



## Putting the Individual and Context Back into NHRD Research: A Systematic Review and Research Agenda

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Abstract:	<p>Conceptualizations of NHRD emphasise that it is an ongoing process of developing the individual shaped by context. However, the extant literature has focused primarily on describing and evaluating NHRD policies and interventions in different countries with limited consideration of NHRD across the lifespan and the interaction of individual life-stage with context. Applying ecological systems theory (EST) and a lifespan development (LSD) perspective we present a systematic review (SR) of the NHRD literature based on 310 sources. We identify key themes and gaps in research across the lifespan and at distinct levels of the ecological system. We build on this review to suggest future research informed by both EST and LSD perspectives. We propose a future research agenda focused on a number of key areas including: the developing individual as the primary focus of NHRD; the dynamic relationship between NHRD microsystems and how this evolves over time; the exosystem and macrosystem, which provide the context of the NHRD development experience for the individual over their lifespan; and the imperatives of directing research attention to top-down and bottom-up influences within the ecological system. We also propose three methodological innovations to address several of the questions raised by our review drawing on national archive databases, the use of historical methods, and a focus on longitudinal data analysis. Finally, we highlight the practical implications of our analysis for ecosystem and microsystem NHRD actors.</p>

## **PUTTING THE INDIVIDUAL AND CONTEXT BACK INTO NATIONAL HUMAN RESOURCE DEVELOPMENT RESEARCH: A SYSTEMATIC REVIEW AND RESEARCH AGENDA**

### **ABSTRACT**

Conceptualisation of NHRD emphasizes that it is an ongoing development process of the individual that is shaped by context. However, the extant literature has focused primarily on describing and evaluating NHRD policies and interventions in different countries with limited consideration of NHRD across the lifespan and the interaction of life-stage with context. Using ecological systems theory (EST) and a lifespan development perspective (LDP) we present a systematic review (SR) of the NHRD literature based on 310 sources. We identify key themes and gaps in research across the lifespan and at distinct levels of the ecological system. We build on this review to suggest future research informed by both EST and a LDP. We propose a future research agenda focused on several key areas including: the developing individual as the primary focus of NHRD; the dynamic relationship between NHRD microsystems and how this evolves over time; the exosystem and macrosystem, which provide the context of the NHRD development experience for the individual over their lifespan; and the imperatives of directing research attention to top-down and bottom-up influences within the ecological system. We also propose three methodological innovations to address many of the questions raised by our review drawing on national archive databases, the use of historical methods, and a focus on longitudinal data analysis. Finally, we highlight the practical implications of our analysis for ecosystem and microsystem NHRD actors.

## INTRODUCTION

The research base concerning national human resource development (NHRD) has grown significantly during the past two decades (Garavan et al., 2018) and has an important presence across disciplines such as economics, vocational education, and training (VET), labour studies and HRD. As an area of research investigation and policy making, NHRD is concerned with the formulation and implementation of HRD systems, policies and practices at national level to address human development within the context of economic, cultural, societal, and global development (Abadi et al., 2022). Its prominence has also risen on the agendas of governments and international development agencies and there is a broad consensus that NHRD is critical for the achievement of economic and social development outcomes (Byrd, 2018; Rana et al., 2017; Zarestsky & Collins, 2017). In an era of globalization, human capital development, competitiveness, and sustainability, critical questions about the evolving role of NHRD arise (Lee & Jacobs, 2021). Scholars have raised questions about the extent to which NHRD contributes to country competitiveness (Oh et al., 2013), the role that NHRD plays in the development of global sustainability (Ghosh, 2019), and the antecedents of NHRD outcomes (Oh et al., 2017). Although HRD researchers have offered partial answers to these questions, no systematic review (SR) exists that synthesizes research across the disciplines. The research on NHRD remains stuck in self-contained and self-referential silos (Barry et al., 2018), with limited or no attempts to integrate diverse perspectives.

A key aim of this paper is to highlight the benefits accruing from integrating different perspectives on NHRD. Following Locke and Golden-Biddle (1997), we provide a synthesized coherence across these perspectives by proposing a novel theoretical framework. The need to break the walls between research silos in business and management research has been widely observed (Block & Fisch, 2020). Efforts to synthesize NHRD research across a range of disciplines

by means of a SR may help to tackle the range of complex problems presented under the label of NHRD (Okumus et al., 2018), as well as bringing clearer understanding to a fragmented field of study. Well-conducted SRs can also lead to the development of a more robust theoretical framework which considers multiple levels of analysis, context, and time (Wen et al., 2021). For the purposes of this review, we define NHRD as “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, pp. 322).

Scholars across different disciplines including HRD (Alagaraja & Githens, 2016), labour studies (Barrett et al., 2013), VET (Fjellstrom, 2017), and economics (Fitzenberger & Volter, 2007) have studied the NHRD phenomenon, and individually these investigations provide important insights into NHRD as a concept. Beyond their interest in the NHRD phenomena, these diverse literatures share both confidence in, and enthusiasm for, the effectiveness of NHRD. Yet the research base is both fragmented and limited in at least four ways. First, scholars investigating NHRD have focused on a diverse set of policy interventions including education in response to NHRD gaps (Gedro & Hartman, 2015); the contribution of modern apprenticeships to national skill development (Greig, 2019); and the role of trade unions in impacting the implementation of skills policies (Kambayashi & Kato, 2020). However, we lack an understanding of the common characteristics of these policy interventions, the role of context in influencing them and their outcomes.

Second, research has not yet developed an integrated perspective on what drives NHRD, how NHRD is implemented, and its outcomes (Garavan et al., 2018). Previous research primarily focuses on the policies and interventions themselves and has ignored exogenous factors that impact outcomes. This is surprising given that NHRD is embedded in a complex context consisting

of micro, meso and macro level influences. Third, NHRD research has paid insufficient attention to the developing *individual*, their development journey over the lifespan and how this journey interacts with context. A lifespan development perspective (LDP) envisages that the developing individual will traverse various stages including early schooling, emerging adulthood, and late adulthood for example (Murphy & Johnson, 2011) and these are associated with different contexts including the family, the workplace, education, community, and country (Bronfenbrenner, 1994). Fourth, NHRD research has not sufficiently engaged with *time*. As the definition of McLean and McLean (2001) suggests, NHRD and its outcomes is essentially a temporal process, and an understanding of its impacts requires the use of a temporal perspective. Therefore, to make progress in theoretically understanding NHRD requires consideration of the interplay of context and time.

We propose that ecological systems theory (EST) (Bronfenbrenner, 1977; 1979) integrated with a LDP (Baltes, 1987) provides an important framework to address the limitations outlined above. We maintain that this novel framework provides us with a means to make meaningful 'connections between works and investigative streams not typically cited together to suggest the existence of undeveloped research areas' within the field of NHRD (Locke & Golden-Biddle, 1997). We first argue that a dynamic ecological systems approach can provide a more comprehensive understanding of the antecedents, processes, and outcomes of NHRD, accommodate investigation of multiple levels of analysis and incorporate time. Central to EST (Bronfenbrenner & Morris, 2006) is the notion that the development of people, which is a fundamental preoccupation of NHRD, is the product of interactions between the developing individual and the environment in which they are situated. It gives emphasis to the dynamic role of the person, the socio-economic context, individual agency, and time thus providing a robust framework to explain the interaction of the developing individual with context. However, while EST gives primacy to the individual at the

centre of NHRD, it is less effective in helping us to understand the developing individual and context across the lifespan (Rudolph, 2016). We therefore propose the integration of a LDP with ecological systems to illuminate NHRD across the lifespan as it interacts with context. The contexts of development will change as an individual develops and each of these contexts is in turn impacted by historical change, social and cultural factors (Kerig, 2016).

The purpose of this paper is to provide an up-to-date review of NHRD research using the theoretical lenses of EST and a LDP and advance suggestions for future research. To accomplish this purpose, we followed a SR methodology approach and analysed 310 articles, book chapters, reports and books published from 1958 to 2022 (April). We make four contributions to the literature. First, our SR integrates the various streams of NHRD that have, to a significant extent, evolved separately and independently. We draw upon not only existing research within the HRD field but also interdisciplinary research from VET, economics, and labour studies and acknowledge that the literature on NHRD is far from unified. The different literatures operate as disciplinary silos with limited evidence of cross-fertilisation. Second, we incorporate an underutilized 'analytic platform' (Selsky & Parker, 2005) to evaluate existing research on NHRD. EST integrated with a LDP has the potential to first direct attention to the multiple levels of context that shape the outcomes of NHRD and second to account for the developing individual across the lifespan. This is an important contribution because it brings to the fore the developing individual in context which is lost in the current research base. Third, we provide a set of future research recommendations informed by our analyses of the current literature and driven by our two theoretical perspectives. The integration of EST and a LDP can offer management and HRD scholars' alternative ways of researching NHRD by highlighting the complexity of NHRD and moving beyond the focus on policy interventions and programmes. Finally, we present a set of practice recommendations for HRD actors, which focus on evaluating context, policies, practices, and individual characteristics.

## INTEGRATING ECOLOGICAL SYSTEMS THEORY AND A LIFESPAN DEVELOPMENT PERSPECTIVE

In this review we first adopt EST (Bronfenbrenner, 1979; Lyons et al., 2019) because it emphasizes a holistic conception that integrates individual, psychological, socio-cultural, and environmental dimensions to explain the development of individuals in the context of NHRD (Wilkinson, 2022). EST was originally proposed by Bronfenbrenner (1979) who conceptualized that individuals are developed within multiple levels of context. To date EST has been used in disciplines including human resource management (HRM) and employee welfare (Cleveland et al., 2015), mentoring (Chandler et al., 2011), disability inclusion (Moore et al., 2020), inclusive organizations (Doughty & Moore, 2021) and maternal pre-natal mental health and employment (Wilkinson, 2022).

In the context of NHRD, EST can be used to understand the development of the individual “in interaction with a multi-layered cultural context in a temporal way” (Wilkinson, 2022, p. 3). It first classifies the developing individual into force, resource, and demand characteristics (Bronfenbrenner, 1979) which is conceptualised as the ontogenic system. It then conceptualizes the environment in which an individual develops into five ecological levels: microsystems or significant micro-settings of development which are conceptualized to have the strongest impact; mesosystems that focus on how microsystems interact; exosystem conceptualized as indirect environments that surround the developing individual; and macrosystems consisting of society and chronosystems which emphasize change over time (Bronfenbrenner, 1979). These five levels of the environment are highly interrelated and can be either facilitative or inhibitive when it comes to the developing individual (Bone, 2015). In later versions of the theory (Bronfenbrenner, 1999) gave primacy to the nested nature of the five levels and their complex interplay (McLinden et al., 2016) and that over time change occurs in both the context and the individual (see Figure 1). Finally, the framework is not prescriptive, in that it does not suggest a particular configuration of

dimensions of an ideal NHRD ecological system, but instead highlights the relevant factors and acknowledges the existence of multiple NHRD systems.

Applied to NHRD, key micro-settings will include the family, the workplace, educational and VET organisations, the community and peer supports. The mesosystem analyses how these interact with each other, for example, the interaction between the family and education institutions and interactions between education settings and the workplace. These interactions may facilitate or inhibit the effectiveness of NHRD interventions and policies. Both microsystems and mesosystems are in turn impacted by the exosystem, which in the context of NHRD, includes several formal and informal institutions including NHRD legislative structures, NHRD implementation bodies and actors and the practices that surround development. These components of the exosystem indirectly impact the developing individual and they also shape the activities of each microsystem and relationships within the mesosystem. For example, changes in legislative structures and funding at the exosystem level will impact the functioning of microsystems which in turn impacts the developing individual. In addition, ecosystem institutions such as trade unions can impact the types of NHRD provision and the entry requirements including the use of gender quotas and HRD opportunities for other minority groups. The macrosystem in the context of NHRD includes cultural systems such as beliefs about development, who should be developed, attitudes to development across the lifespan and approaches to development. These macrosystem changes can permeate the full set of levels down to the microsystem and mandate for examples the types of policies that are developed by ecosystem institutions, the legislative supports for NHRD and ultimately the resource supports for different development micro-settings. The chronosystem envisages the interaction between levels of the ecological system will occur with regularity over extended periods and incorporate historical time, personal changes including skills and competency development, changing careers, and working relationships. We therefore

propose EST combined with a LDP provides a fruitful framework to explore the developing individual in the context of NHRD.

The notion of the chronosystem and disruptions/changes in context and the person have strong parallels with the ideas that underpin a LDP (Rudolph, 2016). However, unlike EST a LDP approach gives primacy to a “lifespan process in which an individual’s biological, cognitive and socioemotional changes occur in multiple contexts including families, schools, workplaces, counties and so on” (Liu et al., 2020, p. 3). The LDP emphasizes a lifelong process of decline, growth and stability that is continuous (Davenport et al., 2022) whereas life-stage models emphasize discrete life stages in terms of that development process (Moersdorf et al., 2022). Key principles that underpin this perspective include (1) development is conceptualized as a lifelong process where no age period is superior to another; (2) development as a process is considered multidirectional, both within and across domains; (3) development inherently involves both gains and losses; (4) the development process contains plasticity and is modifiable within persons; (5) development processes occur in a historical, social and cultural context; (6) the process of development is contingent on the interplay of both normative age- and history-graded influences in addition to non-normative influences; and (7) development is best studied from multiple perspectives (Baltes, 1987). In this review we build on the continuity idea of the LDP but to enhance its explanatory value in the context of NHRD we identify discrete life stages in our framework.

Literature on HRD and development in general supports the notion of distinct development stages and that these vary across time and context (Liu et al., 2020). Development is an ongoing and life span process (Day, 2000) and its use in the context of NHRD brings the developing individual front and centre. It also points to the complex interaction between life stage and context which has important implications for the microsystem within which the individual is

developing including family, the workplace, community, and country (Bronfenbrenner, 1994).

Therefore, integrating a LDP with EST brings to the fore a dynamic notion of NHRD that considers both development stages and contexts which to date is largely ignored in the literature.

The theoretical framework (Figure 1) has a dual purpose. First, it is utilized as a heuristic framework to organise the existing knowledge about NHRD as derived from the SR. However, second, is to offer a novel means to depict the dynamic unfolding of the NHRD phenomena over time (Cloutier & Langley, 2020). In this regard, it can be viewed as a 'process model' that reveals the mechanisms by which events and contexts and NHRD play out over time (Cornelissen, 2017). There have been numerous calls for scholars to move beyond traditional modes of theorizing in organization and management studies as they fail to pay particular attention to temporality and change over time (Cloutier & Langley, 2020; Delbridge & Fiss, 2013; Tsoukas, 2017). Process theoretical contributions are thus advocated as a strong viable alternative (Cornelissen, 2017) to highlight under-researched areas within NHRD and identify those with significant potential for future research.

## **METHOD**

We used a SR as the methodology for this study and we followed established SR procedures as established by Tranfield et al. (2003). We progressed through four steps: (1) formulation of the topic, (2) development of a review protocol, (3) data collection, and (4) data analysis and synthesis.

### **Step 1: Topic formulation**

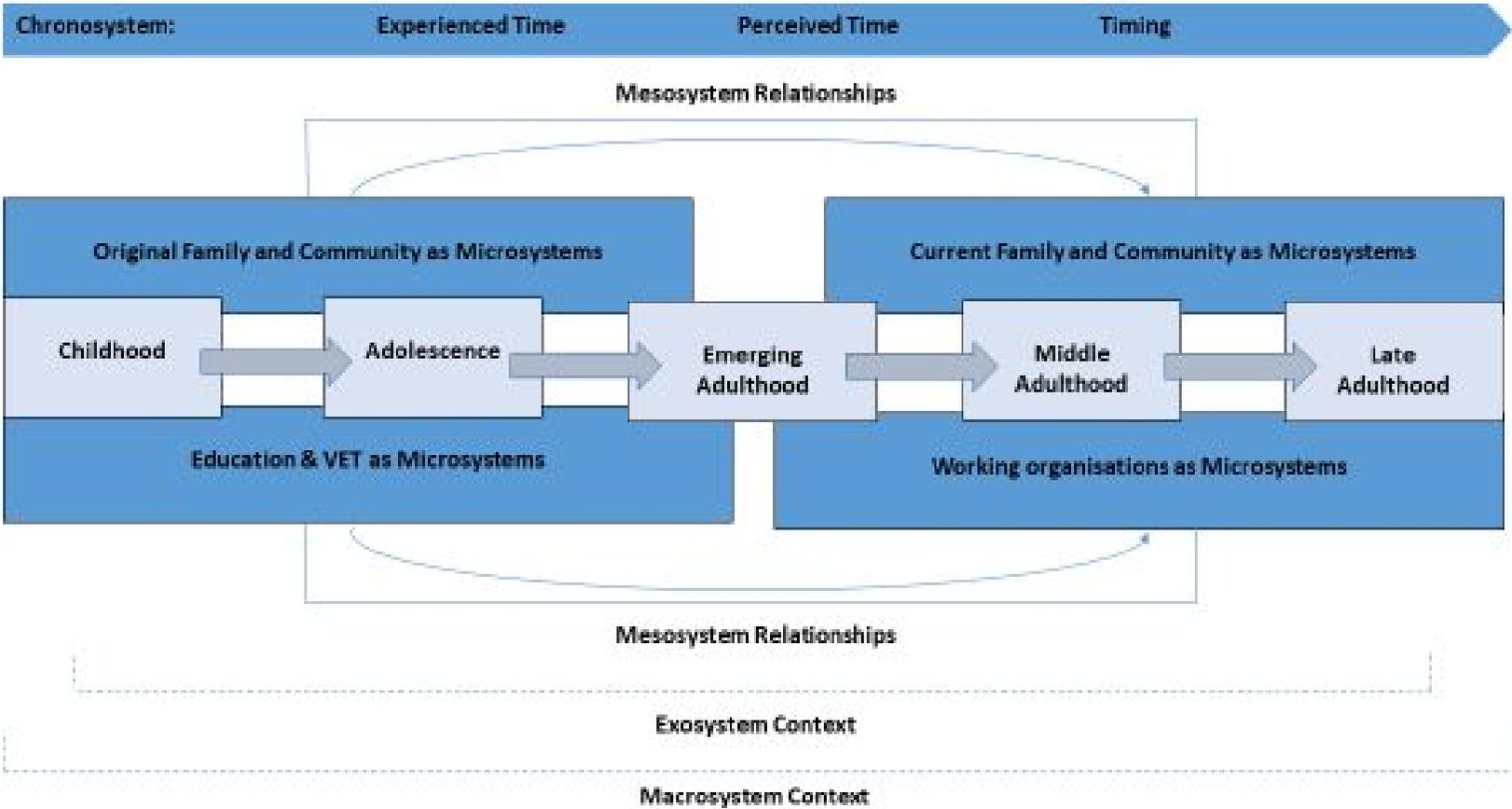
We began our SR by identifying the key objectives that would guide the review. Our first objective was to synthesize heterogeneous research perspectives on NHRD. Our second objective was to describe key trends and developments and discuss challenges and opportunities within and

across diverse perspectives on NHRD. Our third objective was to propose a theoretical framework to promote a multi-level and temporal approach to the study of NHRD, paying particular attention to the developing individual. Our final objective was to offer guidelines to NHRD actors around policy development and interventions/approaches to realise the benefits from NHRD.

**Step 2: Review protocol.**

In our introduction to the paper, we defined NHRD using the universally accepted and most frequently cited paper by McLean & McLean (2001). However, this definition presented us with challenges because of our concern with capturing the full breadth of literature on NHRD. Papers that address issues highlighted in the McLean & McLean (2001) definition appear in disciplines as diverse as HRD, VET, HRM, labour economics, psychology, and management. Therefore, at the outset the authors conducted a review of contributions to develop parameters that would inform the search process.

Figure 1: Integrating Ecological Systems and a Lifespan Development Perspective to Conceptualize NHRD



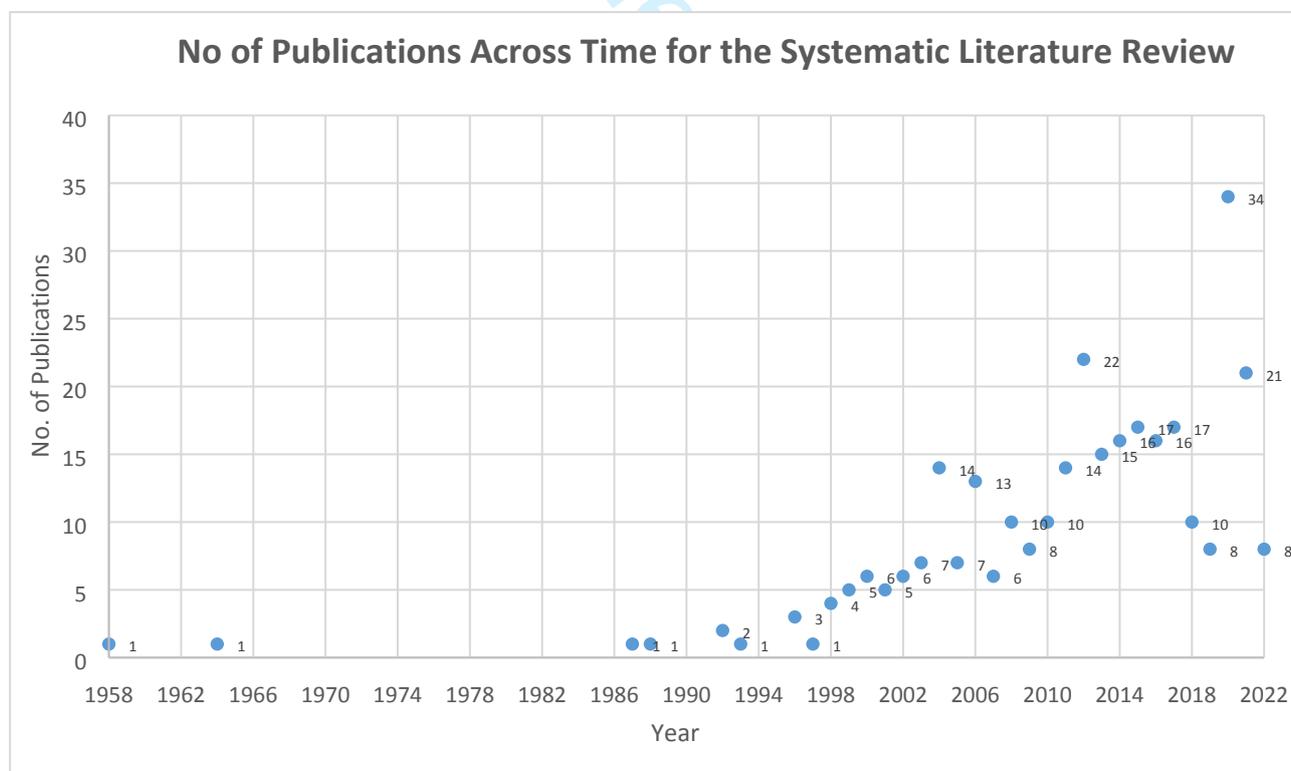
For the purpose of our search we developed an aggregate conceptualisation of NHRD consisting of four elements: (1) it is multi-level, concerned with the development of human capability, individuals, organisations, communities, regions, and nations at a global level; (2) its goals are the development of work, community, society, culture and politically based skills and expertise; (3) it utilizes multiple policies, strategies and interventions including training, education, vocational development, competence-based learning experiences and empowerment learning strategies; (4) it leads to multiple individual and organisational performance outcomes, enhanced standards of living and quality of life, increased sustainability and the betterment of nations, countries and the world at large (Harbison & Myers, 1964; Lynham & Cunningham, 2006; Wang & McLean, 2007). We used this conceptualisation to formulate our search terms which included: *NHRD*, or *VET*, or *macro talent management*, or *national human capital development* or *national training systems* or *continuing education and training* or *international human resource development*. We initially used the search term 'NHRD' however given that it is used in different guises we used this set of search strings to see the extent to which the concept has been applied in other disciplines. We followed an approach like that used by Hillmann & Guenther (2021) who encountered a similar challenge when systematically analysing the literature on organisational resilience because it appeared in a disparate set of literatures that used different terms.

### **Step 3: Data Collection.**

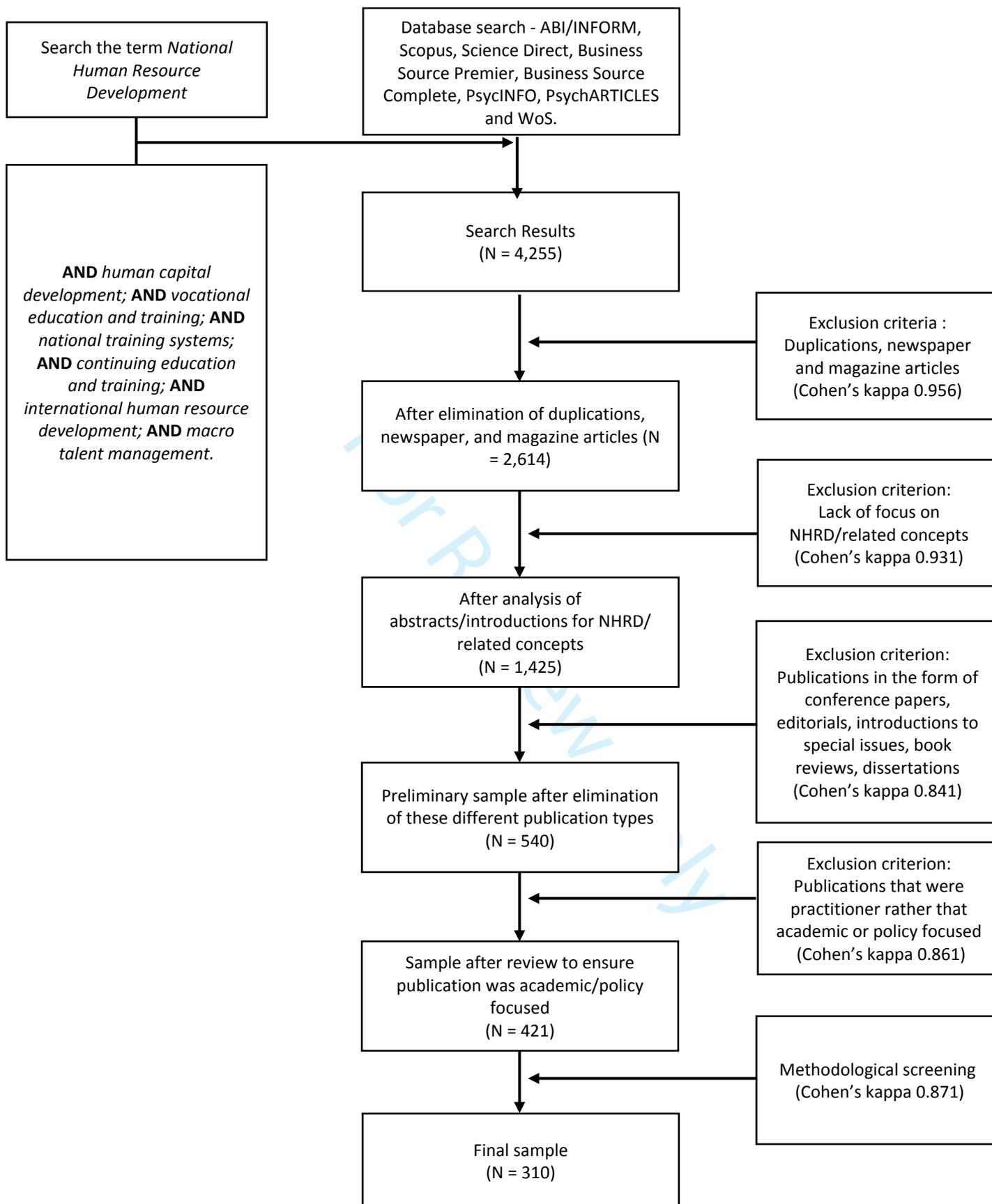
To generate our sample of publications for our SR we confined our sources to: (a) peer-reviewed articles, as these have the greatest impact in the field (Podsakoff et al., 2005); (b) book chapters in peer reviewed books (Nolan & Garavan, 2016); and (c) reports published by OECD and ILO. The baseline year for our SR was 1958 because it marked the publication of Ginzberg's (1958) seminal work *Human Resources: The Wealth of a Nation*. Our cut-off point was end of April 2002. We performed our initial search using ABI/INFORM, Scopus, Science Direct, Business Source Premier, Business Source Complete, PsycINFO, PsychARTICLES and the Web of Science.

The use of these keywords generated 4,255 publications for potential inclusion in the SR. Two members of the research team conducted this initial search. Two other authors then conducted the same search for relevant publications using Google Scholar. The research team compared their results to check for any publications relevant to the review that were not identified in the initial search, as well as to a check for duplication. The research team also undertook a narrative check to supplement our search strategy and to serve as a crosscheck of the quality of the SR process (Thorpe et al., 2005). This involved consultation about articles, book chapters and reports known to be relevant that did not appear in the search results, which led to the identification of 50 additional publications. This process helped to reduce any risk that material relevant to the review could accidentally be omitted. Figure 2 shows the growth in publications since 1958 and Figure 3 presents the key steps in generating our sample.

**Figure 2: Systematic Review (1958-2022)**



**Figure 3. Steps in the Review Process**



We then started the process of reducing our initial sample of publications. Consistent with Petticrew & Roberts (2006) we reviewed the list and eliminated duplications, newspaper, and magazine articles (Cohen's kappa (CK)=0.956), significantly reducing our sample to 2,614 publications. We then reviewed the abstract of each paper and the introduction to book chapters and publications to identify whether they focused on NHRD and related constructs. We frequently found papers, chapters, and reports where the title suggested that it was about NHRD, but it turned out to be about organisational training and development processes. This reduced our sample further to 1,425 publications (CK=0.931). We then made the decision to exclude conference papers, working papers, editorials, introductions to special issues, book reviews and dissertations. In making these exclusion decisions, we followed the approach taken by Pinto (2019) who excluded working and conference papers. We also made the decision to exclude dissertations because as pointed out by Adams et al. (2017) these can lack bibliographic control. Moreover, when we reviewed the dissertations that could potentially be included, we found that often there was a corresponding peer-reviewed journal article that was included in our sample. This process reduced our sample further to 540 publications (CK=0.841).

We then engaged with issues related to the inclusion or exclusion of grey literature. The field is somewhat unique in that there are several global organisations that have published reports on dimensions of NHRD. Metcalfe and Rees (2005) make the argument that these bodies both assist and influence national governments with policy development and the establishment of national NHRD frameworks. The inclusion of these reports is also useful because it addresses the relative shortage of empirical work on NHRD and contributes to the objectives of our SR (Adams et al., 2016; Rabetino et al., 2020). Following Adams et al. (2017), these sources were selected based on reputation, currency, and authority. Scholars have also pointed out the problems associated with a sole reliance on academic literature (Mingers & Willmott, 2013) and the potential rigidity and

bureaucratisation associated with SRs (Bell et al., 2019). Therefore, we adopted a pragmatic approach by supplementing our use of academic literature with a range of grey literature. We did however make the decision to exclude practitioner publications which we defined as those that provoked advice and guidelines and this reduced the sample of publications to 421 (CK=0.861).

We then engaged in a process of methodological screening, which involved the review of empirical papers and reports to establish their relevance and quality (Petticrew and Roberts, 2006). We excluded empirical papers where the methodology was insufficiently described or where the data analysis was inadequate or insufficiently described. When conducting the methodological analysis, we only applied this to empirical papers and not reports or book chapters. Many of the book chapters did not report empirical work but consisted of reviews or commentaries and the reports in some cases did not include chapters on methodology. This methodological screening reduced our sample to 310 publications (CK=0.871) and this number did not change after a final review of each paper.

#### **Step 4: Data analysis and Synthesis.**

Publications included in the SR were subjected to the structured content analysis approach proposed by Mayring (2014). This allowed us to conduct a systematic and theory-guided synthesis of the substantial number of publications and it is particularly useful in classifying material into unifying categories against an established framework. To undertake the coding process, we followed several steps. First, we developed a category system consistent with our conceptual framework - EST. This theory specified six ecological systems described in Table 1, which was developed by drawing on prior conceptual work that utilized an ecological systems perspective (Chandler et al., 2011; Crawford et al., 2019). We started out with a broad description of each level of the framework and the types of issues that are typically included. Next, we coded articles in accordance with the predetermined categories. Based on this initial analysis we revised our

previously developed classification system. We then coded the papers again according to this revised category system; and finally, we interpreted and discussed the result. We added a sixth step where we reviewed the research method used in the case of empirical studies.

Upon conducting a trial run through of 15% of the publications, we made refinements to the ontogenic category by more clearly sub-dividing into demand, resource, and force characteristics. After applying all our categories and sub-categories to approximately half of the publications, we decided to complete a fine-grained analysis of the macrosystem category to develop clear sub-categories: globalisation, formal institutions, informal institutions, national culture and values, and traditions around development. The chronosystem dimensions proved the most difficult to code, however through the process of analysis and discussion we identified three sub-categories of change linked to individual change, economic change, and societal change. Having resolved these issues, we reviewed the publications according to the final category system.

We used a highly iterative process involving re-examining publications and discussion, until we had agreement amongst all authors. Where points of disagreement arose, we resolved them through frequent discussion between the lead researcher and other members of the research team. On several occasions, these discussions resulted in the addition of new codes to the categorisation grid. At the end of the data analysis process, we calculated the level of inter-rater agreement using Cohen's kappa coefficient on a sample of 60% of the analysed papers. We achieved a kappa coefficient of 0.883, which indicates a high level of inter-rater agreement.

## **FINDINGS**

In the following sections, we synthesize the findings of our review and present the findings at each level of the ecological system. We focus on the main findings of each category and sub-category and highlight key gaps and opportunities for research. Descriptively we noted whether

each publication provided a definition of NHRD or related term and established that slightly more than half of the papers offered definitions. Our theoretical framework lends itself to organise the literature into the prescribed levels, but it does not capture all the nuances and detail found in each study. We acknowledge that our categorisation may have forced a structure on studies not intended by the authors, however we argue that it represents a useful means of synthesizing the research across multiple levels. We identify the percentage of papers that discussed each level; however, this does not add up to 100% given that some papers addressed more than one level of the framework.

### **The Ontogenic (Individual) Level**

The ontogenic level of EST emphasizes individual characteristics and focuses on age, a central concern of the LDP. EST takes account of a broader range of individual characteristics than the LDP, yet the literature does not engage with the broad range of ontogenic characteristics and there is a very particular gap when it comes to age. For example, 26% of papers explicitly address ontogenic factors with significant imbalances in what was investigated. We noted a particular focus on demand ontogenic characteristics compared to resource and force characteristics. Demand characteristics such as gender, age, race, ethnicity, and emigrant status were studied in terms of their role and impact within NHRD but not in an intersectional way (e.g., Greig 2019; Ibarrarán et al., 2019). Where age is the focus of studies the emphasis in NHRD research is on younger rather than older adults. EST has as its core idea the direct interaction of ontogenic characteristics with proximal contexts such as microsystems and mesosystems, yet this dimension of the theory is not explored in the literature. These interactions would provide us with important insights concerning how and when proximal contexts shape the development of individuals in the case of NHRD. There are some studies that potentially move in this direction and they highlight

the potential for utilizing EST. Examples include the role of age and human capital variables in impacting access to state training opportunities (Anikin, 2017) and the decision to pursue self-employment, as well as the role of HRD in helping the establishment of micro-enterprises (Bharti, 2014; Khan & Ali, 2014). In the context of a LDP, these studies provide very few insights because they do not capture the variability associated with aging and that people will develop “idiosyncratic profiles of abilities, knowledge, and expertise throughout the lifespan associated with their experiences” (Davenport et al., 2022, pp. 5). This is a significant gap because we lack insights into NHRD outcomes and the age relationship.

For Review Only

<b>Table 1: Conceptual Framework, Current Insights and EST/LDP Informed Research Agenda</b>				
<b>Level of Ecological Ecosystem</b>	<b>Focus</b>	<b>Indicative Factors</b>	<b>What we Currently Know about each Dimension of NHRD Ecological System</b>	<b>Utilizing EST and LDP to Expand Research on NHRD</b>
<b>Individual</b>	<ul style="list-style-type: none"> <li>• Characteristics of individuals (Ontogenic)</li> </ul>	<ul style="list-style-type: none"> <li>• Force characteristics such as motivation and agency</li> <li>• Demand characteristics such as demographic factors</li> <li>• Resource characteristics such as skills and abilities</li> <li>• Age/ Life Stage characteristics</li> </ul>	<ul style="list-style-type: none"> <li>• Age has not featured prominently in understanding NHRD policy and practices</li> <li>• Research has studied a relatively narrow set of ontogenic characteristics with a primary focus on human capital characteristics and gender</li> </ul>	<ul style="list-style-type: none"> <li>• Investigate how ontogenic characteristics of individuals change with age and their impact on NHRD</li> <li>• The interactions of age with other ontogenic characteristics using an intersectional approach</li> <li>• The impact of ontogenic factors in shaping and influencing microsystem, mesosystem and exosystem dimensions of the NHRD ecosystem</li> </ul>
<b>Microsystem</b>	<ul style="list-style-type: none"> <li>• Home-Family</li> <li>• Education and Training</li> <li>• Work Micro Setting</li> </ul>	<ul style="list-style-type: none"> <li>• Family role; family support; household finances; involvement of extended family; family education level</li> <li>• Training and development support; NHRD programmes apprenticeships; funding and resourcing or HRD.</li> <li>• Work experience arrangements; company funding for NHRD; resource such as skills</li> </ul>	<ul style="list-style-type: none"> <li>• Family as a microsystem is under-appreciated and under-researched in the current NHRD research</li> <li>• The characteristics of education and training micro-settings and their link to outcomes is given significant prominence in the literature</li> <li>• The workplace as a microsystem has received some attention in the current literature but primarily in a descriptive way.</li> </ul>	<ul style="list-style-type: none"> <li>• The role and contribution of the home-family as a microsystem in contributing to NHRD and its outcomes as a key development microsystem</li> <li>• Develop insights into the resource components of this microsystem and its impacts on NHRD outcomes</li> <li>• Understand the resource components of the workplace as a microsystem and its relative effectiveness in context of NHRD outcomes</li> </ul>

	<ul style="list-style-type: none"> <li>Peer/ Community</li> </ul>	<p>and competencies; HR support for NHRD</p> <ul style="list-style-type: none"> <li>Peer support for NHRD; community level support initiatives</li> </ul>	<ul style="list-style-type: none"> <li>Impacts of peers and community experiences on NHRD outcomes as a social microsystem is under-appreciated while acknowledged as important</li> </ul>	<ul style="list-style-type: none"> <li>Brings to the fore the notion of social microsystems and their impact in terms of peer support and developmental relationships</li> </ul>
<b>Mesosystem</b>	<ul style="list-style-type: none"> <li>Interactions between Microsystems</li> </ul>	<ul style="list-style-type: none"> <li>Alignment of development goals and priorities; relationships between microsystems; communications processes; synergies and shared resources</li> </ul>	<ul style="list-style-type: none"> <li>The value of communication between NHRD micro settings for alignment of NHRD goals</li> </ul>	<ul style="list-style-type: none"> <li>Highlights the importance of alignment between microsystems and the role of multiple microsystems in the development of individuals.</li> <li>Emphasizes the role that the mesosystem plays in transmitting and reinforcing cultural value in respect of age</li> </ul>
<b>Exosystem</b>	<ul style="list-style-type: none"> <li>Social Structures</li> </ul>	<ul style="list-style-type: none"> <li>Legislative regimes for NHRD; governance regimes for NHRD; NHRD policy and funding; trade unions and their power; specialist agencies and charities; NGOs</li> </ul>	<ul style="list-style-type: none"> <li>The impact of mesosystem actors in influencing NHRD policy</li> <li>The role of national NHRD legislation and policy on outcomes</li> <li>Influence of third sector institutions on access to NHRD</li> </ul>	<ul style="list-style-type: none"> <li>Emphasizes the role of the exosystem in translating macrosystem cultural values and beliefs and their impact on age sensitive NHRD</li> <li>Broadening our understanding of the mesosystem actors that are relevant in the context of NHRD to include the media, trade unions and voluntary organisations</li> </ul>
<b>Macrosystem</b>	<ul style="list-style-type: none"> <li>Society/Culture</li> </ul>	<ul style="list-style-type: none"> <li>Geography; values around development; gender issues and NHRD; values around</li> </ul>	<ul style="list-style-type: none"> <li>The importance of both formal and informal institutions in the macrosystem in impacting NHRD</li> </ul>	<ul style="list-style-type: none"> <li>Broadening our insights concerning the content of the macrosystem to include forces of globalisation, population trends and migration</li> </ul>

		how NHRD is implemented	<ul style="list-style-type: none"> <li>• Descriptive analysis of the role of macro-level factors in impacting NHRD</li> </ul>	<ul style="list-style-type: none"> <li>• Highlighting that the macrosystem reinforces values related to age and opportunities for development</li> </ul>
<b>Chronosystem</b>	<ul style="list-style-type: none"> <li>• Temporality (past, present and future)</li> </ul>	<ul style="list-style-type: none"> <li>• Historical time; changing personal circumstances, career changes, relationships over time</li> <li>• Person related time including changes in work values, life circumstance and career goals</li> </ul>	<ul style="list-style-type: none"> <li>• Impact of change in individuals for NHRD</li> <li>• Impacts of major disruptions and evidence on NHRD at a particular point in time</li> </ul>	<ul style="list-style-type: none"> <li>• Brings time front and centre in understanding the processes and outcomes of NHRD</li> <li>• Highlights multiple dimensions of time including historical, perceived, and experienced time as important to studying NHRD</li> </ul>
<b>Multilevel Interactions</b>	<ul style="list-style-type: none"> <li>• Top down and bottom-up relationships between levels over time</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in cultural values and impact on participation in NHRD; bottom-up innovations that impact national NHRD policy; ecosystem influences on microsystem functioning</li> </ul>	<ul style="list-style-type: none"> <li>• Top-down macrosystem impacts on exosystem policy making on NHRD provision in terms of policies, structures, and resources</li> <li>• Exosystem policies shape resources available at microsystems level and relationships between microsystems</li> </ul>	<ul style="list-style-type: none"> <li>• Top-down influences of macrosystem in influencing age-related beliefs about NHRD and shaping the actions of the exosystem</li> <li>• Lower levels of the ecological system such as developing individuals, microsystems and mesosystems can shape actions and policy at the exosystem level</li> </ul>

EST conceptualises gender as a demand characteristic and proposes that it will have salience in explaining NHRD development processes, access to NHRD, and its outcomes. A small number of studies point to the potential of EST in the case of gender. For example, Metcalfe (2011a, 2011b) investigated the participation of females in development programmes in the Arab Gulf States. Shim et al. (2015a) investigated how gender impacts the employment opportunities derived from post vocational training programmes. Other studies have given prominence to gender as a demand characteristic and investigated the role of women in community development interventions in an Islamic context (Budhwani & McLean, 2012), and the learning needs of women who work within the formal economy (Razvi & Roth, 2010). Both EST and a LDP envisage that key demand characteristics will interact with other demand characteristics including race, ethnicity, social orientation, social class marginalisation and emigrant status. Yet efforts to explore these research opportunities in the NHRD literature are embryonic.

There was a lack of attention given to force characteristics as a significant future research opportunity. EST also gives prominence to force characteristics which are conceptualised as motivational in nature and which have salience in explaining key issues such as learning motivation, and confidence to utilize the outcomes of NHRD. We find evidence of research that aligns with the EST notion of force characteristics. For example, researchers have investigated motivation to participate in NHRD (Cooke et al., 2011); however, there is a paucity of research on other force characteristics including learning orientation, performance orientation, career motivation, self-efficacy, and career satisfaction. Our overall assessment of NHRD research at the ontogenic level of EST is that the key ideas that underpin the framework have not been explored and where they have been explored this has occurred in isolation with insufficient attention to the full range of ontogenic factors. In addition, the interaction of these characteristics with dimensions of proximal context are underexplored. Very little research has operationalised the

ideas that underpin a LDP so we cannot reach conclusions concerning the role of age in explaining NHRD outcomes.

### **The Microsystem**

EST proposes the microsystem as the most proximal aspect of context that impacts the developing individual (Bronfenbrenner & Evans, 2000). As the most proximal setting it will play a central role in explaining the types of outcomes that are derived from NJHRD. To date 25% of papers explicitly investigated microsystem dimensions. EST gives prominence to dimensions of the microsystem, including the variety of context, such as family, schools, universities, VET organisations, and NGOs. Second, it highlights the primacy of social micro systems such as peer groups and the community, and third it focuses on the types of development resources that are found within microsystems (Bronfenbrenner & Morris, 2007). The literature reveals a fragmented examination of these microsystem dimensions with primacy given to contexts and some attention to resources. For example, Mahmud et al. (2014) and Khan & Ali (2014) both investigated the role of NHRD within two microsystems contexts, both involving poor rural districts of Bangladesh. Social microsystems have also received attention including the city (Ahn & McLean, 2006), the Ismaili Muslim Community (Budhwani & McLean, 2012) and microenterprises in India (Bharti, 2014). Overall, social microsystems are less well understood (Cassarino & Murphy, 2018), with significant gaps related to the roles of family, peers, and informal developmental relationships.

NHRD researchers have given less attention to the resources dimension of microsystems with several more recent studies bringing this dimension into focus. Examples of microsystem resource investigated include volunteers as development resources (Budhwani & McLean, 2012); senior managers in Omani organisations (Budhwar et al., 2002); private vocational education providers (Wilkins, 2002); national apprenticeship system resources (Greig, 2019); life-long

learning city programmes in promoting community development (Byun & Ryu, 2012); and NGOs on the front-line addressing HIV/AIDS issues (Johnson et al., 2010). The role of HR professionals is examined by Mamman et al. (2018) in the context of Sub-Saharan Africa. There is an absence of research focusing on the relationship between age and the importance of different microsystem context and resources. A LDP highlighted the potential value of microsystems such as education, informal peer relationships, developmental relationships, and the family in contributing to understanding age related NHRD outcomes (Toossi & Toprey, 2017). The interaction of age with multiple microsystems contexts is a prime insight suggested by EST.

### **The Mesosystem**

NHRD does not occur within one microsystem but is manifest across microsystems, thus bringing to the fore the notion of mesosystems which highlight relationships between microsystems (Snyder & Duchscher, 2022). Many NHRD processes within countries bring to the fore multiple microsystems yet the relationship between microsystems, which is central to EST, remains underexplored with only 4% of papers explicitly investigating or theorizing mesosystems. The limited research to date does highlight that individuals who participate in NHRD will interact with many microsystems, that these microsystems interact with each other, and these combinations are important in interacting with LDP issues focused on age norms, and interventions that are designed to address age related issues. The interactions of different microsystems are highlighted by Chai et al. (2018) where individuals participated in state training and workplace settings. Other research emphasizes interactions between training agencies and employers (Prendergast, 2016) and between multinational enterprises (MNEs) when it comes to the poaching of skilled labour (Sheldon & Li 2013).

EST emphasizes the need to investigate relationships and interactions between the full range of microsystems that can potentially play a role in NHRD (Rosa & Tudge, 2013). Where there are constant and fruitful interactions between microsystems, positive NHRD outcomes can be secured or achieved. The NHRD literature is significantly deficient in respect of the investigation of microsystems with insufficient attention given to the role of the family in interactions with other microsystems, the importance of peers as a social microsystem and their interaction with education and training microsystems. We can however glean some insights concerning communication between different microsystems. Lee (2004) highlighted the development synergies from local microsystem communication in the context of NHRD in the UK. In a similar vein, Shim et al. (2015b) investigated relationships between learners, trainers and development supports and found that ineffective communication between microsystems was counterproductive in terms of development outcomes. Smith et al. (2006) emphasized the advantages of interaction between employers and national training agencies in delivering training to enhance workforce human capital. Prendergast (2016) examined the interactions between different microsystems in the context of developing non-Irish workers. Finally, Mellahi (2000) investigated interactions between microsystems in the delivery of vocational development in Saudi Arabia.

There is a significant blind spot when it comes to the integration of a LDP into understanding the effectiveness of interactions of microsystems in impacting NHRD outcomes. The existing gaps concern how and when cultural norms within microsystems related to younger and older individuals' impact NHRD outcomes, access to development opportunities, and how microsystems and their interactions reflect societal cultural norms and values around age. A combination of EST and a LDP has the potential to shed light on how and when NHRD can promote inclusive or non-inclusive age norms, the salience of microsystems interactions with each other in shaping

opportunities for NHRD and in explaining the role of different actors in influencing an age-sensitive approach to NHRD policy and practice.

### **The Exosystem**

EST conceptualises the exosystem to include multiple social structures, institutions and settings that the developing individual is not directly a part of, yet is influenced indiscreetly by what happens (Bronfenbrenner, 1979). The exosystem in the context of NHRD is where much of the policy making occurs in addition to the allocation of resources at the level of the country or state. Actions taken at this level carry important implications for the implementation of policies informed by a LDP. To date NHRD researchers have engaged with aspects of the exosystem (55% of papers), yet little of it is informed by lifespan development considerations. Research on the exosystem is primarily descriptive where it does incorporate LDP issues. For instance, Lalioti (2019) investigated apprenticeship initiatives for different age groups in Greece and highlighted significant policy shortcomings and the lack of strong institutional support. Similarly, Lee (2004) explored NHRD in the UK and specifically initiatives to foster the development of national workforce competencies for different age categories and the use of less traditional types of provision. There was a strong emphasis on standardisation but also on the provision of resources to address traditionally difficult-to-reach recipients of NHRD such as older workers. Mellahi (2000) examined key factors inhibiting the effectiveness of VET in Saudi Arabia and India, despite the considerable efforts of the Saudi government to enhance and expand the VET system. Similarly, India has experienced problems due to labour market dysfunctionalities. Cox et al. (2006) studied Morocco's NHRD strategy, which they identified as having played a vital role in success of reforms intended to promote both human rights and economic development.

The literature does provide insights concerning the content of the exosystem in the context of NHRD. These include the formulation of national training policies, the allocation of funding, governance of NHRD within countries and the role of NHRD standards. For example, Marinaccio (2018) investigated training policies in Austrian and Chinese forestry administration focusing on institutional differences and how they impact national training policies, whereas Yang et al. (2004) examined exosystem factors in China and highlighted a number of important components including a national top-down policy approach from central to local government, a strong emphasis on the provision of resources for both social and moral development and a balance between policy and strategy. Gedro and Hartman (2015) analysed the disparity between Haiti's educational standards and the lack of a well-articulated and executed NHRD strategy. Similarly, Ayentimi et al. (2018) evaluated the education and training system in Ghana with a particular focus on apprenticeship. They identified several constraints that are impeding the development of high-level technical and vocational skills that support human capital development, including training mismatch, low literacy levels, lack of regulations and adequate apprenticeship programmes, poor quality of training, limited investment in education and training for older employees and outdated training programmes. Finally, Osman-Gani and Tan (1998) explored the types of HRD strategies and resource commitments in Singapore. They found that three characteristics of the exosystem were important: 1) a government commitment to NHRD for all age categories; 2) a network of agencies and a commitment to tripartism and 3) economic stability.

We found some evidence of researchers focusing on how components of the exosystem interact with lower levels of the EST framework. For example, Arthur-Mensah and Alagaraja (2018) reviewed the national strategy for human development in Ghana and assessed the efficacy of existing long-range initiatives and policies. They focused on interactions between the exosystem

and ontogenic levels, with particular attention on how high unemployment among youths and young adults could be combatted through HRD, thereby meeting the overall socio-economic goals of the country. Arubayi and Akobo (2018) gave prominence to interactions between exosystem characteristics and lower levels of the EST framework in suggesting that efforts to improve youth unemployment and equip young people with relevant skills to enter or compete in the labour market in Nigeria have been largely unsuccessful because they did not engage with ontogenic characteristics and customise NHRD provision.

NHRD researchers have not engaged with the full range of exosystem institutions and structures envisaged by EST, nor have they explained how and when they indirectly impact mesosystem, microsystem and ontogenic levels. In terms of institutions there are gaps in our knowledge concerning the role of national education structures and national VET organisations, the role of professional bodies and the employment conditions and status of developers. The utilization of a LDP in integration with the exosystem could prove fruitful in understanding the role of these exosystem actors in influencing and making decisions about development needs and priorities for different age groups (Veth et al., 2019), the links between NHRD exosystem actors' decision-making and behaviour and population aging and the role that LDP-informed policy making has on the allocation of financial resources. The conjunction of both EST and a LDP in the context of the exosystem potentially opens many research avenues around age-informed NHRD policy making.

### **The Macrosystem**

EST gives salience to the overarching role of the macrosystem and the prominence of society and culture in shaping NHRD and age-focused NHRD policies (Bronfenbrenner, 1989).

Macrosystems will carry important overarching belief systems about the role of development and

age-related development including rules, culture, social norms laws and ideology (Rose and Tudge, 2013). The macrosystem has largely received attention at the descriptive level with 23% of papers theorized or investigated the macrosystem. Informal dimensions on the macrosystem focus culture and stereotypes (Peng et al., 2009) and these dimensions have received some attention in the literature. For example, Alagaraja and Wang (2012), for example, theorised the importance of the socio-cultural context in NHRD model building. Mellahi (2000) highlighted the complexity of societal values in inhibiting NHRD development and the need to change societal values towards females. Similarly, Metcalfe (2011a, 2011b) investigated the role of societal values in UAE, Bahrain and Saudi Arabia and highlighted the need for social change where Arab women are supported to develop feminist agency and create their own version of Islamic feminism. Likewise, Razvi and Roth (2010) emphasized how diverse cultural values present complex issues for the participation of women in the labour market. The literature is largely silent on LDP issues with little attention given to age related values in national culture, negative bias toward older adults, role of social inequalities (Alagaraja & Wang, 2012) and the salience of national cultural values (Bartlett & Rodgers 2004; Lutta-Mukhebi, 2004).

EST also gives prominence to formal dimension of the macrosystem but there is little in the way of links with LDP issues. For example, EST argues for the role of formal institutions in articulating codified and explicit rules and standards that provide important behavioural guidelines within society and the importance of regulatory and political processes in this context. We glean some insight for NHRD research in this context that provide a platform for future research. For example, Asrar-ul-Haq (2015) highlighted the negative impact of these formal institutions on Pakistan including lack of government and political support for the development of the private sector and a low concern for global employability. Rao and Varghese (2009) emphasized the key role of political leadership in India and the belief that human capital development contributes to

economic development. Oh et al. (2013) claimed that the countries like Switzerland and Sweden have a particularly strong political commitment to NHRD and Modisane (2015) examined the role of political will on Botswana that sought to be an educational hub for the South African Development Community Region.

EST has potential to inform our understanding of the role of macro level phenomenon in shaping how NHRD is underattended in different countries. Central to EST is the notion that the macrosystem has a downward influence on all other levels of the ecosystem and is therefore an important construct in informing research on phenomena such as national culture, national, transnational and global institutions, and forces for globalisation. The integration of the macrosystem with a LDP points the potential to investigate how societal values and norms interact with age and how they differ across cultures in shaping NHRD. Their integration can also help researchers to shed light on differences in age-related norms across countries, the role of age stigma and its influence on NHRD actor decision-making, and the existence of prejudice and unfair discrimination in cultures and their impacts across the lifespan in NHRD policy making. There is also scope to expand conceptualizations of the macrosystem in the context of NHRD to consider the role of globalisation, the global business environment and the impacts of migration and emigration flows and global labour market conditions on age-related issues. The macrosystem concept is sufficiently broad in its scope to incorporate these dimensions.

### **The Chronosystem**

The chronosystem which incorporates aspects of time and history and can be external (e.g., changes in the nature of work, global economic conditions) and internal (aging, changing priorities and personal values). The internal dimension is aligned with the key principles of the LDP. To date NHRD researchers have given this issue little attention with only 14% of papers explicitly

investigated the chronosystem. The integration of a LDP with the chronosystem concept of EST makes investigation of time a major research priority. We found examples of research that considered time issue. For example, Ibararán et al. (2019) took a time dimension to investigate the long-term effects of youth training programmes and several researchers have investigated NHRD issues in the context of economic crisis and downturns (Laloti 2019; Pilz, 2017) but not in terms of how they impact development opportunities and participation for different age groups. Research has also sought to consider NHRD issues in the context of transitioning societies (McLean, 2006; Paprock et al., 2006) and poverty reduction (Khan & Ali, 2014).

The integration of EST and the chronosystem with a LDP provides an interesting lens to identify gaps in the current literature. It highlights issues concerning how changing societal values impact participation in NHRD by different age categories, how biases and stereotypes on respect of aging are changing and their impact on NHRD provision, the role of generational differences and how they influence NHRD policy and practice and the impact of changing life circumstances on NHRD policy, delivery, and effectiveness.

## **FUTURE RESEARCH AGENDA AND A METHODOLOGICAL WAY FORWARD**

In Table 1 we summarize what we know about current approaches to researching NHRD and highlight the potential impact of utilizing EST integrated with a LDP. In this section we discuss novel research questions in the context of NHRD that are linked to Table 1. Table 2 identifies the key dimensions of EST and LSP as applied to future NHRD research endeavours. It serves as an important means to emphasize how these combined theoretical approaches allow us to capture heretofore unanswered questions about NHRD and propose a future research agenda.

**Table 2: Ecological Systems Theory and a Life-Span Development Perspective - Implications for NHRD Research**

<b>Dimensions</b>	<b>Ecological Systems Theory and NHRD</b>	<b>A Life-Span Development Perspective and NHRD</b>
<b>Context</b>	<p><b>Key Idea:</b> Explicitly acknowledges that NHRD is contextual and that it is shaped by multiple environments.</p> <p><b>Research Implications:</b> Account for context in researching NHRD; Specify the context with precision</p>	<p><b>Key Idea:</b> Implicit recognition of the role of context shaping NHRD</p> <p><b>Research Implications:</b> Explore dimensions of context that impact aging and development over time</p>
<b>Levels of Analysis</b>	<p><b>Key Idea:</b> Specifies multiple levels of the environment that shape NHRD and labels these as microsystems, mesosystems, ecosystems and macrosystems.</p> <p><b>Research Implications:</b> Research the multiple context that directly and indirectly shape NHRD processes and outcomes. Account for top-down and bottom-up contextual influences on NHRD</p>	<p><b>Key Idea:</b> This theory is silent concerning the levels of analysis use to understand NHRD</p> <p><b>Research Implications:</b> Acknowledge that development processes over time are shaped by multiple levels of the environment</p>
<b>Time and Temporality</b>	<p><b>Key Idea:</b> Gives specific emphasis to the issue of time through the chronosystem concept and advocates three notions of time including experienced time, perceived time, and timing.</p> <p><b>Research Implications:</b> Study NHRD longitudinally and use historical approaches to capture change over time</p>	<p><b>Key Idea:</b> Emphasizes experienced time and that development is continuous throughout the lifespan</p> <p><b>Research Implications:</b> NHRD research must account for experienced time when explaining NHRD processes and outcomes</p>
<b>Relevance of Individual Characteristics</b>	<p><b>Key Idea:</b> Highlights three sets of individual characteristics relevant to NHRD processes and outcomes: demand, force, and resource characteristics. Envisages an intersectional approach.</p> <p><b>Research Implications:</b> Place the individual at the centre of NHRD. Focus on understanding the role of multiple individual characteristics over time</p>	<p><b>Key Idea:</b> Prioritizes age as the primary individual characteristic relevant to NHRD processes and outcomes</p> <p><b>Research Implications:</b> Change due to age differences are a central component of NHRD research</p>

<b>Agency of Developing Individual</b>	<b>Key Idea:</b> Places the individual at the centre of the NHRD ecological system and gives emphasis to force or motivation characteristics <b>Research Implications</b> Conceptualise the beneficiaries of NHRD as having agency and potential to shape multiple levels of context	<b>Key Idea:</b> Emphasizes the agency of individuals and highlights that an individual will seek to maximize gains and minimize losses but that losses become more salient with age. They will select development goals to align with age. <b>Research Implications:</b> Research and understand the different ways in which individuals address age in terms of development goals within NHRD interventions
<b>Direct and Indirect Influences on NHRD</b>	<b>Key Idea</b> Distinguishes proximal from distal influences. Proximal or direct influences include the developing individual, microsystems, and mesosystems. Distal or indirect influence include the exosystem and macrosystem. <b>Research Implications:</b> Pay careful attention to delineating the role of different levels of context. Theoretically justify why they have an direct or indirect impact on NHRD processes and outcomes	<b>Key Idea:</b> Highlights the direct influence of age on NHRD but makes no explicit reference to other direct or indirect influences. <b>Research Implications:</b> Age plays a key role in NHRD throughout the life span thus requiring longitudinal approaches to investigate its impact

### The Individual Experiencing NHRD through EST and LDP lens

We proposed in our introduction that the developing individual has in many ways got lost in NHRD research with the focus more on describing interventions, programmes, policy initiatives and institutions with responsibility for NHRD. Utilizing EST and the ontogenic level in integration with a LDP brings the developing individual to the core of NHRD research and points to important and as yet unanswered questions. First, we need to focus on the full spectrum of developing individuals and not solely on adults (emerging and middle) which are the major focus of existing research. NHRD research has largely ignored the childhood and adolescence stages and the development issues that arise in in the context of NHRD. We see a similar gap in respect of late

adulthood which is interesting given that many individuals are now working well into their 70s. A LDP suggests scope to consider gains and losses in the context of development processes (Baltes et al., 1999) and what these mean for how NHRD is developed, delivered, and evaluated. The notion of maximization of gains and minimization of losses central to a LDP suggests that NHRD should consider the types of development goals that are specified for NHRD, and the approaches used to develop different age categories. Additionally, a LDP suggests that we need to develop insights concerning differences in the way individuals think, feel and are motivated when it comes to development processes across the lifespan (Mascolo & Fischer, 2010).

The integration of EST and a LDP points to opportunities for NHRD research that adopt an intersectional approach (Jones et al., 2017), something that is absent from the current literature. This approach to studying NHRD emphasizes the need to simultaneously study age in conjunction with other demographic characteristics such as gender, ethnicity, social position, and group membership. For example, how does gender and race matter and their intersection in explaining access to and the outcomes of NHRD (Spry & Merchant, 2014). This intersectional approach would also help to surface the role of racial or colonial hierarchies embedded in culture and institutions (Nkomo et al., 2019) and develop insights into how these have an upward influence on microsystem, mesosystem and exosystem functioning. Insights on this dimension can shed light on the extent to development processes in NHRD are continuous or cumulative and discontinuous and emergent processes (Heckhausen et al., 2010).

The intersectional approach that a LDP integrated with the ontogenic level of EST opens the possibility to understand different demographic characteristics and their links with force characteristics. Life goals, for example, are age-related and likely to vary with changing circumstances, role expectations and maturation over the lifespan (Bühler et al., 2019). Overall,

the use of EST integrated with a LDP can kickstart and renew research on the individual who is the focus of NHRD.

### **The Micro, Meso and Chronosystems: NHRD Microsystems and Their Relationships over Time**

The literature on NHRD primarily takes a static approach and focuses on a snapshot in time rather than longitudinal investigation. Utilizing EST and a LDP highlights that such an approach will not generate insights into the phenomenon of NHRD and/or help us to develop insights into how and when NHRD outcomes occur. EST in particular highlights that NHRD researchers need to fix their gaze on a much broader conceptualisation of the settings in which NHRD occurs, the links between them and how they change over time due to external and internal chronosystem issues. For example, NHRD research needs to shift its focus away from primarily emphasizing the role of employers, government agencies and VET organisations to consideration of the family, NGOs, and charitable organisations. These microsystems largely remain invisible in the current literature, yet they are important micro-settings that have a major impact on NHRD outcomes (Bronfenbrenner, 1979).

Researchers have not yet fully appreciated that these microsystems are temporally informed and dynamic, something which both EST and a LDP place particular emphasis on. Both theoretical perspectives emphasize that we need to understand how and when microsystems and mesosystem interactions change and what impact they have on NHRD outcomes. Additional insights suggested by both perspectives focus on different types of micro-settings and how they impact NHRD outcomes and which ones are more salient at different points in the lifespan. What types of measurement mechanisms are appropriate to evaluate the effectiveness of different microsystems? Do they change over time?

The mesosystem level refers to the interactions that take place between different micro-settings. This represents an important theoretical insight which to date is not explored in NHRD. Its application to NHRD has the potential to develop insights into how different components of a NHRD system synergise to result in important national level outcomes (Biosca & Galaso, 2020). The mesosystem concept highlights that an individual will likely participate within multiple microsystems across the lifespan. Therefore, how do these different microsystems reinforce or upset norms in respect of age and its interaction with other force, demand, and resource characteristics? Doughty and Moore (2021) highlight that the mesosystem concept brings to the fore understanding the role of goal alignment, communication, and relationships. It also brings into play the need to research issues such as how different microsystems align their NHRD development strategies? What coordination mechanisms do they use? How frequently do they communicate? What types of boundary spanning strategies do they use to minimise resource and activity duplication? And how do they network with each other to share best practices?

### **The Exosystem and Macrosystem: Exploring Meso and Macro Context of NHRD**

To date researchers have prioritized the generation of descriptive studies of both the exosystem and macrosystem. EST prioritizes the importance of understanding context, something which has achieved significant prominence in the management and HRM literatures in recent times (McLaren & Durepos, 2021; Hoff, 2021) yet is has received insufficient attention in NHRD. EST provides two context concepts, one which can be characterised as meso and the other macro. The exosystem as a meso-level of context plays a key role in making NHRD happen within countries and plays a vital role as formulator and implementer of NHRD policy and legislative

frameworks (Cleveland et al., 2015; Wilkinson, 2022). Investigation of a broader spectrum of meso-level actors in the context of NHRD is warranted the role of trade unions, government departments, specialised VET and skills development agencies, ministries for economics and labour, NGOs, and the media. We have scope to generate important insights into how the exosystem as a meso-level of context shapes actor power to influence and commitment to lifespan development approaches. Do they have unique implicit age norms (Kunze et al., 2015) which shape development policies and approaches. Negative age stereotypes maybe used to justify discriminatory NHRD practices against older individuals (Ng & Feldman, 2012). The media as a key factor in the exosystem also merits further investigation. Application of EST and a LDP highlights the imperative to investigate how exosystem actors evolve over time and how they formulate and change NHRD policy direction and approaches to implementation.

The macrosystem can be conceptualized as a macro level of context whose influence on NHRD is more distal. EST is instructive in highlighting the types of issues that should be the focus of research for NHRD. Consistent with EST, national institutions can be viewed as higher-order creators of rules within which NHRD takes place (Wilkinson et al., 2014) and will be reflected in laws surrounding access to development, age discrimination, industry standards and practices in respect of development and the expansiveness of NHRD policies across the lifespan (Marcus, 2017). Institutions are not necessarily created for functional but for political reasons (Savage & Williams, 2008) and operate under social influences and pressures to implement practices that fit with their environment (Haak-Saheem et al., 2017).

Investigation of informal mechanisms is nascent in the literature with significant scope for scholars to utilize dominant cultural frameworks including those of Hofstede (1980), GLOBE (House, 2004), Trompenaars (1996), Schwartz (1994) and Stackhouse et al. (2018) to investigate how cultural values impact NHRD in the context of lifespan development. The primacy of

investigating macro context is also highlighted by a LDP. For example, Baltes (1987) emphasizes the socially and culturally embedded nature of development and suggests that individuals are embedded in an informal institutional context including norms and values. Age has a particularly important societal dimension, and the concept of social age (Schwall, 2012) highlights those individuals may be categorised as young or old depending on the context. We have scope to develop insights into the ways in which cultural values permeate all levels of the ecological system in addition to understanding the types of cultural values favourable to age and NHRD policy making and practice. EST combined with a LDP brings context front and centre in understanding NHRD as a phenomenon and the role of the individual within that ecological system. It also helps us to understand NHRD as multilevel and a temporal phenomenon something which has to date not gained traction in the literature.

### **The Imperatives of Research on Top-Down and Bottom-Up Influences within the Ecological System**

EST gives primacy to both top-down and bottom-up influences within the wider ecological system (Cassarino & Murphy, 2018). This dimension of EST provides multiple opportunities concerning how the macrosystem impacts lower levels of the ecological system in the context of NHRD. Higher level factors are critical in explaining processes and outcomes at lower levels in the ecological system (Clemens & Cook, 1999) thus pointing to the role of cultural beliefs and values in shaping NHRD policies and implementation approaches of exosystem actors. We can use this approach to gain insights into how globalisation and de-globalisation impact what happens at lower levels of the ecological system and how macrosystem values and norms concerning age impact lower levels of the ecological system and their persistence over time in the context of NHRD? EST also points to the roles that ecosystem actors play in translating societal values

related to development, discrimination, and prejudice to microsystems and mesosystems (Kapucu et al., 2017). These mesosystem actors include trade unions (Kambayashi & Kato, 2020), consultants, local policy implementation organisations, voluntary and not for profit organisations and NGOs. EST also envisages bottom-up influences from microsystems and the mesosystem on the exosystem. This dimension of EST opens up new avenues of investigation around the role that developing individuals, microsystems and mesosystems play in shaping the exosystem in particular. We can develop insights into the role they play in shaping approaches to policy formulation, the time it takes for bottom-up influences to translate into change in NHRD and the relative impact of microsystem settings in bringing about bottom-up change. Therefore, EST opens a new vista when it comes to understanding emergent processes and how they shape NHRD.

### **Bringing Time into NHRD Research and Investigating Chronosystem Influences**

Both EST and a LDP give primacy to time and its relevance in understanding NHRD development processes and outcomes. They emphasize different conceptualisations of time which can enrich NHRD research and add new dimensions to theorizing. For example, they bring to the fore experienced time or what might be considered the process of aging (Henkens et al., 2018). In addition, associated with age, a variety of ontogenic factors such as motivation to learn, career commitment, development proactivity and developmental intentions are influenced by the experience of time and are temporally bound (Baltes, 1987). These characteristics will be influenced by meso and macro dimensions of context. Therefore, there is scope for NHRD researchers to investigate issues related to how individual characteristics change over a learner's lifetime and how they experience NHRD, what role do changes in career values have, and how career goals and motivations for development differ across the lifespan. These issues represent

something of a black box in the context of NHRD, however they have the potential to provide temporal understanding of how and why NHRD evolves across the lifespan.

The notion of perceived time is also suggested by EST, with Shipp et al. (2009) defines as a psychologically construed notion of what time is about. Ancona et al. (2001) proposed a temporal framework emphasizing three interrelated dimensions of perceived time: ideas of time, which are based mostly on culture, planning activities for time and individuals relating to time. These time dimensions can help us to understand different dimension of NHRD including (a) participation in NHRD, (b) the role of ontogenic factors in shaping perceptions of time, and (c) how perceived time operates at different levels of the ecological system. The notion of timing is also highlighted within EST and it gives emphasis to historical embeddedness of NHR. It suggests that contemporary influences will shape the development trajectories of individuals and NHRD policy making and implementation. EST highlights economic factors as one dimension of timing (Bianchi, 2013; Bianchi, 2014) and their role in shaping development in addition to temporally bound factors such as discrete events and temporal fluctuations in these events such as Covid 19. Discrete events may include changes in government policy, the withdrawal or provision of resources and changes in practices around NHRD. Temporal events include changes in governments, political changes, changes in the economy, pandemics, unemployment rates and changes in technology. Our review highlights the scope to develop insights concerning three under-researched temporal events. The first concerns poverty (Roca-Puig et al., 2019) and this event can be studied in conjunction with macro-level societal factors to understand its impact on investment in NHRD and the role of NHRD in the context of age in alleviating poverty over time. The second temporal event suggested by EST concerns investigation of changing global economic conditions and migration patterns and their influence of lifespan development issues (Guo & Ariss, 2015). Individuals may be in culturally different development settings across the lifespan, thus

highlighting the need to investigate how these institutional contexts impact access to NHRD (Fernando & Patriotta, 2020; Tung, 2016). So, for example, how do formal institutions promote or constrain migrants' ability to access NHRD? What is the impact of anti-immigration sentiment, stereotypes, and power imbalances when they interact with age to impact NHRD and how do agencies and actors in the exosystem filter, augment or impede these socio-cultural stereotypes? Arguably, researchers should address the role that NHRD agencies, policy makers and professional bodies play in the development of migrants' talent and skills. Third, EST highlights the need to understand changes in technology as a temporal event in terms of older adults and those who do not have internet connectivity who are likely to be in lower socioeconomic groups or in developing parts of the world. Changes in technology and its use in the context of NHRD will interact with force and resource characteristics at the ontogenic level. These issues merit further research. Overall, one of the most significant contributions that EST integrated with a LDP makes to research on NHRD is the realisation that to study dimensions of NHRD in a static way does the field a disservice and points to the need to utilize a new methodological toolbox which we discuss in the next section.

### **Expanding our Methodological Toolkit**

We propose three methodological innovations that are necessary to operationalize many of the questions that we discussed in the previous sections. The first innovation concerns the use of national archival databases rather than reliance on self-report measures. They have been particularly highlighted as a way of bridging the divide between the micro and macro which is central to EST (Aguinis et al., 2011). Macro-level databases may help NHRD researchers to capture industrial, societal, and economic systems, as well as national cultural dimensions and they also facilitate comparative investigations (Hill et al., 2022). There are numerous national level data

bases that can be used in NHRD research including the Human Capital Index reported by the World Bank, Database of Political Institutions, Global Leadership and Organisational Effectiveness (GLOBE) Thomson Reuters Environmental, Social and Governance, Gallup Analytics and Economist Intelligence Unit. Central to our arguments in this paper is that NHRD often focuses on questions that while located at an operational level extend to the macro level. Therefore, we see the use of these archival data bases as an important extension to the methodological toolkit used in NHRD research.

A second approach that can be used by NHRD researchers includes a focus on the use of historical methods. Bell and Taylor (2013) for example highlight that a pervasive problem in management and organisation research concerns the focus on 'presentism' and propose the use of historically informed methodological approaches. The historical approach has begun to take hold in the in fields such as strategy (Argyres et al., 2020; Vaara & Lamberg, 2016), institutional change (Decker et al., 2018) and family business research (Suddaby et al., 2021). These historical methods in the context of researching NHRD could include the critical analysis of primary and secondary historical sources to provide rich descriptions of context and interpretation in respect of NHRD policy formulation and implementation, significant changes in policy directions, and the way in which NHRD actors leverage power to achieve important outcomes. Indeed, history can be used not only as data, as a methodological approach, but also as a component of theorizing in NHRD.

Our third methodological suggestion concern the use of quantitative methods. There is a significant growth in the use of longitudinal data analysis and their role in establishing causal connections (Reitan & Stenberg, 2019). These advanced statistical analysis techniques include growth modelling and latent class modelling (Bliese & Lang, 2016; Bliese & Ployhart, 2020) and could be used to uncover the impact of, for example, early NHRD development experiences on

later development outcomes. In addition, scholars have highlighted the use of field experiments to establish the causal effects in the context of a lifespan approach to NHRD (Chatterji et al., 2016; Eden, 2017).

## **PRACTICE IMPLICATIONS**

Our review of the literature utilizing both EST and a LDP suggests significant practice implications for exosystem actors such as legislators, government agencies, NGOs and other bodies involved in the formulation of NHRD in addition to microsystem actors that implement NHRD. We acknowledge that actors particularly those in micro-settings and the exosystem do not have control over the macro and exosystem influences but they potentially have scope to influence the type of legislative arrangements and NHRD practices that are implemented. It therefore makes sense that actors at the exosystem level, when they come to formulating NHRD policy and institutional arrangements, that they consider what these mean for both micro- and mesosystems levels. Where they engage in these scanning behaviours then they can potentially develop better fit NHRD policies and practices.

When it comes to the actions that exosystem institutions can take to incorporate a LDP into NHRD policy making they should consider their equality and diversity legislative frameworks and policies, the use of quotas in terms of participation in NHRD, and the affirmative action policies to spread the benefits of NHRD. At the mesosystem and microsystem levels a clear practice implication concerns how various microsystems interact, network, and communicate with each other. These policies will help to ensure that microsystems make the most efficient and effective use of resources in addition to eliminating duplication of programmes and efforts.

The final practice implication concerns the importance of linking the various levels of the ecological system and ensuring an understanding of top down and bottom-up effects. EST in

particular gives primacy to interactions between and within levels this there is a need amongst NHRD actors to be aware of the potential for unintended outcomes effects that were not anticipated.

### **STRENGTHS AND LIMITATIONS OF OUR SYSTEMATIC REVIEW**

While we conducted this SR integrating both academic and grey literatures systematically and in a disciplined way, we acknowledge both strengths and limitations. We made the decision to include diverse types of publications, ensuring that we captured the full extent of intellectual endeavour to date on NHRD. Our approach to both the search for publications and their analysis was rigorous. The research team independently search for and coded a final selection of papers, chapters, and reports. This process helped ensure that we did not overlook important contributions and the evaluations that we made of each publication were thorough.

Our review does, however, have several limitations. First, there is an imbalance in the literature between theoretical and empirical contributions. While the number of empirical studies has grown, further empirical work is required to understand the research questions posed in this paper. Second, our review does not escape the limitations associated with publication bias. We focused only on published studies and therefore ignored unpublished work including conference papers. We also only focused on articles published in the English language. Therefore, we may have omitted important non-English contributions. Despite these limitations, this review is an up-to-date and SR of the literature.

### **CONCLUSIONS**

NHRD is one of the most complex phenomena in the field of HRD and management generally, thus warranting considerable research effort. As past research on NHRD has noted

there is a need to engage more effectively with multi-level and temporal perspectives, this SR utilizing EST and a LDP sheds light on current progress on both dimensions, in addition to catalysing future research avenues. It is our hope that this review will motivate researchers to research fresh avenues on NHRD and that practitioners will utilize both perspectives when formulating NHRD policies and interventions.

For Review Only

## REFERENCES

- Abadi, M., Dirani, K.M. & Rezaei, F.D. (2022) Women in leadership: a systematic literature review of Middle Eastern women managers' careers from NHRD and institutional theory perspectives, *Human Resource Development International*, 25, pp. 19-39.
- Adams, R.J., Jeanrenaud, S., Bessant, J., Denyer, D. & Overy, P. (2016) Sustainability-oriented innovation: a systematic review. *International Journal of Management Reviews*, 18, pp. 180-205.
- Adams, R.J., Smart, P. & Huff, A.S. (2017) Shades of Grey: Guidelines for Working with the Grey Literature in Systematic Reviews for Management and Organisational Studies. *International Journal of Management Reviews*, 19, pp. 432-454.
- Aguinis, H., Boyd, B. K., Pierce, C.A. & Short, J.C. (2011) Walking New Avenues in Management Research Methods and Theories: Bridging Micro and Macro Domains. *Journal of Management*, 37, pp. 395-403.
- Ahn, Y.S. & McLean, G.N. (2006) Regional human resource development: The case of Busan city, Korea. *Human Resource Development International*, 9, pp. 261-270. \*
- Alagaraja, M. & Githens, R.P. (2016) Capacity and Capability Buildings for National HRD: A Multi-Level Conceptual Framework. *Human Resource Development Review*, 15, pp. 24-46. \*
- Alagaraja, M. & Wang, J. (2012) Development of a national HRD strategy model: Cases of India and China. *Human Resource Development Review*, 11, pp. 407-429. \*
- Ancona, D., Okhuysen, G. & Perlow, L. (2001) Taking Time to Integrate Temporal Research. *The Academy of Management Review*, 26, pp. 512-529.
- Anikin, V.A. (2017) Occupational Propensity for training in a late industrial society: evidence from Russia. *International Journal of Training and Development*, 21, pp. 249-284. \*
- Argyres, N.S., De Massis, A., Foss, N.J., Frattini, F., Jones, G. & Silverman, B.S. (2020) History-informed strategy research: The promise of history and historical research methods in advancing strategy scholarship. *Strategic Management Journal*, 41, pp. 343-368.
- Arthur-Mensah, N. & Alagaraja, M. (2018) Examining Training and Skills Development of Youth and Young Adults in the Ghanaian Context: An HRD Perspective. *Human Resource Development International*, 21, pp. 493-508. \*
- Arubayi, D.O. & Akobo, L.A. (2018) The capability approach and national development in Nigeria: towards a youth transition model. *Human Resource Development International*, 21, pp. 463-492 \*
- Asrar-ul-Haq, M. (2015) Human resource development in Pakistan: Evolution, trends, and challenges. *Human Resource Development International*, 18, pp. 97-104. \*
- Ayentimi, D., Burgess, J. & Dayaram, K. (2018) Skilled Labour Shortage: A Qualitative Study of Ghana's Training and Apprenticeship System. *Human Resource Development International*, 21, pp. 406-424. \*
- Baltes, P.B. (1987) Theoretical propositions of life-span developmental psychology: On the dynamics between growth and decline. *Developmental Psychology*, 23, pp. 611-626.
- Baltes, P., Staudinger, U., & Lindenberger, U. (1999). Lifespan Psychology: Theory and Application to Intellectual Functioning. *Annual Reviews Psychology*, 50, 471-507.
- Barrett, A., McGuinness, S., O'Brien, M. & O'Connell, P. (2013) Immigrants and employer-provided training. *Journal of Labor Research*, 34, pp. 52-78. \*
- Barry, M., Dundon, T. & Wilkinson, A. (2018) Employee voice: Conceptualisations, meanings, limitations, and possible integration. In *The Routledge Companion to Employment Relations* (1st ed., Vol. 1, pp. 251-265). Routledge.
- Bartlett, K.R. & Rodgers, J. (2004) HRD as national policy in the Pacific Islands. *Advances in Developing Human Resources*, 6, pp. 307-314. \*
- Bell, E., Bryman, A. & Harley, B. (2019) *Business research methods*. 5th ed. Oxford: Oxford University Press.
- Bell, E. & Taylor, S. (2013) Writing history into management research, *Management & Organizational History*, 8, pp. 127-136,
- Bharti, N. (2014) The role of training in reducing poverty: the case of microenterprise development in India. *International Journal of Training and Development*, 18, pp. 291-296. \*
- Bianchi, E.C. (2013) The Bright Side of Bad Times: The Affective Advantages of Entering the Workforce in a Recession. *Administrative Science Quarterly*, 58, pp. 587-623.

- Bianchi, E.C. (2014) Entering Adulthood in a Recession Tempers Later Narcissism. *Psychological Science*, 25, pp. 1429-1437.
- Biosca, O. & Galaso, P. (2020) What Makes a Key Player in Interorganizational Social Policy Networks? The Case of Uruguay. *International Journal of Public Administration*, 43, 1156-1168.
- Bliese, P.D. & Lang, J.W.B. (2016) Understanding Relative and Absolute Change in Discontinuous Growth Models: Coding Alternatives and Implications for Hypothesis Testing. *Organizational Research Methods*, 19, pp. 562-592.
- Bliese, P.D. & Ployhart, R.E. (2002) Growth modeling using random coefficient models: Model building, testing, and illustrations. *Organizational Research Methods*, 5, pp. 362-387.
- Block, J.H. & Fisch, C. (2020) Eight tips and questions for your bibliographic study in business and management research. *Management Review Quarterly*, 70, pp. 307-312.
- Bone, K.D. (2015) The Bioecological Model: Applications in holistic workplace well-being management. *International Journal of Workplace Health Management*, 8, pp. 256-271.
- Bronfenbrenner, U. (1977) Toward an experimental ecology of human development. *American Psychologist*, 32, pp. 513-531.
- Bronfenbrenner, U. (1979) *The Ecology of Human Development: Experiments in nature and design*, Cambridge, M.A.: Harvard University Press.
- Bronfenbrenner, U. (1994) Ecological models of human development. In M. Gauvin and M. Cole (Eds.), *Readings on the development of children* (2nd edition). New York: Freeman, pp. 34-43.
- Bronfenbrenner, U. (1999) Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman and T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts*. American Psychological Association, pp. 3-28.
- Bronfenbrenner, U., & Evans, G.W. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development*, 9(1), 115-125.
- Bronfenbrenner, U. & Morris, P. A. (2006) The Bioecological Model of Human Development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793–828). John Wiley & Sons Inc.
- Budhwani, N.N. & McLean, G.N. (2012) Community and societal development: A case study of an Ismaili Muslim Community's HRD efforts. *Advances in Developing Human Resources*, 14, pp. 264-278. \*
- Byrd, M.Y. (2018) Does HRD have a moral duty to respond to matters of social injustice? *Human Resource Development International*, 21, pp. 3-11.
- Budhwar, P.S., Al-Yahmadi, S. & Debrah, Y. (2002) Human resource development in the Sultanate of Oman. *International Journal of Training and Development*, 6, pp. 198-215. \*
- Bühler, J. L., Weidmann, R., Nikitin, J. & Grob, A. (2019) A Closer Look at Life Goals Across Adulthood: Applying a Developmental Perspective to Content, Dynamics, and Outcomes of Goal Importance and Goal Attainability. *European Journal of Personnel*, 33, pp. 359-384.
- Byun, J. & Ryu, K. (2012) Changes in regional communities the case of the republic of Korea's lifelong learning city project. *Advances in Developing Human Resources*, 14, pp. 279-290. \*
- Cassarino, M. & Murphy, G. (2018) Reducing young drivers' crash risk: Are we there yet? An ecological systems-based review of the last decade of research. *Transportation Research Part F: Traffic Psychology and Behaviour*, 56, pp. 54-73.
- Cerdin, J.L., Diné, M. & Brewster, C. (2014) Qualified immigrants' success: Exploring the motivation to migrate and to integrate. *Journal of International Business Studies*, 45, pp. 151-168.
- Chai, D.S., Kim, S. & Kim, M. (2018) A Work and Learning Dual System Model for Talent Development in South Korea: A Multiple Stakeholder View. *Advances in Developing Human Resources*, 20, pp. 410–427. \*
- Chandler, D.E., Kram, K.E. & Yip, J. (2011) An Ecological Systems Perspective on Mentoring at Work: A Review of Future Prospects. *The Academy of Management Annals*, 5, pp. 519-570.
- Chatterji, A.K., Findley, M., Jensen, N.M., Meier, S. & Nielson, D. (2016). Field experiments in strategy research. *Strategic Management Journal*, 37, pp. 116-132.
- Cheung, F., Yeung, D.Y. & Wu, A.M.S. (2019) Occupational Future Time Perspective and Successful Aging at Work. *Journal of Career Development*, 46, pp. 3-16.

- Clemens, E. & Cook, J. (1999) Politics and Institutionalism: Explaining Durability and Change. *Annual Review of Sociology*, 25, pp. 441-466.
- Cleveland, J.N., Byrne, Z.S. & Cavanagh, T.M. (2015) The Future of HR is RH: respect for humanity at work. *Human Resource Management Review*, 25, pp. 146-161.
- Cloutier C, & Langley A. (2020) What Makes a Process Theoretical Contribution? *Organization Theory*. doi:10.1177/2631787720902473 [early online publication]
- Collins, J.C., Zarestky, J. & Tkachenko, O. (2017) An Integrated Model of Critical HRD and National HRD: Considering New Possibilities for Human Resource Development. *Human Resource Development International*, 20, pp. 236-252. \*
- Conlon, T. (2003) A review of informal learning literature, theory, and implications for practice in developing global professional competence. *Journal of European Industrial Training*, 28, pp. 283-95. \*
- Cooke, G. B., Chowhan, J. & Brown, T. (2011) Declining versus participating in employer-supported training in Canada. *International Journal of Training and Development*, 15, pp. 271-89. \*
- Cornelissen, J. P. (2017) Developing propositions, a process model, or a typology? Addressing the challenges of writing theory without a boilerplate. *Academy of Management Review*, 42, pp. 1–9.
- Cox, J.B., Al Arkoubi, K. & Estrada, S.D. (2006) National human resource development in transitioning societies in the developing world: Morocco. *Advances in Developing Human Resources*, 8, pp. 84-98.\*
- Crawford, B.F., Snyder, K.E. & Adelson, J.L. (2019) Exploring obstacles faced by gifted minority students through Bronfenbrenner's bioecological systems theory. *High Ability Studies*, 31, pp. 43-74.
- Cunningham, P.W., Lynham, S.A. & Weatherly, G. (2006) National human resource development in transitioning societies in the developing world: South Africa. *Advances in Developing Human Resources*, 8, pp. 62-83. \*
- Czernek-Marszałek, K. (2020) Social embeddedness and its benefits for cooperation in a tourism destination. *Journal of Destination Marketing and Management*, 15.
- Davenport, M.K., Young, C.K., Kim, M.H., Gilberto, J.M. & Beier, M.E. (2022), A lifespan development perspective and meta-analysis on the relationship between age and organizational training. *Personnel Psychology*. Accepted Author Manuscript. <https://doi.org/10.1111/peps.12535>
- Day, D.V. (2000). Leadership development: A review in context. *The Leadership Quarterly*, 11, pp. 581–613.
- Decker, S., Üsdiken, B., Engwall, L. & Rowlinson, M. (2018) Special issue introduction: Historical research on institutional change, *Business History*, 60, pp. 613-627.
- Delbridge, R., & Fiss, P. C. (2013) Styles of theorizing and the social organization of knowledge. *Academy of Management Review*, 38, pp. 325–333.
- Doughty, S.E. & Moore, J.R. (2021) Understanding Inclusive Organizations through Ecological Systems Theory. *International Journal of Research in Business Studies and Management*, 8, pp. 7-14.
- Eden, D. (2017). Field experiments in organizations. *Annual Review of Organizational Psychology and Organizational Behavior*, 4, pp. 91-122.
- Fernando, D. & Patriotta, G. (2020) "Us versus them": sensemaking and identity processes in skilled migrants' experiences of occupational downgrading, *Journal of World Business*, 55, pp. 101-109.
- Fitzenberger, B. & Volter, R. (2007) Long-run effects of training programs for the unemployed in East Germany. *Labour Economics*, 14, pp. 730-55. \*
- Fjellström, M. (2017) Vocational Learning in a Swedish Post-Secondary Apprenticeship. *Empirical Research in Vocational Education and Training*, 9, 5.
- Garavan, T.N., Wang, J., Matthews-Smith, G., Nagarathnam, B. & Lai, Y. (2018). Advancing national human resource development research: suggestions for multi-level investigations. *Human Resource Development International*, 21, pp. 288-318.
- Gedro, J. & Hartman, L.P. (2015) Education as a response to NHRD gaps in developing economies: A case study of l'Ecole de Choix/The school of choice (Haiti), as critical national human resource development. *Human Resource Development Quarterly*, 27, pp. 67-94. \*
- Ghosh, R. (2019) Inviting contributions on international HRD research in HRDI, *Human Resource Development International*, 22, pp. 317-320.
- Ginzberg, E. (1958) *Human Resources: The Wealth of a Nation*. New York: Simon and Schuster.

- Greig, M. (2019) Factors affecting Modern Apprenticeship completion in Scotland. *International Journal of Training and Development*, 23, pp. 27-50. \*
- Guo, C. & Ariss, A.A. (2015) Human resource management of international migrants: current theories and future research. *The International Journal of Human Resource Management*, 26, pp. 1287-1297.
- Haak-Saheem, W., Festing, M. & Darwish, T. (2017) International Human Resource Management in the Arab Gulf States: An institutional perspective. *The International Journal of Human Resource Management*, 28, pp. 2684-2712.
- Harbison, F.H. & Myers, C.A. (1964) *Education, Manpower, and Economic Growth*. New York: McGraw-Hill Book Co. \*
- Hajro, A. (2017) Integrating highly qualified migrants: allowing a personal narrative to set future research directions. *European Journal of Cross-Cultural Competence and Management*, 4, pp. 192-200.
- Heckhausen, J., Wrosch, C. & Schulz, R. (2010) A motivational theory of life-span development. *Psychological Review*, 117, pp. 32-60.
- Henkens, K., Van Dalen, H.P., Ekerdt, D., Hershey, D., Hyde, M., Radl, J., Solinge, H., Wang, M. & Zacher, H. (2018) What We Need to Know About Retirement: Pressing Issues for the Coming Decade. *The Gerontologist*, 58, pp. 805-812.
- Henry, H., Zacher, H. & Desmette, D. (2017) Future time perspective in the work context: a systematic review of quantitative studies, *Frontiers of Psychology*, 8, pp. 1-22
- Hill, N.S., Aguinis, H., Drewry, J., Patnaik, S. & Griffin, J.J. (2022) Using Macro Archival Databases to Expand Theory in Micro Research. *Journal of Management Studies*, 59, pp. 627-659.
- Hillmann, J. & Guenther, E. (2021) Organizational Resilience: A Valuable Construct for Management Research? *International Journal of Management Reviews*, 23, pp. 7-44.
- Hoff, T. (2021). Presenting Context in an AMD Article: The Value for Illuminating a Discovery. *Academy of Management Discoveries*, 7, 321–324
- Hofstede, G. (1980) *Culture's Consequences: International Differences in Work-related Values*. Sage Publications, Newbury Park.
- House, R.J. (2004) *Culture, Leadership and Organisations: The GLOBE study of 62 societies*. Thousand Oaks C.A.: Sage.
- Ibarrarán, P., Kluve, J., Ripani, L. & Rosas-Shady, D. (2019) Experimental Evidence on the Long-Term Effects of a Youth Training Program. *ILR Review*, 72, pp. 185-222. \*
- Johnson, M.H., Bartlett, K.R., Cunningham, P., Lynham, S.A. & Von der Marwitz, J. (2010) A necessary dialogue: A South African case study exploring the role of national HRD in HIV/AIDS non-government organizations. *Human Resource Development International*, 13, pp. 65-183. \*
- Jones, K.P., Sabat, I. E., King, E.B., Ahmad, A., McCausland, T.C. & Chen, T. (2017) Isms and schisms: A meta-analysis of the prejudice-discrimination relationship across racism, sexism, and ageism. *Journal of Organizational Behaviour*, 38, pp. 1076-1110.
- Kabayashi, R. & Kato, T. (2020) Do collective bargaining institutions crowd out discussion and implementation of firm-related training programs? Evidence from Japan. *International Journal of Training and Development*, 24, pp. 204-230. \*
- Kapucu, N., Hu, Q. & Khosa, S. (2017) The State of Network Research in Public Administration. *Administration and Society*, 49, pp. 1087-1120.
- Khan, M.A. & Ali A.J. (2014) The role of training in reducing poverty: the case of the ultra-poor in Bangladesh. *International Journal of Training and Development*, 18, pp. 271-281. \*
- Kerig, P.K. (2016). Family systems from a developmental psychopathology perspective. In D. Cicchetti (Ed.), *Developmental psychopathology: Theory and method* (pp. 580–630). John Wiley & Sons, Inc.
- Kim, S. & McLean, G.N. (2014) The impact of national culture on informal learning in the workplace. *Adult Education Quarterly*, 64, pp. 39-59. \*
- Kunze, F., Raes, A. & Bruch, H. (2015) It Matters How Old You Feel: Antecedents and Performance Consequences of Average Relative Subjective Age in Organizations. *The Journal of Applied Psychology*, 100, pp. 1511-26.
- Lalioti, V. (2019) Training-related dimensions of apprenticeship programmes in crisis-ridden Greece: an exploratory study. *International Journal of Training and Development*, 23, pp. 51-68. \*

- Lechner, C.M., Sortheix, F.M., Göllner, R. & Salmela-Aro, K. (2017) The development of work values during the transition to adulthood: a two-country study. *Journal of Vocational Behavior*, 99, pp. 52-65.
- Lee, M. (2004). National human resource development in the United Kingdom. *Advances in Developing Human Resources*, 6, pp. 334-345. \*
- Lee, A.S. & Jacobs, R.L. (2021) A Review of National Occupational Standards and the Role of Human Resource Development in their Implementation. *Human Resource Development Review*, 20, pp. 46-67.
- Liu, Z., Venkatesh, S., Murphy, S.E. & Riggio, R.E. (2020) Leader development across the lifespan: A dynamic experiences-grounded approach, *The Leadership Quarterly*, 32. 101382.
- Locke, K. & Golden-Biddle, K. (1997) Constructing Opportunities for Contribution: Structuring Intertextual Coherence and “Problematizing” in Organizational Studies. *Academy of Management Journal*, 40, pp. 1023-1062.
- Lutta-Mukhebi, M.C. (2004). National Human Resource Development Policy in Kenya. *Advances in Developing Human Resources*, 6, pp. 326-333. \*
- Lynham, S.A. & Cunningham, P.W. (2006) National human resource development in transitioning societies in the developing world: Concept and challenges. *Advances in Developing Human Resources*, 8, pp. 116-135. \*
- Lyons, S.T., Schweitzer, L., Urick, M.J. & Kuron, L. (2019) A dynamic social-ecological model of generational identity in the workplace. *Journal of Intergenerational Relationships*, 17, pp. 1-24.
- Mahmud, K. T., Parvez, A., Hilton, D., Kabir, G.M.S. & Wahid, I.S. (2014) The role of training in reducing poverty: The case of agricultural workers receiving microcredit in Bangladesh. *International Journal of Training and Development*, 18, pp. 282-290. \*
- Mamman, A., Kamoche, K., Zakaria, H.B. & Agbebi. M. (2018) Developing Human Capital in Africa: Carving a Role for Human Resource Professionals and Practitioners. *Human Resource Development International*, 21, pp. 444-462. \*
- Marcus, J. (2017) Age Discrimination. In N.A. Pachan (Ed) *Encyclopedia of Geropsychology*, New York: Springer, pp. 75-81.
- Marinaccio, J. (2018) Training in Austria’s and China’s Forestry Administration: A Comparison of Human Capital Development. *International Journal of Public Administration*, 41, pp. 516-527. \*
- Mascolo, M.P. & Fischer, K.W. (2010). The dynamic development of thinking, feeling, and acting over the life span. In W. F. Overton & R. M. Lerner (Eds.), *The handbook of life-span development*, Vol. 1. Cognition, biology, and methods (pp. 149–194). John Wiley & Sons, Inc..
- Mayring, P. (2014) *Qualitative content analysis: Theoretical foundation, basic procedures and software solution*, Klagenfurt: Monograph.
- McLaren, P.G., & Durepos, G. (2021). A call to practice context in management and organization studies. *Journal of Management Inquiry*, 30(1), 74-84.
- McLean, G.N. (2006) National Human Resource Development: A Focused Study in Transitioning Societies in the Developing World. *Advances in Developing Human Resources*, 8, pp. 3-11. \*
- McLean, G.N. & McLean, L. (2001) If We Can’t De fine HRD in One Country, How Can We Define It in an International Context? *Human Resource Development International*, 4, pp. 313-326. \*
- McLean, G.N., Kuo, M.-S., Budhwani, N. N., Yamnill, S. & Virakul, B. (2012) Capacity building for societal development: Case studies in human resource development. *Advances in Developing Human Resources*, 14, pp. 251-263. \*
- McLinden, M., Douglas, G., Cobb, R., Hewett, R. & Ravenscroft, J. (2016) Access to learning’ and ‘learning to access’: analyzing the distinctive role of specialist teachers of children and younger people with vision impairments in facilitating curriculum access through an ecological systems theory. *British Journal of Visual Impairment*, 34, pp. 179-197.
- Mellahi, K. (2000) Human resource development through vocational education in gulf cooperation countries: The case of Saudi Arabia. *Journal of Vocational Education and Training*, 52, pp. 329-344. \*
- Metcalfe, B.D. (2011a) Women work organisations and social change: human resource development in Arab Gulf States. *Human Resource Development International*, 14, pp. 123-129 \*

- Metcalfe, B.D. (2011b) Women, empowerment, and development in Arab Gulf States: A critical appraisal of governance, culture, and national human resource development (HRD) frameworks. *Human Resource Development International*, 14, pp. 131-148. \*
- Metcalfe, B.D. & Rees, C.J. (2005) Theorising advances in international human resource development. *Human Resource Development International*, 8, pp. 449-465. \*
- Metcalfe, B.D., Makarem, Y. & Afiouni, F. (2020) Macro talent management theorizing: transnational perspectives of the political economy of talent formation in the Arab Middle East. *The International Journal of Human Resource Management*, 32, pp. 147-182
- Mingers, J. & Willmott, H. (2013) Taylorizing business school research: On the 'one best way' performative effects of journal ranking lists. *Human Relations*, 66, pp. 1051-1073.
- Modisane, K.T. (2015) HRD Takes Root in Botswana: From Fledgling Beginnings to Positive Steps. *Human Resource Development International*, 18, pp. 429-440. \*
- Moersdorf, L., Daum, M.M., & Freund, A.M. (2022). For whom is the path the goal? A lifespan perspective on the development of goal focus. *Collabra: Psychology*, 8(1): 31603.
- Moore, J.R., Hankins, S. & Doughty, S.E. (2020). Successful Employees with Disabilities Through the Lens of Bronfenbrenner's Ecological Systems Theory: A Case Study at Sephora. *Journal of Business Diversity*, 20, pp. 10-19.
- Murphy, S.E. & Johnson, S.K. (2011) The benefits of a long-lens approach to leader development: Understanding the seeds of leadership. *The Leadership Quarterly*, 22(3), pp. 459-470.
- Ng, T.W.H. & Feldman, D.C. (2012) Evaluating six common stereotypes about older workers with meta-analytical data. *Personnel Psychology*, 65, pp. 821-858.
- Nkomo, S.M., Bell, M.P., Roberts, L.M., Joshi, A. & Thatcher, S.M.B. (2019) Diversity at a Critical Juncture: New Theories for a Complex Phenomenon. *Academy of Management Review*, 44, pp. 498-517.
- Nolan, C.T. & Garavan, T.N. (2016) HRD in SMEs: A Systematic Review of the Literature. *International Journal of Management Reviews*, 18, pp. 85-107.
- Oh, H., Choi, Y. & Choi, M. (2013) Comparative analysis of OECD member countries' competitive advantage in National Human Resource Development system. *Asia Pacific Education Review*, 14, pp. 89-208. \*
- Oh, H., Seo, D., Yoo, S. & Kim, J. (2017) Analysis of Strengths and Weaknesses in the National Human resource Development Systems of BRICS. *Human Resource Development International*, 20, pp. 268-281 \*
- Okumus, B., Xiang, Y. & Hutchinson, J. (2018) Local cuisines and destination marketing: cases of three cities in Shandong, China. *Asia Pacific Journal of Tourism Research*, 23(6), pp. 584-599.
- Osman-Gani, A.A.M. & Wee-Liang-Tan. (1998) Human resource development: The key to sustainable growth and competitiveness of Singapore. *Human Resource Development International*, 1, pp. 417-432. \*
- Paprock, K.E., Yumol, B. & Atienza, T.V. (2006) National human resource development in transitioning societies in the developing world: The Philippines. *Advances in Developing Human Resources*, 8, pp. 46-61. \*
- Park, I.-J., Rie, J., Kim, H.S. & Park, J. (2020) Effects of a Future Time Perspective-Based Career Intervention on Career Decisions. *Journal of Career Development*, 47, pp. 96-110.
- Peng, M.W., Sun, S.L., Pinkham, B. & Chen, H. (2009) The institutional based view as a third leg for a strategy tripod. *Academy of Management Perspectives*, 23, pp. 63-79.
- Pesämaa, O., Shoham, A., Khan, M.L. & Muhammad, I.J. (2015) The Impact of Social Networking and Learning Orientation on Performance, *Journal of Global Marketing*, 28, pp. 113-131.
- Petticrew, M. & Roberts, H. (2006) *Systematic Review in the Social Sciences: A Practical Guide*. Oxford: Blackwell.
- Pilz, M. (2017) *Vocational Education and Training in Times of Economic Crisis: Lessons from Around the World, Technical and Vocational Education and Training: Issues, Concerns and Prospects*. Springer. \*
- Pinto, J. (2019) Key to Effective Organizational Performance Management Lies at the Intersection of Paradox Theory and Stakeholder Theory. *International Journal of Management Reviews*, 21, pp. 185-208.

- Podsakoff, P.M., MacKenzie, S.B., Bachrach, D.G. & Podsakoff, N.P. (2005) The influence of management journals in the 1980s and 1990s. *Strategic Management Journal*, 26, pp. 473-488.
- Posthuma, R. & Campion, M. (2009) Age Stereotypes in the Workplace: Common Stereotypes, Moderators, and Future Research Directions. *Journal of Management*, 35, pp. 158-188.
- Prendergast, M. (2016) Training and developing non-Irish workers: The perspectives of interested stakeholders. *European Journal of Training and Development*, 40, pp. 446-467. \*
- Prieto, L., Phipps, S. Thompson, L. & Ogbuehi, A. (2015) Societal Entrepreneurship and National Human Resource Development: A Caribbean Perspective. *International Journal of Entrepreneurship*, 19, pp. 105-118. \*
- Rabetino, R., Kohtamäki, M. & Federico, J.S. (2020) A (Re)view of the Philosophical Foundations of Strategic Management. *International Journal of Management Reviews*, 23, pp. 151-190
- Rana, S. Ardichvili, A. & Zaing, S.K. (2017) National human Resource Development in a transforming society: the case of Cambodia. *Human Resource Development International*, 20, pp. 127-146. \*
- Rao, T. & Varghese, S. (2009) Trends and challenges of developing human capital in India. *Human Resource Development International*, 12, pp. 15-34. \*
- Razvi, M. & Roth, G. (2010) Non-governmental organizations and the socio-economic development of low-income women in India. *Human Resource Development International*, 13, pp. 65-81. \*
- Reitan, T. & Stenberg, S-Å. (2019). From classroom to conscription. Leadership emergence in childhood and early adulthood. *Leadership Quarterly*, 30, pp. 298-319.
- Roca-Puig, V., Beltrán-Martín, I. and García-Juan, B. (2019) Incorporating poverty in society into strategic human resource management. *The International Journal of Human Resource Management*, 32,13, pp. 2759-2782.
- Rosa, E.M. and Tudge, J. (2013). Urie Bronfenbrenner's Theory of Human Development: Its Evolution From Ecology to Bioecology. *Journal of Family Theory & Review*, 5, 243-258.
- Rudolph C.W. (2016) Lifespan developmental perspectives on working: a literature review of motivational theories. *Work Aging Retirement*, 2, pp. 130-158.
- Rudolph, C.W. & Zacher, H. (2018) Managing employees across the working lifespan. In Hoffman, B., Shoss, M. and Wegman, L (Eds) *The Cambridge Handbook of the Changing Nature of Work*. Cambridge, UK: Cambridge.
- Savage, M. & Williams, K. (2008) Elites: remembered in capitalism and forgotten by social sciences. *The Sociological Review*, 56, pp. 1-24.
- Schwall, A. (2012) Defining age and using age-relevant constructs. In J.W. Hedge and W.C. Borman (Eds.) *The Oxford Handbook of Work and Aging*. Oxford; New York: Oxford University Press.
- Schwartz, S.H. (1994) Cultural Dimensions of Values: Toward an Understanding of National Differences. In U. Kim, H.C. Triandis, C. Kagitçibasi, S.C. Choi & G. Yoon (eds), *Individualism and Collectivism: Theory, Method, and Applications*. Thousand Oaks, CA: Sage, pp. 85-121.
- Selomon, T.T., Urassa, G.C. & Allan, I.S. (2016) The effects of organisational capabilities on firm success: Evidence from Eritrean wood-and-metal-manufacturing firms. *African Journal of Economic and Management Studies*, 7, pp. 314-327.
- Selsky, J.W. & Parker, B. (2005) Cross-Sector Partnerships to Address Social Issues: Challenges to Theory and Practice. *Journal of Management*, 31(6), pp. 849-873.
- Sheldon, P. & Li, Y. (2013) Localized poaching and skill shortages of manufacturing employees among MNEs in China. *Journal of World Business*, 48, pp. 186-215. \*
- Shim, J., Lee, Y., Oh, J. & Im, J. (2015a) Developing an Evaluation System for Korean NHRD. *Review of Integrative Business and Economic Research*, 4, pp. 237-245. \*
- Shim, J., Lee, Y., Oh, J. & Im, J. (2015b) Factors Affecting Employment after Vocational Training of National Human Resource Development in Korea. *Review of Integrative Business and Economic Research*, 4, pp. 246-253. \*
- Shipp, A.J., Edwards, J.R. & Lambert, L.S. (2009) Conceptualization and measurement of temporal focus: The subjective experience of the past, present, and future. *Organizational Behavior and Human Decision Processes*, 110, pp. 1-22.

- Smith, E., Smith, A., Pickersgill, R. & Rushbrook, P. (2006) Qualifying the workforce: The use of nationally recognised training in Australian companies. *Journal of European Industrial Training*, 30, pp. 592-607. \*
- Snyder, S.E., & Duchschere, J.E. (2022) Revisiting ecological systems theory: Practice implications for juvenile justice youth. *Translational Issues in Psychological Science*. Advance online publication. <https://doi.org/10.1037/tps0000324>
- Spry, N. & Marchant, T. (2014) How a personal development program enhances social connection and mobilises women in the community? *Australian Journal of Adult Learning*, 54, pp. 32-53. \*
- Stackhouse, M. Kirkman, B., Steel, P. & Taras, V. (2018) National culture and leadership research between 2003 and 2014: a review, synthesis, and directions for the next decade of cross-cultural leadership research. In D. S. Ones, N. Anderson, and H. K. Sinangil, *The SAGE handbook of industrial, work, and organizational psychology*. SAGE Publications Ltd, pp. 206-236.
- Suddaby, R., Silverman, B.S., De Massis, A., Jaskiewicz, P. & Micelotta, E.R. (2021) Call for Papers for the 2023 Family Business Review (FBR) Special Issue on History-informed Family Business Research. *Family Business Review*, 33(3), pp. 331-334.
- Taras, V., Steel, P. & Kirkman, B. L. (2016) Does country equal culture? Beyond geography in the search for cultural boundaries. *Management International Review*, 56, pp. 455-487.
- Thornton, P.H., Ocasio, W. and Lounsbury, M. (2015) The Institutional Logics Perspective. In R.A. Scott and S.M. Kosslyn (Eds.) *Emerging Trends in the Social and Behavioral Sciences*, New York: Wiley.
- Thorpe, R., Holt, R., Macpherson, A. & Pittaway, L. (2005) Using knowledge within small and medium-sized firms: A systematic review of the evidence. *International Journal of Management Reviews*, 7, pp. 257-81.
- Toossi, M. & Torpey, E. (2017). *Older workers: Labor force trends and career options*, Career Outlook, U.S. Bureau of Labor Statistics, May.
- Tranfield, D., Danyer, D. & Smart, P. (2003) Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14, pp. 207-222.
- Trompenaars, F. (1996). *Riding the waves of culture: Understanding cultural diversity in business*, London: Nicholas Brealey Publishing Ltd.
- Tsoukas, H. (2017) Don't simplify, complexify: From disjunctive to conjunctive theorizing in organization and management studies. *Journal of Management Studies*, 54, pp. 132–153.
- Tung, R. L. (2016) New perspectives on human resource management in a global context. *Journal of World Business*, 51, pp. 142-152.
- Uzzi, B. (1999). Embeddedness in the making of financial capital: how social relations and networks benefit firms seeking financing. *American Sociological Review*, 64, pp. 481-505.
- Vaara, E. & Lamberg, J-A. (2016) Taking Historical Embeddedness Seriously: Three Historical Approaches to Advance Strategy Process and Practice Research. *Academy of Management Review*, 41, pp. 633-657,
- Veth, K.N., Korzilius, H.P.L.M, Van der Heijden, B.I.J.M, Emans, B.J.M. & De Lange, A.H. (2019) Which HRM practices enhance employee outcomes at work across the life-span? *The International Journal of Human Resource Management*, 30, pp. 2777-2808.
- Wang, X. & McLean, G.N. (2007) The Dilemma of Defining International Human Resource Development. *Human Resource Development Review*, 6, pp. 96-108.
- Wen, J., Wang, W., Kozak,, M., Liu, X. & Hou, H. (2021) Many brains are better than one: the importance of interdisciplinary studies on COVID-19 in and beyond tourism, *Tourism Recreation Research*, 46, pp. 310-313.
- Wilkins, S. (2002) Human resource development through vocational education in the United Arab Emirates: The case of Dubai polytechnic. *Journal of Vocational Education and Training*, 54, pp. 5-26. \*
- Wilkinson, A., Wood, G. & Deeg, R (Eds.) (2014) *The Oxford handbook of employment relations: Comparative employment systems*. Oxford: Oxford University Press.
- Wilkinson, K. (2022) Maternal (perinatal) mental health and employment: An agenda for research and practice. *Human Resource Management Journal*, pp. 1-18.

Yang, B., Zhang, D. & Zhang, M. (2004) National human resource development in the People's Republic of China. *Advances in Developing Human Resources*, 6, pp. 297-306. \*

Zarestky, J. & Collins, J.C. (2017) Supporting the United Nations 2030 sustainable development goals: A call for international HRD action. *Human Resources Development International*, 20, pp. 371-381. \*

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