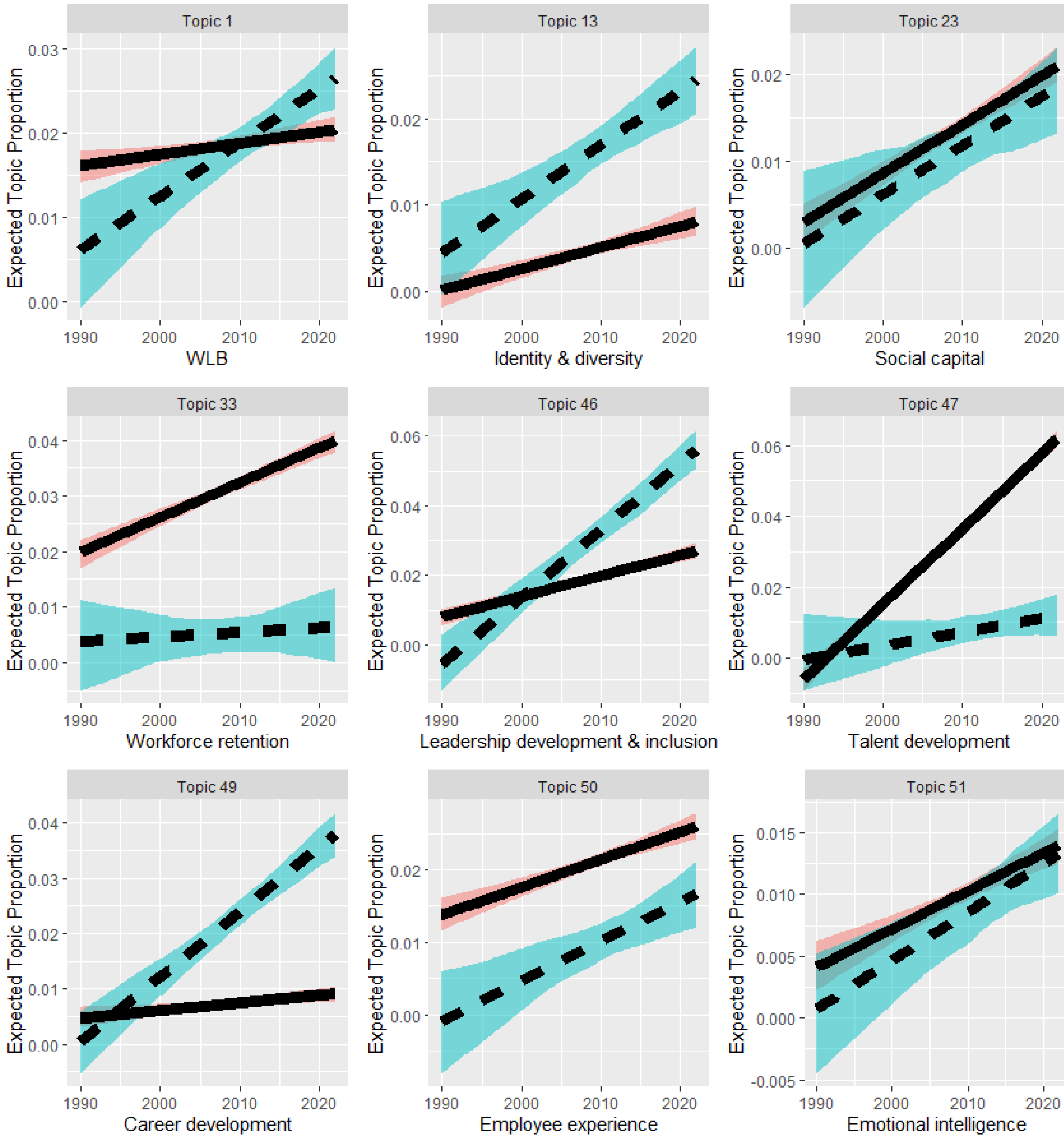
groups of constant low–volatility trends and constant moderate–volatility trends), and (5) diverging and steady trends. In the following sections, changes in topic trends are presented according to these categories rather than referring to the topic ID numbers used in the previous section. This approach enables direct observation of the variations in topic evolution across different types of journals over the past three decades.

Concurrent Rising Trends

This category includes topics that consistently demonstrated upward patterns in both HRD professional and academic journals over time. Topics falling under this category are as follows: WLB, identity and diversity, social capital, workforce retention, leadership development and inclusion, talent development, career development, employee experience, and emotional intelligence. In other words, there was a marked increase in the discussion of these identified topics across both professional and academic platforms over time. A graphical representation of these topics is depicted in Figure 3.

Figure 3

Topics Showing Concurrent Rising Trends



Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the

publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

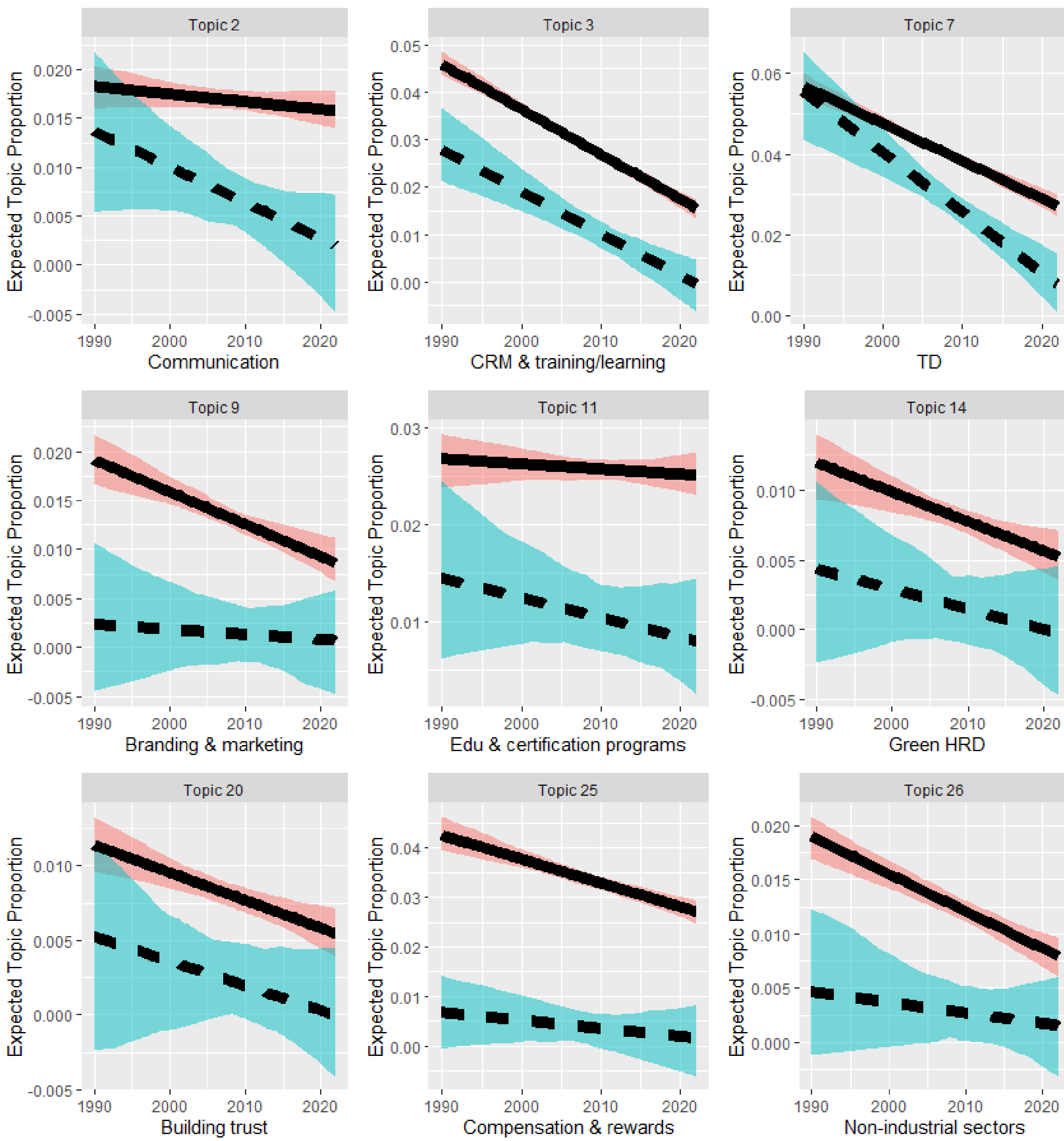
Nine topics demonstrated the constant rising trends in both HRD professional and academic journals between 1990 and 2022. These topics have gained a shared emphasis and growing interest in both professional and academic journal publications over the past three decades.

Concurrent Declining Trends

This category includes topics that exhibited downward patterns in both professional and academic journal publications over time. Topics in this category are as follows: communication, CRM and training/learning, training and development, branding and marketing, education and certification programs, green HRD, building trust, compensation and rewards, non–industrial sectors, enterprise software, employee benefits, empowerment, quality management, union/labor relations, strategic management and HRD, organizational environment, and the global context. A graphical representation of these topics is depicted in Figure 4 and Figure 5.

Figure 4

Topics Showing Concurrent Declining Trends

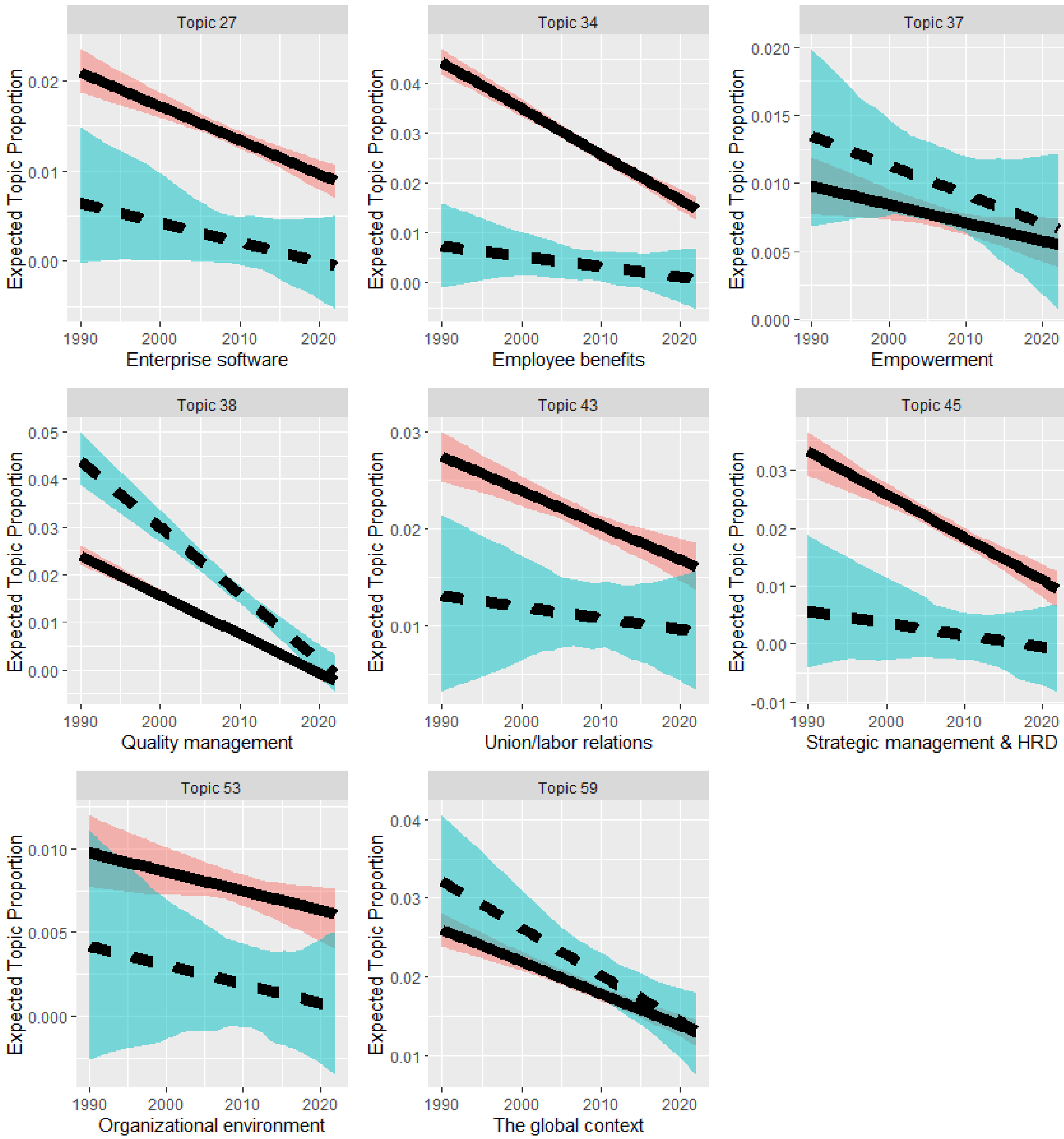


Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the

publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

Figure 5

Topics Showing Concurrent Declining Trends (Cont.)



Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

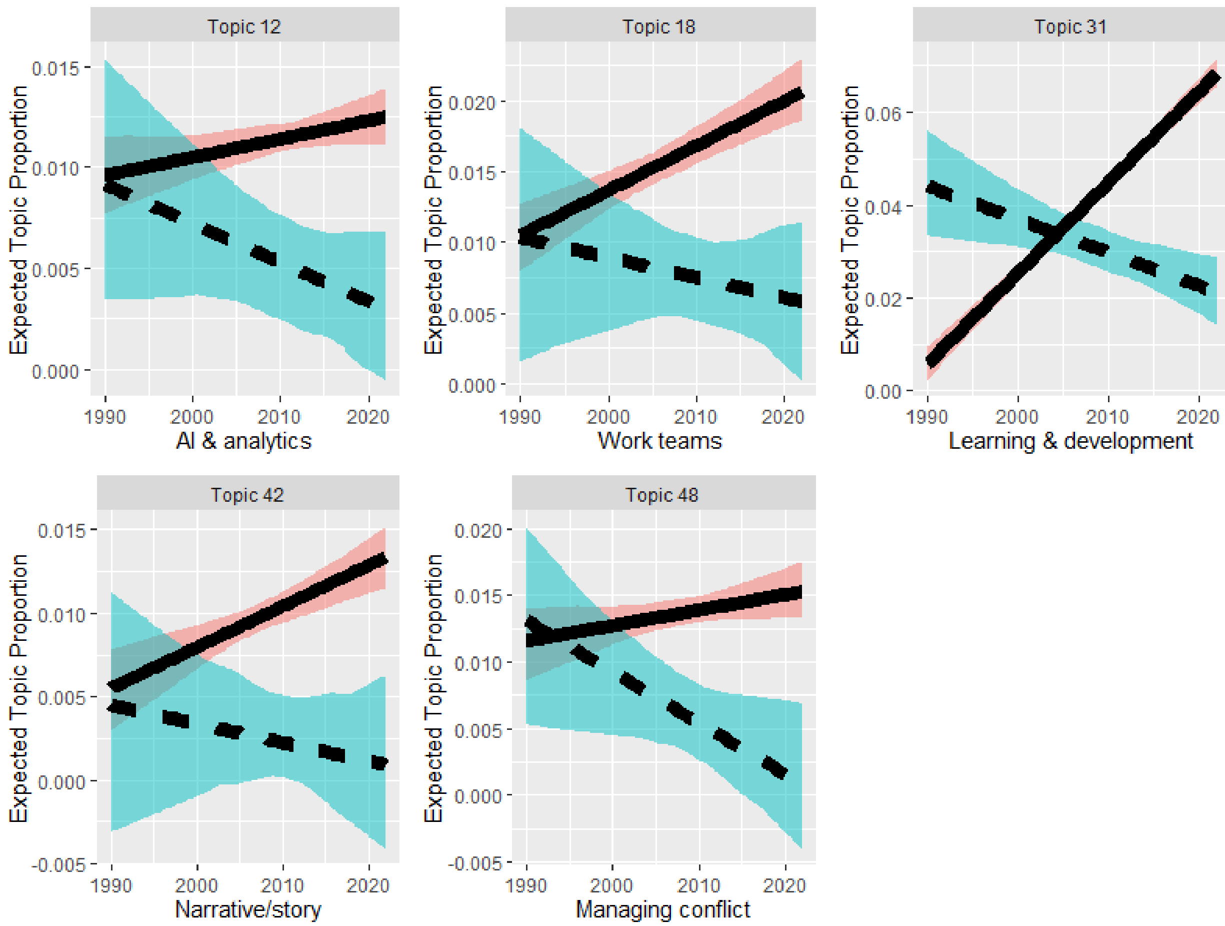
These 17 topics exhibited a downward pattern in both HRD professional and academic journals over time. In other words, while both HRD professional and academic journal articles featured these topics in the 1990s, their salience diminished over time. The concurrent declining trends of these 17 topics provide insights into a shared waning interest in these topics across both HRD professional and academic journal publications between 1990 and 2022.

Rising–Declining Trends

This category includes topics that demonstrated variations in their trends, with a rising pattern in one type of journal publication, while simultaneously experiencing a declining pattern in another. Topics falling under this category are as follows: AI and analytics, work teams, learning and development, narrative/story, and managing conflict. A graphical representation of these topics is depicted in Figure 6.

Figure 6

Topics Showing Rising–Declining Trends



Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

From 1990 to 2022, these five topics showed an increasing prevalence in one type of publication, contrasted by a diminishing prominence in the other. This noticeable contrast in topic prevalence trends signified shifting interests and priorities in HRD professional and academic journal publications over time.

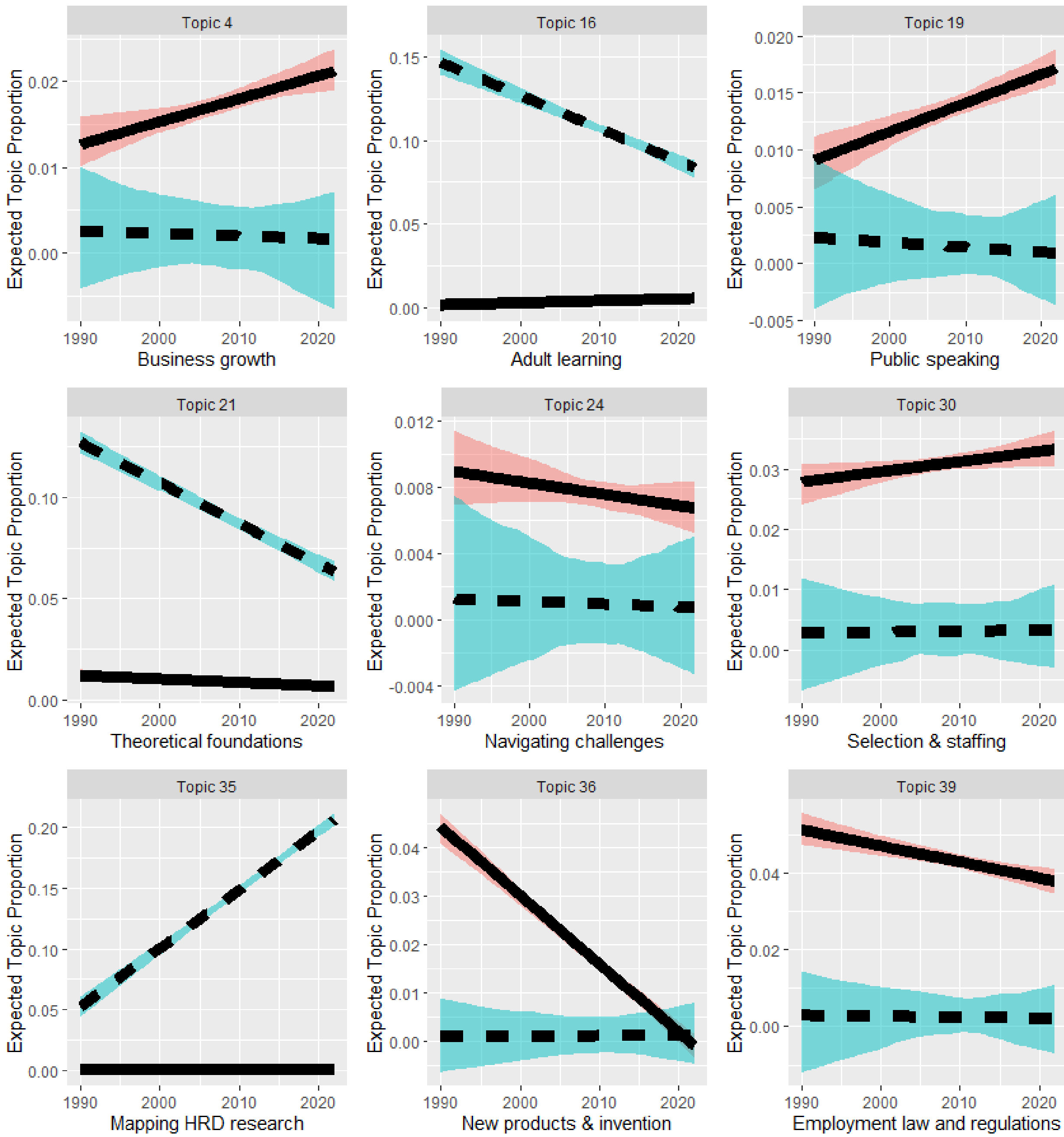
Constant–Volatility Trends

This category is divided into two distinct subgroups: constant low–volatility trends and constant moderate–volatility trends. The constant low–volatility trends subgroup includes topics that displayed minimal prevalence (near 0) in one type of journal, while simultaneously showing variations in the other. In other words, these topics were covered infrequently in one type of journal, a trend that remained consistent over the past thirty years, regardless of changes in topic prevalence in the other type of journal. This suggests a gap persisted between professional and academic journals with respect to these topics falling under the constant low–volatility trends subgroup. The constant moderate–volatility trends subgroup contains topics that maintained a moderate prevalence in one journal type yet demonstrated fluctuations in the other. In other words, both professional and academic journals engaged these topics, albeit with varying degrees of priority and emphasis between 1990 and 2022. The distinction between these two subgroups is crucial for interpreting the trends.

Constant Low–Volatility Trends. The following 12 topics are included in the subgroup constant low–volatility trends: business growth, adult learning, public speaking, theoretical foundations, navigating challenges, selection and staffing, mapping HRD research, new products and invention, employment law and regulations, power play, and challenges facing the C–suite. A graphical display of these topics is presented in Figure 7 and Figure 8.

Figure 7

Topics Showing Constant Low–Volatility Trends

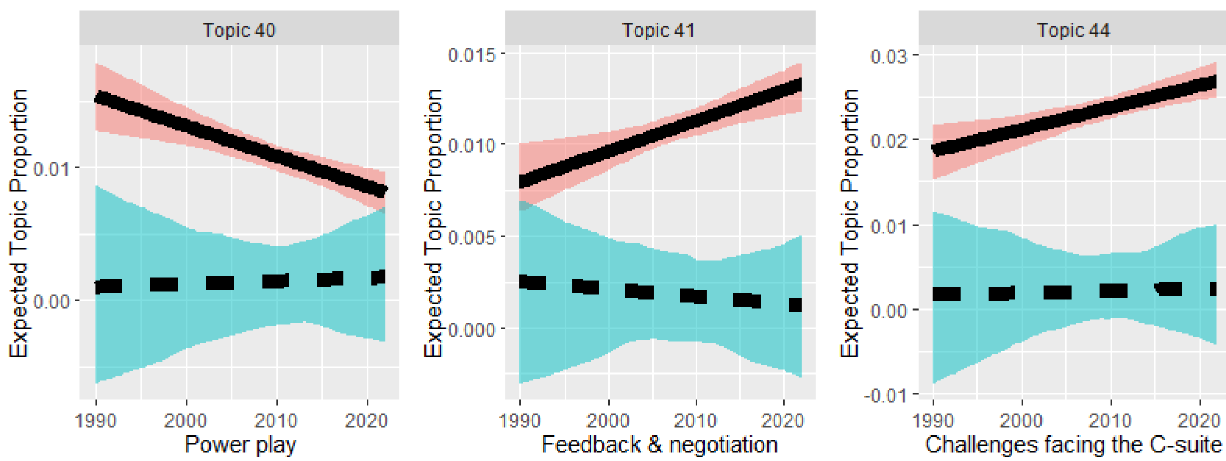


Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the

publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

Figure 8

Topics Showing Constant Low–Volatility Trends (Cont.)



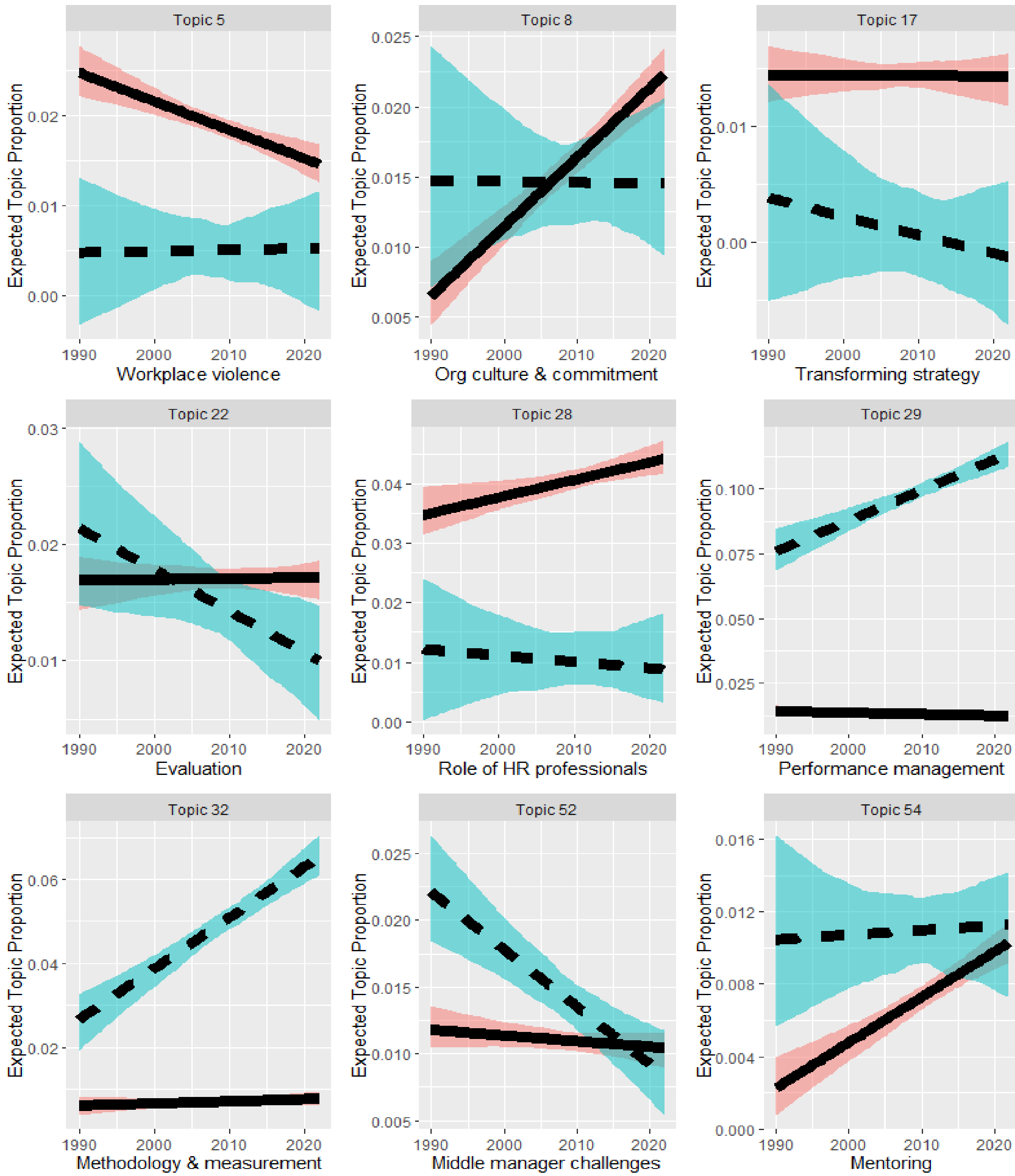
Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

The constant low–volatility trends subgroup included 12 topics that consistently showed negligible presence (almost zero) in one type of journal, while concurrently exhibiting fluctuations in the other between 1990 and 2022. The presence of these 12 topics in the constant low–volatility trends subgroup indicates a persistent, yet minimal emphasis in one type of journal, contrasted with a fluctuating level of attention in the other. This disparity highlights the divergent preferences in topic coverage between HRD professional and academic journals between 1990 and 2022.

Constant Moderate–Volatility Trends. The following topics are included in the subgroup of constant moderate–volatility trends: workplace violence, organizational culture, and commitment, transforming strategy, evaluation, role of HR professionals, performance management, methodology and measurement, middle manager challenges, mentoring, knowledge management, compliance, and risk management, and investing in tomorrow's issues. A graphical representation of these topics is depicted in Figure 9 and Figure 10.

Figure 9

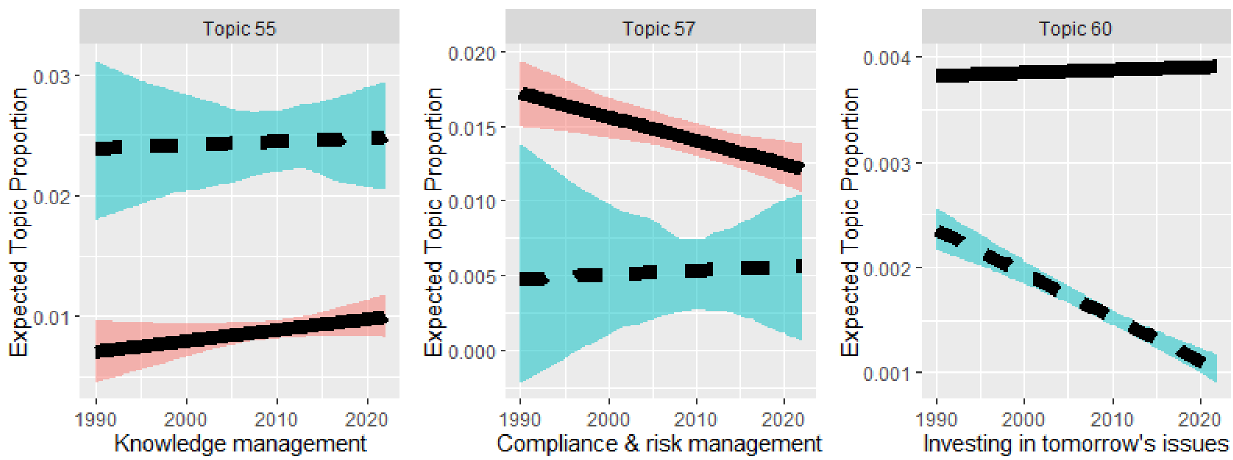
Topics Showing Constant Moderate–Volatility Trends



Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

Figure 10

Showing Constant Moderate–Volatility Trends (Cont.)



Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

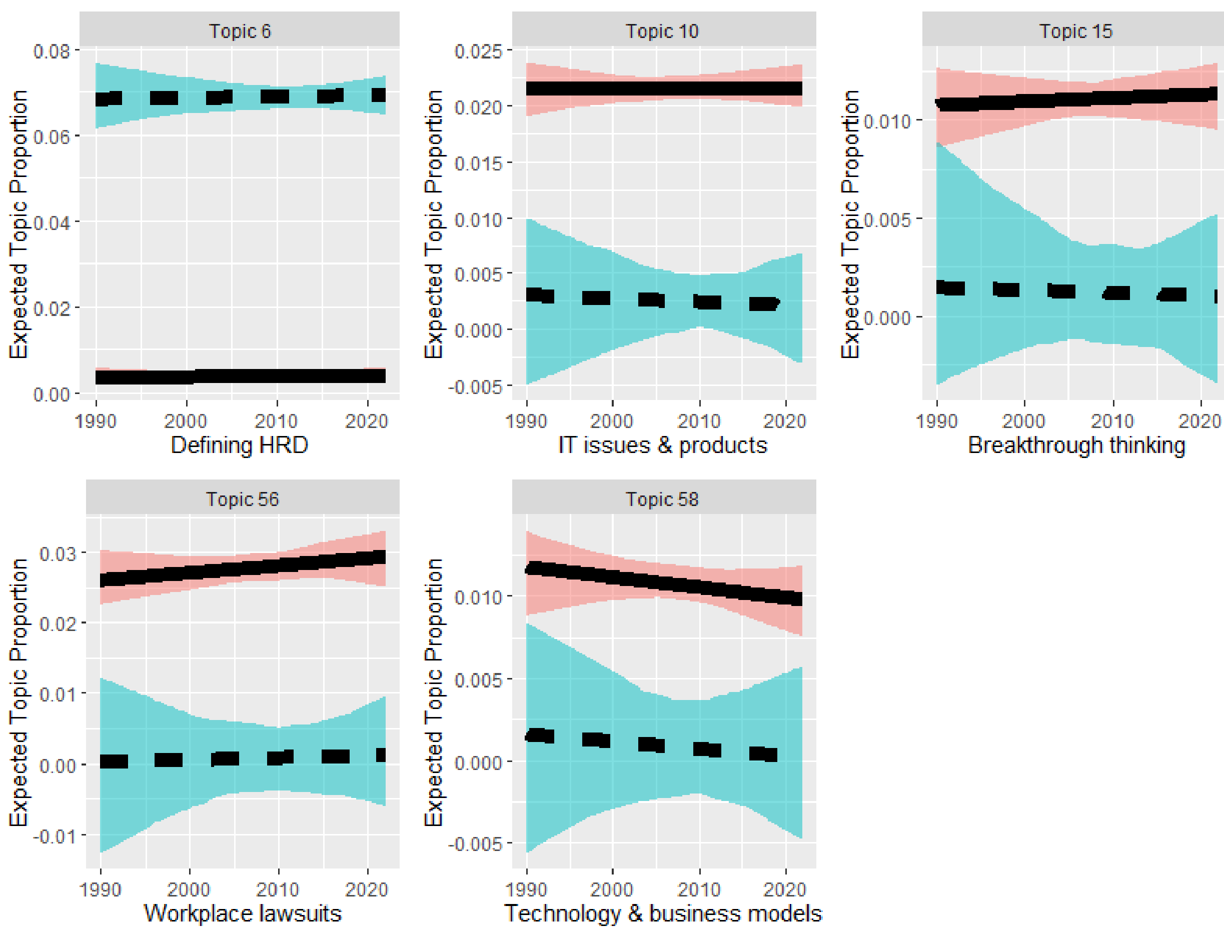
These 12 topics maintained a relatively moderate or high prevalence in one type of journal while experiencing varying levels of fluctuation in the other journal type. This implies that both HRD professional and academic journals covered these topics, although with differing levels of emphasis over time.

Diverging and Steady Trends

This category includes topics that demonstrated little change in prevalence between 1990 and 2022 across both professional and academic journals. While these topics received significant attention in one type of journal, they received less focus in the other. Five topics fall under this category: defining HRD, IT issues and products, breakthrough thinking, workplace lawsuits, and technology and business models. A graphical representation of these topics is depicted in Figure 11.

Figure 11

Topics Showing Diverging and Steady Trends



Note. Topic prevalence in professional journals is represented by a solid line, while topic prevalence in academic journals is depicted by a dotted line. The x–axis corresponds to the publication year, and the y–axis represents the expected topic prevalence. Vertical error bars indicate the confidence intervals (CI) around the estimated topic proportions, marked at 95%, providing insight into the uncertainty associated with these estimates.

These five topics exhibited minimal fluctuations in prevalence from 1990 to 2022. However, while one type of journal publications extensively addressed the topic, the other consistently published fewer articles on these topics over time. This discrepancy suggests a divergent emphasis between HRD professional and academic journals with respect to these topics.

Summary of the Topic Trends

This section presented the results of the evolution of 60 individual topics in HRD–related professional and academic journals between 1990 and 2022. Among the 60 topics, nine topics demonstrated consistently rising trends in both types of journals over time, suggesting a shared emphasis and growing interest in these areas. Conversely, 17 topics exhibited a constant downward trend, indicating a mutual waning interest across HRD professional and academic journal publications. Five topics displayed a contrasting pattern, with increasing prevalence in one type of publication and diminishing prominence in the other, signifying shifting interests and priorities over time.

A group of 12 topics, characterized as constant low–volatility trends, showed a negligible presence in one type of journal and fluctuating prevalence in the other, highlighting the divergence in topic coverage between HRD professional and academic journals. Another 12 topics, identified as constant moderate–volatility trends, maintained a moderate or high prevalence in one type of journal, with varying levels of fluctuation in the other, implying that both HRD professional and academic journals covered these topics, although with differing levels of emphasis over time. Lastly, five topics exhibited minimal fluctuations but demonstrated a divergence in emphasis between HRD professional and academic journals, further highlighting their distinct areas of focus. The results revealed the changing interest and nuanced evolution of topic trends across HRD professional and academic journals over the past three decades.

Chapter 4 Summary

This chapter focused on the study results addressing Research Question 1 and Research Question 2. The first part of the chapter presented the identification of 60 key topics across the test dataset. The 60 topics signify a diverse range of interests, interventions, and objects of study in HRD research and practice as presented in the five major HRD academic journals and five publications aimed at a practitioner HRD audience. The second part of the chapter reported the contrasting changes in topic prevalence across different types of journals between 1990 and 2022. Certain topics gained or lost salience over time, while others experienced disparate trends in the selected journals. Some topics maintained a steady prevalence, albeit at varying levels of emphasis across the journals. The findings offer insights into the dynamic and changing interests in HRD research and practice over the last three decades. The next chapter presents the discussion and conclusions of the study.

Chapter 5: Discussion and Conclusions

This chapter provides a summary of the study, including a brief review of the purpose, research questions, method, and rationale behind the design and approach. It then discusses the results, limitations of the study, and implications for practice and research, concluding with final remarks.

Purpose and Research Questions

The study aimed to provide a quantitative descriptive evaluation of the characteristics of the HRD research–practice gap. Specifically, it sought to identify and analyze prominent topics and their trends in HRD professional and academic journal publications over the past three decades. The study was guided by the following research questions:

Research Question 1: What topics were discussed in HRD professional and academic journal publications between 1990 and 2022?

Research Question 2: How did these topics evolve and change in different types of publications (professional versus academic) between 1990 and 2022?

Method

Structural topic modeling (STM) was employed in this study to analyze topics and their prevalence across selected HRD–related professional and academic journal publications from 1990 to 2022. The research process started with identifying HRD–related professional magazines and academic journals. Metadata, including the title, abstract, and publication year, were collected for all articles published in the selected journals during the specified period. A total of 39,732 metadata entries from professional journal publications and 4,393 metadata entries from academic journal publications were collected using the EBSCO Host and Scopus databases. A data pre–processing phase was conducted, leading to the removal of 9,427 (23.73%) non-article or missing metadata entries from the professional journal metadata collection, and 758 (17.25%) missing metadata entries from the academic journal metadata collection. This resulted in a total of 30,305 professional journal articles' metadata entries and 3,635 academic journal articles' metadata entries.

The subsequent analysis used a 50/50 training–test dataset split procedure to address identification problems and overfitting issues inherent in text as data research (Egami et al., 2022). This split involved randomly dividing the post–processed metadata from professional and academic journals into a separate training dataset and test dataset. Each dataset contained a random selection of 50% of the post–processed professional journal metadata and a random selection of 50% of the post–processed academic journal metadata. Further data wrangling was performed on both the training and test datasets, including tokenization and the removal of tokens/words such as stop words (e.g., the, a,), numbers, punctuations, among others.

STM topic models were first fitted using the cleaned training dataset to identify the appropriate model. Since the optimal number of topics for the topic model could not be determined based on existing theory or prior research, an iterative process of model selection and validation was conducted on the training dataset. Model fit statistics measures were evaluated ranging from 10 to 120, and semantic validation was conducted for the candidate models. Through this iterative model selection and validation process, the model with 60 topics was identified as the optimal model, providing the lower–level representation of the complex corpus.

The test dataset was then used to fit the final topic model for further analysis to address the two research questions of the study. The first analysis identified key topics based on outcomes from the final topic model, including high–probability words, FREX words, and documents (i.e., titles and abstracts in the metadata) that were highly associated with each topic.

The second analysis focused on examining the contrasting changes in individual topics in professional and academic journal publications over the past thirty years. In particular, the analysis estimated the prevalence of specific topics as a linear function of document–level covariates including the time and types of publications (professional versus academic) in the model.

Rationale Behind the Design and Approach

It is important to note that rather than creating separate corpora for professional journals and academic journals to compare topic models across them, both professional and academic journal publications were used to build the entire corpus for analysis. This design choice was based on methodological and theoretical considerations. From a methodological perspective, topic models learn from the data, and there is no guarantee that the topics identified in professional journals will have direct counterparts in academic journals. Therefore, tracking and comparing topics separately would hinder the ability to examine and establish relationships between the two types of publication. Fortunately, STM combines contextual information with traditional LDA topic modeling, using a Bayesian model to allow topics to vary by document–level covariates. This enables the estimation of topic prevalence variations based on the types of publications (professional versus academic) and publication year.

From a theoretical perspective, Tsui and McKiernan (2022) suggested that scholars are internal stakeholders (producers) of research, while practitioners are external (consumers) stakeholders of knowledge produced from research. Conversely, practitioners are internal stakeholders of practice, and scholars are external stakeholders of practice. However, there is evidence of a decoupling of expectations between both parties, along with various contributing factors that have contributed to the HRD research–practice gap (as detailed in Chapter 2). To address this emergence of an increased acceptance of the drivers of the HRD research–practice gap, the present study combined both professional and academic journals into the entire corpus. This allowed for the broadest consideration and exploration of topics that are produced and consumed by stakeholders of research and practice across the same time period. This approach recognizes the equal importance and competence of both parties in the process of knowledge management of the research–practice gap (Van de Ven & Johnson, 2006).

While the identified topics exhibit more diversity than typically expected in HRD research traditions, this approach provides a unique observation of the interconnectedness and dispersity of topics produced and consumed by HRD stakeholders, as presented in both influential professional and academic journal publications. Previous studies have also incorporated both professional and academic journals in their analyses to ensure the inclusion of both practitioner and academic concepts when examining the gap (as reviewed in Chapter 2). This dissertation study was informed by theoretical and methodological considerations and was designed by building on the insights from prior studies.

Summary of Results – Key Topics

The results from the first analysis revealed 60 topics that meaningfully describe the corpus of HRD professional and academic journal publications between 1990 and 2022. The 60 identified topics, presented using the conceptual labels in descending order based on their proportion, are as follows: learning and development (4.0%), employment law and regulations (3.9%), training and development (3.8%), role of HR professionals (3.7%), compensation and rewards (3.1%), talent development (3.0%), selection and staffing (2.8%), workforce retention (2.8%), CRM and training/learning (2.7%), employee benefits (2.5%), workplace lawsuits (2.5%), education and certification programs (2.4%), performance management (2.2%), challenges facing the C–suite (2.1%), IT issues and products (2.0%), union/labor relations (2.0%), leadership development and inclusion (2.0%), employee experience (2.0%), WLB (1.9%), the global context (1.9%), workplace violence" (1.8%), strategic management and HRD (1.8%), theoretical foundations (1.7%), evaluation (1.7%), mapping HRD research (1.7%), new products and invention (1.7%), communication (1.6%), business growth (1.6%), organizational culture and commitment (1.5%), adult learning (1.5%), work teams (1.5%), transforming strategy (1.3%), social capital (1.3%), enterprise software (1.3%), managing conflict (1.3%), compliance and risk management (1.3%), branding and marketing (1.2%), public speaking (1.2%), non–industrial sectors (1.2%), methodology and measurement (1.2%), defining HRD (1.1%), AI and analytics (1.1%), middle manager challenges (1.1%), breakthrough thinking (1.0%), quality management (1.0%), power play (1.0%), feedback and negotiation (1.0%), emotional intelligence (1.0%), knowledge management (1.0%), technology and business models (1.0%), narrative/story (0.9%), empowerment (0.8%), green HRD (0.7%), building trust (0.7%), navigating changes (0.7%), organizational environment (0.7%), mentoring (0.7%), identity and diversity (0.6%), and investing in tomorrow's issues (0.4%).

Summary of Results – Topic Trends

The study examined the evolution of the identified topics within professional and academic journal publications between 1990 and 2022. The prevalence of each topic was conditionally estimated based on the publication year and types of publications (professional verses academic). In each type of publication, topics may exhibit one of three distinct patterns over time: rising, declining, or constant/steady. The 60 topics from 1990 to 2022 are characterized into the following groups based on the observed combination of patterns: concurrent rising trends, concurrent declining trends, rising–declining trends, consistent–

volatility trends (featuring subcategories of consistent low–volatility trends and consistent moderate–volatility trends), and diverging and steady trends. The following sections review these trends, offering an enhanced observation of variations in topic evolution across HRD professional and academic journal publications over the past three decades.

The study identified nine topics that exhibited a consistent increase in prevalence in both HRD professional and academic journal publications between 1990 and 2022, indicating a shared emphasis and growing interest in these areas of interest. These topics include WLB, identity and diversity, social capital, workforce retention, leadership development and inclusion, talent development, career development, employee experience, and emotional intelligence. These topics showed amplified emphasis across both professional and academic platforms over time.

Conversely, 17 topics exhibited constant declining trends, indicating a shared waning interest in these topics across HRD professional and academic publications. These topics include communication, CRM and training/learning, training and development, branding and marketing, education and certification programs, green HRD, building trust, compensation and rewards, non–industrial sectors, enterprise software, employee benefits, empowerment, quality management, union/labor relations, strategic management and HRD, organizational environment, and the global context. While both HRD professional and academic journal articles featured these 17 topics, their salience diminished over time.

This study identified five topics that displayed a contrasting pattern, with increasing prevalence in one type of publication and diminishing prominence in the other. These topics include AI and analytics, work teams, learning and development, narrative/story, and managing conflict. This noticeable contrast in topic prevalence trends signified shifting interests and priorities in these five topics discussed in HRD professional and academic journal publications over time.

Additionally, 12 topics exhibited constant low–volatility trends. These topics exhibited a consistently low (near 0) prevalence in one type of journal and fluctuating prevalence in the other, highlighting the divergence in topic coverage between HRD professional and academic journals. These topics include business growth, adult learning, public speaking, theoretical foundations, navigating challenges, selection and staffing, mapping HRD research, new products and invention, employment law and regulations, power play, and challenges facing the C–suite. These topics were covered infrequently by one type of journal over the past three decades, regardless of changes in topic prevalence in the other type of journal. The persistent extremely low prevalence of certain topics, despite changes in the other type of journals, signifies a noticeable gap in the frequency of discussion around these topics in HRD professional versus academic publications.

Another 12 topics displayed constant moderate–volatility trends. These topics maintained a moderate or high prevalence in one type of journal, with variable levels of fluctuation in the other type. This trend implies that both HRD professional and academic journals covered these topics, although with differing levels of emphasis over time. These topics include workplace violence, organizational culture and commitment, transforming strategy, evaluation, role of HR professionals, performance management, methodology and measurement, middle manager challenges, mentoring, knowledge management, compliance and risk management, and investing in tomorrow's issues.

Lastly, five topics demonstrated little change in prevalence between 1990 and 2022 across both professional and academic journals. While these five topics received significant attention in one type of journal, they received less focus in the other. These topics include defining HRD, IT issues and products, breakthrough thinking, workplace lawsuits, and technology and business models. These topics exhibited minimal fluctuations but demonstrated a divergence in emphasis between HRD professional and academic journals, further highlighting the divergent areas of focus between HRD professional and academic journals with respect to these topics.

Discussion of Key Topics and Topic Trends

The identified topics in this study have several key characteristics. First, there is a noteworthy overlap between the top topics identified here and the core topics found in previous studies mapping HRD research themes. Table 4 provides a comparison of the top topics in this study with those from earlier studies, including the data, scope, and methods.

Table 4

Comparison of the Findings with Previous Studies

Reviews of work	Method and scope	Key topics/themes
Deadrick & Gibson (2007)	Content analysis of articles published in two professional journals and two academic journals to evaluate research–practice gap in Human Resource Management	Top three topics in professional journals: compensation/reward, HR department issues, and HR development Top three topics in academic journals: organizational behavior and motivation, staffing, and HR development

	(1986–2005)	
Reviews of work	Method and scope	Key topics/themes
Ardichvili & Oh (2013)	Content analysis of articles published in two professional journals and 10 HRD Graduate Programs in the U.S. (2009–2012)	Top three topics in professional journals: learning technology and e–learning; leadership and leadership development; instructional issues Top three topics in HRD programs: instructional issues; learning technology and e–learning; management of the HRD function
Ghosh et al. (2014)	Content analysis of articles published in four HRD academic journals (2002–2011)	Top 10 themes: learning, training, leadership, national HRD, culture, performance, work attitude, diversity, career, knowledge
Shirmohammadi et al. (2021)	Term co–occurrence and cluster analysis of metadata in five HRD academic journals (1990–2019)	Topic clusters: nature and identity of HRD, HRD interventions and outcomes, national HRD, career development, HRD in academia
The present study	Structural topic analysis of metadata in five professional journals and five academic journals	Top five topics: learning and development, employment law and regulations, training and development, role of HR professionals, compensation and rewards

(1990–2022)

The topic coverage in this study goes beyond that of earlier research. For example, the topic coverage in prior studies include 15 general and 49 specific coding topics for HRM professional and academic journals identified in Deadrick and Gibson's (2007) study, and 42 HRD research themes identified in Ghosh et al.'s (2014) study. The 60 topics found in this study span a diverse range of HR/HRD interventions and objects of study, aligning with the claimed convergence of HRD, HRM, and OD (Ruona & Gibson, 2004). However, it is important to note that some identified topics, such as branding and marketing, fall outside the conventional range of HRD, which is likely due to the wide range of articles published in professional journals related to general management, particularly in *Harvard Business Review*.

The topic trends analysis across HRD professional and academic journal publications also unveiled important characteristics of the HRD research–practice gap. In this study, topics following concurrent rising and declining trends demonstrate a highly synchronized interest and focus in these 26 topics across both types of publications. Additionally, topics following the rising–declining and consistent moderate–volatility trends suggest some alignment in interests in these 18 topics between the two types of publications, albeit with shifting priorities over time. Finally, topics following consistent low–volatility and diverging and steady trends highlight a notable disparity of interest in 16 topics between professional and academic publications.

Compared to prior studies, the topic trends identified in this research unveiled new insights. Some topic trends identified in this study resemble earlier studies but provide new insights on shifts in topic prevalence in professional journals. As an example, Ghosh et al. (2014) identified both learning and training as waning research themes based on the analysis of HRD academic journal publications. This study affirmed the concurrent declining trends of training and development in both professional and academic publications between 1990 and 2022. In terms of learning and development, this study also identified a declining trend in academic journals, yet the results showed that learning and development gained greater emphasis in professional journals over time, indicating an interesting contrast in the changing interest and priorities.

Some topic trends identified in this study diverged from those found in prior research. For example, the topic of national HRD is one such case, which displayed three unique trends in two prior studies and the present study. Shirmohammadi et al. (2021) found that national HRD remained a significant research stream and expanded to include new international settings between 1990 and 2019, whereas Ghosh et al. (2014) observed a steady trend for national HRD from 2002 to 2011. This study found the topic of the global context exhibited a declining trend in both professional and academic journals from 1990 to 2022. These discrepancies in trend identification for identical topics could stem from methodological variations among the different studies, especially in terms of how national HRD or the global context were defined and coded, even though these studies primarily used the same academic journal publications for analysis. However, the declining trend of the global context identified in this study warrants further exploration, considering the growing influence of geopolitical tensions and the growing impact of digital technology on organizations and workplaces (Egan et al., 2022).

In summary, this study expanded the comparison of topics and trends, unveiling a complex and diverse landscape of the HRD research–practice gap. Although this study contributed to the investigation of the HRD research and practice gap, it serves only as a preliminary exploration of the phenomenon. The following section discusses several limitations of this study.

Limitations

This section presents a discussion of the limitations of the study, which are categorized into five key areas: source selection, the use of metadata, the data pre–processing process, the split sample approach, and identification of topic labels.

The first group of limitations pertains to source selection. This study acknowledges the existence of other professional journals (e.g., People + Strategy), academic journals (e.g., Journal of Applied Psychology), and various knowledge dissemination platforms (e.g., Ted Talk, conference proceedings) that are relevant and important to HRD practitioners and scholars. However, certain journals were excluded due to their infrequent publication of HRD–related articles. An exception was made for *Harvard Business Review*, a general management professional journal because HRD practitioners and scholars recognize it as a valuable resource, and it has been included in previous studies (Rynes et al., 2007). However, the inclusion of such a wide array of sources could potentially introduce topics (e.g., branding and marketing) that fall clearly outside the scope of HRD. Furthermore, the language and geographical focus of the selected journals carry their own limitations. The selected professional and academic journals, which have editorial offices based in North America and Europe and publish in English, could potentially restrict the applicability of the study findings to other regions.

The second group of limitations is related to the use of metadata. Although metadata, including article titles and abstracts, provide a reliable proxy for grasping the key content of articles (Atanassova et al., 2016), they may not capture the nuanced insights that full–text articles can provide. This study refrained from using full–text articles primarily due to data availability and computational power. First, the availability of full–text data for corpus construction is currently limited due to copyright restrictions imposed by publishers. Second, analyzing full–text data entries for all the articles published in the ten selected journals over the past 30 years demands considerable computational resources. Thus, employing metadata was a balanced choice in this study. It allowed a comprehensive analysis while respecting copyright and computational power constraints and made the best use of information available from the selected journals. Furthermore, given that the study aimed to categorize the explicit language used in article content rather than delve into deeper meanings, the use of metadata, despite its limitations, effectively fulfilled the objectives of this study.

The third set of limitations originates from the data pre–processing process. Due to their commercial nature, professional journals may include advertisements and promotional content. Excluding such data improved the analysis quality, but it also presented a risk of introducing selection bias and overlooking relevant information. Furthermore, the manual data pre–processing process used in this study could introduce inconsistencies and errors that might affect the results. Additionally, removing data entries with missing metadata elements could result in the loss of information. However, the labor cost associated with manually identifying over 10,000 metadata entries that lacked metadata elements would have been significant. Given this high labor cost and the fact that the collected datasets already represent a large portion of the entire published metadata corpus (see Figure 2), the researcher decided not to manually add all missing metadata.

The fourth set of limitations is tied to the split sample approach, which is commonly employed in the field of machine learning. This approach has been effective in addressing identification and overfitting issues in text as data research (Egami et al., 2022; Sridhar & Blei, 2022). However, the split sample approach results in efficiency loss due to data set reduction for testing purposes (Egami et al., 2022). Thus, this approach may not fully utilize the available data, with information lost during the dataset division.

The fifth set of limitations are related to the identification of topic labels. The exploratory nature of the topic labeling process introduces challenges in interpreting the topics and determining the most appropriate topic labels (Mozer et al., 2020). However, the topic labeling process in this dissertation study was conducted solely by the PhD candidate and might have introduced potential biases and oversight in interpretation of topics. The word choices for labeling topics may present limited representation of the identified topics. Multiple researchers or coders with clear guidance and substantial domain knowledge are generally recommended for topic identification (Schmiede et al., 2019; Ying et al., 2022).

These limitations underscore the persistent challenges inherent in the text as data research and journal–based studies. While acknowledging these constraints, it is important to note that they also illuminate opportunities for further exploration. There are likely additional insights that future studies could be derived by addressing these limitations. The next section focuses on discussing the implications for HR/HRD practices as well as the implications for future research.

Implications for HR/HRD Practice

This study has significantly broadened the scope of previous research by employing the innovative STM method. It identified 60 key topics and trends from an in-depth analysis of 33,940 metadata entries across ten HRD–related professional and academic journals from 1990 to 2022. This study holds substantial implications for the HRD field, particularly in three areas: assisting practitioners in monitoring changes and informing professional development, shaping the practices of certification and accreditation agencies, and enhancing the design of HRD academic programs.

For practitioners, the insights derived from this study provide a comprehensive understanding of current trends and issues, as well as the necessary foresight to stay updated, monitor progress, and anticipate future trajectories in the field. Armed with this knowledge, HRD professionals are better positioned to proactively address emerging challenges and seize opportunities in their organizations (Shirmohammadi et al., 2021) and throughout the industry. These findings also offer concrete guidance for the design of professional development initiatives. For example, HRD professionals can leverage the key topics and their temporal variations identified in this study to formulate and implement innovative learning and development programs. They could also construct strategic talent development and career development pathways in organizations. Such pathways ensure that HRD interventions are not only keeping pace with industry trends, but also champion evidence–based HRD practices (Gubbins & Rousseau, 2015), which could mitigate the critique of HRD interventions being overly influenced by fads and unsubstantiated trends (Swanson & Holton, 2001).

Beyond enriching professional development, these strategies have the potential to significantly shape the practices of certification and accreditation agencies. In particular, these agencies can utilize the research findings to develop relevant certification programs. By aligning their certification requirements with the key topics and trends identified in this study, they can ensure that certified HRD professionals are equipped to manage both current and emerging issues in the field. Furthermore, this study can serve as a reference for these agencies to highlight the relevance of the certificates they offer. The results of this study can be used to underscore the value of participating in their certification programs, reinforcing the importance of staying current with evolving HRD trends and issues. Thus, the findings can both inform and validate the certifications.

Lastly, universities and other educational institutions can benefit from these findings by integrating the identified key topics and trends into the design and delivery of academic programs. For instance, the most prevalent topics could form the backbone of core courses, providing students with a robust understanding of the fundamental issues in HRD. Trending topics, on the other hand, might serve as a basis for specialized electives or seminar series, allowing students to delve deeper into specific areas of interest that are particularly relevant in today's HRD landscape. The more nuanced or evolving trends can also be incorporated into capstone projects or case study analyses, helping students apply their knowledge in a practical context and stay attuned to the rapidly changing HRD landscape. By aligning the curriculum with a deep understanding of topics featured in HRD–related professional and academic publications, educational institutions can ensure that students acquire the necessary knowledge, skills, and abilities (KSAs) to effectively address current and future challenges in the HRD field. This alignment increases the relevance and applicability of HRD education, enhancing job placement and career advancement prospects for graduates. In essence, the academic programs become real–world preparation that is closely aligned with the realities of HRD practice, giving graduates an edge as they transition from academic training to professional practice.

Implications for Research

The study findings also offer several implications for future research. The findings are broadly related to two areas. First, the identified topics highlight opportunities to replicate and broaden the analysis and comparison of topics, thereby providing quantitative descriptive knowledge about the current state of the HRD research–practice gap in the digital era. Second, they encourage deeper exploration of the discourse differences between professional and academic journal publications, which will aid in further theoretical development of the HRD research–practice gap.

Future studies can further replicate analysis and expand the comparison of topics in the HRD research–practice gap by incorporating a diverse range of data sources in the analysis, especially prevalent sources in the digital era. In recent years, a variety of easily accessible resources and products designed to cater to the public have emerged. For instance, the Human Resource Development Masterclass (https://www.ahrd.org/page/HRD-Masterclass-Podcast-Series) is a free podcast series that features renowned scholars discussing current HRD topics. I/O at Work (www.ioatwork.com) is a website that translates recent industrial and organizational psychology research for practitioners. Moreover, the Josh Bersin website offers industrial reports on people analytics and HR technology (https://joshbersin.com/category/talent-management/talent-analytics-talent-management/). These new media distribution outlets provide valuable insights into contemporary HRD practice–related issues and serve as important communication channels for translating research and industrial insights to practitioners. By analyzing these sources, future research can gain invaluable insights into the current state of the HRD research–practice gap.

Future studies can also build on this research to delve deeper into discourse differences between professional and academic journal publications, thereby assisting in the theory building concerning the HRD research–practice gap. One possible avenue of research could examine how a single topic is discussed differently across professional and academic journals. The investigations could particularly focus on variations in language use and the difference in the approaches and perspectives tied to the examined topics presented in professional journals compared to academic journals. This approach would contribute to a more comprehensive understanding of effective communication patterns, especially regarding "speaking our language" (Moats, 2009, 2017), and thus enhancing professional partnerships among HRD professionals and researchers (Short & Shindell, 2009; Wang, 2017). Another potential research direction could analyze how the information flow is influenced by factors that are currently underexplored in empirical studies, such as power dynamics and cultural embeddedness in discourse, as represented in articles published in professional and academic journals. This direction would facilitate a deeper understanding of the process of knowledge management across boundaries (Carlile, 2004; Van de Ven & Johnson, 2006).

Conclusions

This dissertation study contributes to the descriptive foundation for the HRD research–practice gap by addressing longstanding issues and broadening the comparison of areas of focus. Overall, the identification and examination of these topics suggest the multifaceted, evolving, and dynamic nature of the HRD research–practice gap. The gap is reflected in the broad spectrum of topics generated and consumed by professionals and scholars, and the contrasting shifts in areas of interest of the distinct groups over time. The findings of this study, particularly topics identified with unusual proportions and trends, pave the way for the generation and testing of future hypotheses concerning intriguing questions in HRD. The insights generated from this study lay a solid foundation for further research to identify important questions, analyze, and theorize the HRD research–practice gap, and help practitioners implement evidence–based HRD practice. It is important for all stakeholders in HRD research and practice to recognize the multifaceted, evolving, and dynamic nature of the HRD research–practice gap, and then delve into the specific topical areas to advance both research and practice and contribute knowledge to each other. This study is an important step towards achieving that end.

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