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BUILDING KNOWLEDGE MANAGEMENT THROUGH A LEARNING AND DEVELOPMENT ARCHITECTURE IN ORGANISATIONS

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Abstract:
Bitter or sweet, investing in employee learning and development is an important leadership decision in every organisation and triggers intense discussions from an opportunity costs perspective. In good or bad times, there is always a debate in leadership on the need to prioritise and invest in employee learning and development initiatives. This study examines how a global organisation designed and built a learning and development architecture to drive employee and organisational capability, which was integrated into its talent and succession management initiatives. The study proposes a framework to design and implement a learning and development architecture anchored on andragogy, values and behaviors, leadership commitment, knowledge centre, operational excellence and employee engagement. It concludes that there is a relationship between a well-designed learning and development architecture and other HR outcomes, including talent and succession management.

Keywords: learning and development architecture, andragogy, work-based learning, action learning, knowledge centre, knowledge management

1. Introduction

An organization's learning and development architecture helps to build the capacity of its staff and also facilitates the realization of corporate goals. Investments in employee learning and development, when integrated with other talent management initiatives ensures coherence towards achieving employee and organizational effectiveness outcomes. Bitter or sweet, investing in employee learning and development is an important leadership decision in every organisation and triggers intense discussions from an opportunity costs perspective. In good or bad times, there is always a debate in leadership on the need to prioritise and invest in employee learning and development initiatives. In a world where the place of work has become more online-based, the

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strategic use of technology to deliver learning and development programmes has assumed mission-critical importance. Upskilling and re-skilling staff in a world of uncertainty is a sine qua non for competitiveness in the labour market. The agenda of investing in staff learning and development has become and will continue to become increasingly crucial if organizations are to achieve their business strategies. In order to develop and operationalize a learning and development architecture, it entails a participatory process that involves all organizational stakeholders, namely the board, senior leadership, middle managers and staff. This level of engagement is an absolute requirement for ensuring competitive advantage, quality learning and development programmes and services delivery, accountability and overall organizational effectiveness.

The purpose of this study is to examine how a global organisation designed and built a learning and development architecture to drive employee and organisational capability, which was integrated into its talent and succession management initiatives.

2. Literature Review

2.1 Knowledge Management and Learning and Development

Any organisation that intends to build a learning and development architecture requires a solid philosophical foundation anchored on knowledge management. Learning and development of employees aims to transfer knowledge through skills and behaviors to enable organisational effectiveness. A review of the literature on knowledge management indicates varying perspectives with respect to the philosophical definition of knowledge (Dueck, 2001; Martensson, 2000; Fahey & Prusak, 1998).

Three varying perspectives have been identified in the literature:

1) knowledge as an object,
2) knowledge as residing in individual minds, and
3) knowledge as being constructed socially.

The definition of knowledge as an object posits that knowledge exists outside of people. This definition is associated with engineering (Hendriks, 2001). It limits knowledge to information, i.e., data organized and structured in a context relevant to the user (Wiig, 1997). In this definition, knowledge management initiatives consist of information management. The focus is on technologies such as repositories, search and retrieval and access software with the aim to archive information and make it accessible to employees (Hendriks, 2001). Research, however, confirms that organizations invest in resources to acquire and archive information only to realize employees rarely use it (McDermott& O'Dell, 2001). The challenge with this approach is that it fails to consider the values and needs of employees. According to Palmer 2003, databases and other storage media will be used only if potential users value them.

The second definition of knowledge is framed as residing in the minds of individual employees of the organization who apply cognitive processes to transform information into knowledge (Nonaka, 1994). Knowledge is created through knowledge

conversion, focusing on a dialogue between tacit and explicit knowledge. Tacit knowledge has a personal quality that makes formalizing and communicating it difficult, whereas explicit knowledge is transmittable in systematic language (Polanyi, 1958). This perspective avers that a critical challenge for knowledge management is to capture and convert knowledge from employees' minds (tacit knowledge) into a form that is available, accessible and utilized by others (explicit knowledge). Knowledge is codified using a "people-to-documents" approach in which knowledge from the person who developed it is made independent of that person and is subsequently used for various purposes (Hansen, Nohria, & Tierney, 2001). Once this process is completed, it becomes information and can be stored. Limiting knowledge management to an individual-based process may generate tensions, causing efforts aimed at reinforcing individual knowledge to be counterproductive for organizational knowledge creation.

The social perspective of the philosophy of knowledge considers knowledge to be socially constructed as groups of individuals engage in talk and activity around shared tasks or problems (Merriam & Caffarella, 1999, 2007). In contrast, the two previously discussed perspectives on knowledge ignore social and tend to view technology as the key to successful knowledge management. An analysis of 400 journal articles published between 1993 and 1998 revealed this technological bias in the knowledge management literature (Hendricks, 2001). Nonetheless, the importance of the social dimension in knowledge management is supported by several studies. Knowledge creation is a dynamic social process that involves human interaction with its inherent complex of values, assumptions, language and symbols (Schwarndt & Marquardt, 2000). An organisation's L&D architecture comprises senior leadership political will, L&D strategies, operational excellence processes and systems and andragogy principles. The integration of these factors becomes the foundation to implement in-house organisational knowledge centers that facilitate talent management through the transfer of skills, values and behaviors to enable organisational performance.

2.2 Work-Based Learning

Work-Based Learning (WBL) has gained global attention as an essential strategy for equipping professionals with the skills necessary to succeed in the workforce (Wang *et al.*, 2024). As organizations face pressure to streamline operations and adapt to change, work-based learning has emerged as a strategic approach to enhance leadership capabilities (AlNuaimi *et al.*, 2022). Work-based learning is rooted in various theoretical foundations, including situated learning theory, which emphasizes learning through active participation in real workplace situations. It offers opportunities for learners to tackle real-world tasks and challenges, fostering leadership development within their work environments. Blending learning and work facilitates the application of theoretical knowledge to practical situations, equipping leaders to navigate complex organizational dynamics effectively. Work-based learning aligns with transformational leadership theory, encouraging leaders to cultivate inspirational and motivational qualities through experiential learning and reflection (Ladyshewsky, 2007). These experiences empower

leaders to inspire employees, drive innovation, and initiate organizational change (Zhang *et al.*, 2020). Work-based learning incorporates adult learning theories, recognizing that leaders possess prior knowledge and skills (Mumford, 2010). This approach prioritizes learner-centered experiences, allowing leaders to construct knowledge actively and meaningfully through reflection, collaboration, and workplace problem-solving. WBL refers to structured learning and development experiences that take place in real work environments, allowing learners to apply academic knowledge to practical tasks. WBL combines hands-on experience in the workplace with vocational learning. WBL is essential in improving practical skills, especially in the context of vocational education (Suyitno & Pardjono, 2018). WBL emphasizes the transformative potential of work-based learning initiatives and is vital in developing influential leaders, fostering a culture of learning and innovation. WBL interconnects leadership development, organizational growth and economic success. WBL plays a critical role in driving positive organisational effectiveness outcomes (Bilderback, 2025). Understanding the background and context of work-based learning is crucial to grasping its impact on leadership, talent management and organisational effectiveness (Bilderback, 2025). Work-based learning provides a hands-on approach for aspiring leaders to gain practical experience, refine their skills, and understand organizational dynamics (Selznick *et al.*, 2022).

Perusso and Wagenaar (2024) introduced the concept of electronic work-based learning (eWBL), providing a framework for integrating digital tools in work-based learning programs. Plasman and Thompson (2023) highlighted the economic benefits of informal learning within work-based learning, underscoring its value beyond formal educational settings. Fletcher (2023) discussed using virtual learning environments to enhance reflective practice in work-based learning, suggesting that technology can significantly improve these experiences

2.3 Action Learning

Talent is the engine behind the creation of all value (Christensen, 2006). Talent development is an investment in building skills and behaviors that result in successful performance; it is an investment in building the capabilities of employees that enable business strategy. One of the most important principles of andragogy to strengthen talent management is action learning. Action learning is a way of learning from action and experience, or learning by doing. Action learning assumes that organisational problems can become a vehicle for learning as they are tackled and resolved. The key to all forms of action learning is that they can be conceptualised as a strategy whereby individuals learn from shared reflections as they confront problems in small groups and search for acceptable solutions. According to Revans (1982), there are three essential components of action learning: real-world action, involving a number of individuals, with an emphasis on learning from the shared experience. Underlying the process is a model of learning that seeks to integrate theory and practice (Pedler, 2016). Learning occurs in a cycle of experiences that seeks to integrate theory and practice. Learning occurs in a cycle of experience whereby information is gathered, reflection follows, then abstract

conceptualisation, then some form of active experimentation, as in the model of experiential learning developed by Kolb (1984) and subsequently elaborated by Pedler, Burgoyne and Boydel (1986). Action learning models are based on a number of assumptions that employees, as mature adults, generally learn best when provided with an appropriate opportunity to engage their inbuilt knowledge-seeking endeavours. Within organisations, action learning initiatives can lead to increased teamwork skills, self-understanding, critical reflection and reframing (Sofo, 1999). In line with all process-based methods, action learning has potential pitfalls. Senior leadership commitment is required to ensure support is provided in terms of time and facilities, without which they will not value the benefits of the learning outcomes. When an organisation integrates action learning into its learning and development strategies, it ensures knowledge transfer using employees'real life experiences. Action learning must be based on andragogy principles.

2.5 Employee Learning and Development

Employee learning refers to all the policies, programs, processes and activities that go into identifying, nurturing, developing, and appropriately rewarding the talents and capabilities of an individual. It is a process to facilitate personal and professional development, to reinforce self-belief in a person to realize his/her full potential in a sustainable manner (Coleman, 2018). Employee learning is an enabler for changing behavior and skills. Mangham (1948). Investing in employee learning is a source of motivation for staff (Benkhoff, 1997, 1997). Employees place a high value on learning if it will lead to a favourable outcome (Vroom, 1982). Many organizations invest in executive training programmes for their employees as a means to improve organizational performance (Stuller, 1993). Managers play a key role in facilitating employee learning and development (Weaver & Farrell, 1997). Employers are focusing on competence-based management education to drive productivity (Albanese, 1989). Whereas investment in data infrastructure can normally be defined as cost saving leading to improved data-driven decision making, the outcomes of employee learning programmes and their impact on business are often difficult to assess (Kearns, 2005). This is due to the fact that the immediate learning objectives and outcomes to be realized are often not expressed in quantitative terms. Philips (1997) identifies a number of factors that make most HR and training staff shy away from doing ROI assessments on employee learning programmes, including the absence of pressure from senior management to conduct a post learning knowledge transfer and its impact on business performance.

Employees in most organizations are adults, and any strategy for employee learning must consider the conceptual framework that underpins adult learning. Linderman *(1926),* based on his experience as both an adult learner and a teacher of adults, proposed that adults were not just grown-up children, that they learned best when they were actively involved in determining what, how, and when they learned. Argyris and Kaplan (1994) have concluded that implementing new knowledge gained after an employee learning programme can be enhanced by activity-based costing.

According to Knowles (1998:3), there are six main assumptions underpinning adult learning:

1) Adults have a need to know why they should learn something,
2) Adults have a deep need to be self-directing,
3) Adults have a greater volume and a different quality of experience than youth,
4) Adults become ready to learn when they experience in their life situation a need to know or be able to do in order to perform more effectively and satisfyingly.
5) Adults enter into a learning experience with a task-centred or problem/life-centred orientation to learning, or in simple terms, real-life experiences.
6) Adults are motivated to learn by both extrinsic and intrinsic motivators.

Mayo (2008) argues that in the field of training, organizational change and HR initiatives, employers are more likely to be aiming for non-financial benefits in the first place than for a targeted bottom-line gain. Alder (1992) has stressed the need for evaluating the impact of employee learning vis-à-vis the added benefit to company performance. Kirkpatrick (1998) defined four levels for evaluating a training programme- the first was the experience itself, followed by evidence of real learning. The third was the application of the learning to the workplace, and finally, the effect on the bottom line.

Philips (2001) added ROI as level 5. Mayo (2008) has suggested a "level 0", which is fundamental, and that is the setting of the objectives of the programme. In this research, we will argue that three key enablers are required before a rigorous measurement of the impact of employee learning can be effectively conducted. These are organizational culture, theory of change (TOC), and support systems. Luiten *et al.* (1980) have argued that measuring employee learning is critical to assess learning transfer, retention and application of knowledge. Lumsden and Sheron (1975) assert that employees as adults bring life experiences into any learning space, and this must be factored in when assessing knowledge transfer before and after a learning intervention. Wholey (1991) avers that managers need to ensure that the views of all internal and external constituencies are considered when post learning evaluation criteria are developed. In order to measure the impact of any employee learning programme, it is important to have employee group support systems to improve the learning environment (Briggs *et al.* 1994-1995)

Our review of the literature confirms that an organisation's L&D architecture must be anchored on a clear knowledge management philosophy, supported by an integrated technical approach that combines L&D strategies, action learning and andragogic principles.

3. Hypothesis

- If a L&D architecture is anchored on a sound knowledge management philosophy, it drives a high level of employee engagement.

- If a L&D architecture is designed based on strategy, operational excellence and andragogic principles it facilitates employee learning and development in a transparent manner.

4. The Case Study Organisation

The organization with its headquarters in Canada, is a global humanitarian organization dedicated to working with children, families and communities affected by conflict and humanitarian crises. It serves all people, regardless of religion, race, ethnicity, or gender. It has had a global presence since 1995, implementing relief and post conflict interventions for affected communities across Asia, Africa, and Latin America. It has been building peace, transforming communities and using innovation tools to end violent conflicts around the world. It employs over three thousand employees across twenty countries in the world. In 2020, it decided to scale up its investment in staff learning and development in response to the projected growth arising from new funding that had been secured from donors. Senior leadership agreed to implement a comprehensive learning and development architecture, including an in-house academy that would be key to building core organizational capabilities, strengthening talent management and succession planning to build a pool of "leaders for the future" to deliver impact. The Board has also expressed an expectation to senior leadership to focus on strengthening technical and leadership capability for excellence in complex humanitarian emergencies and fragile context programmes delivery.

The L&D architecture was also expected to support the capacity building of community-based partners and government partner agencies across its programme implementation countries. A Chief Human Resources Officer was hired in 2020 to implement the in-house academy. He subsequently hired a Chief Learning Officer and two learning and development officers to support the execution of the learning and development strategy pillar of the company's overall Human Resources strategy. The senior leadership team also appointed the Managing Director in charge of international programmes and a member of the Board's HR Committee to serve as a working group to provide senior leadership and board-level support to the CHRO. This was to reinforce political will and support from the organisation's highest levels. The Board had also set a performance expectation of the Chief Executive Officer on the need to implement a sustainable talent management and succession planning programme to enable the organisation build the next set of leaders for its fifth strategy cycle.

The case study organization raises 90% of its funding from unrestricted funding and 10% from donors in Europe and America.

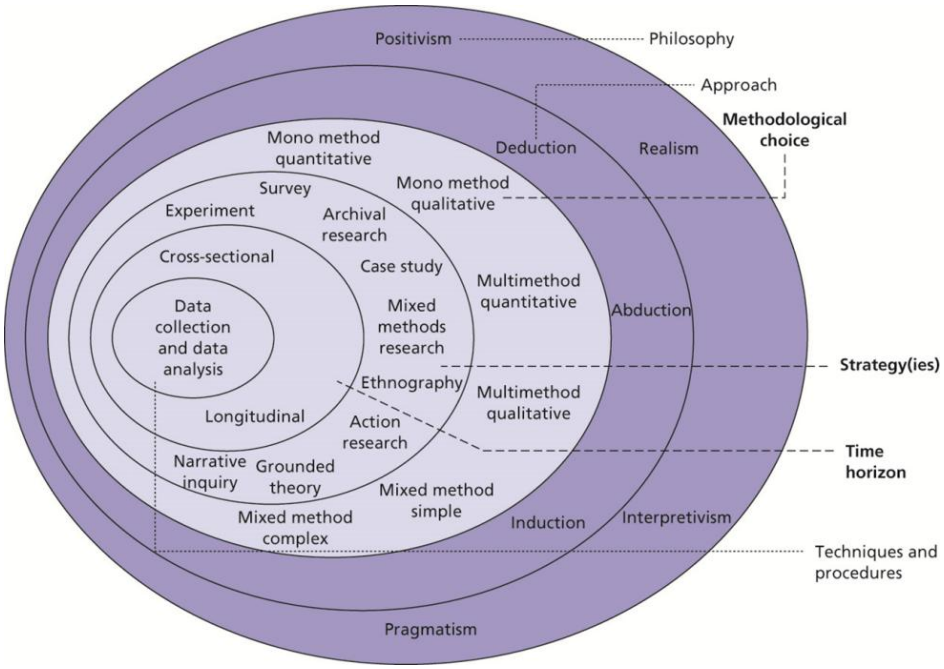
5. Methodology

5.1 Research Philosophy and Approach

The research strategy is the general plan for how the researcher will address the research questions (Saunders *et al.*, 2012, p. 680). The different stages of a research strategy are illustrated by the research onion. It comprises the research philosophy, the research approach, the methodological choices and strategies, the time horizon, and the techniques and procedures for collecting data and analysing it.

For the purpose of this study, a positivist research philosophy was used. A deductive approach was used to develop and test the research questions and hypotheses. To design the research, a combination of qualitative and quantitative methods, through a survey, was developed.

Figure 1: The Research Onion



Source: Saunders *et al.* (2012).

The rationale of research philosophy, approach and design is explained in sections in the next section.

5.2 Research Philosophy

As shown in Figure 1, there are four approaches to research philosophy: realism, interpretivism, pragmatism, and positivism (Saunders *et al.*, 2012).

Approach	Description
Realism	The epistemological position that objects exist independently of our knowledge of their existence. (Saunders *et al.*, 2012: 673).
Interpretivism	A philosophical position which is concerned with understanding the way we as humans make sense of the world around us. (Saunders *et al.*, 2012: 678).
Pragmatism	A position that argues that the most important determinant of the research philosophy adopted is the research question, arguing that it is possible to work within both positivist and interpretivist positions. It applies a practical approach, integrating different perspectives to help collect and interpret data. (Saunders *et al.*, 2012: 678).
Positivism	The epistemological position that advocates working with an observable social reality. The emphasis is on highly structured methodology to facilitate replication, and the end product can be law-like generalisations similar to those produced by the physical and natural scientists. (Saunders *et al.*, 2012: 678).

This research is applied HR research that focuses on how an organisation rolled out a learning and development architecture anchored on knowledge management principles and supporting operational excellence systems and standards.

Based on the findings, we will propose a framework for designing an effective learning and development architecture and how this enables talent management practices in organisations. Consequently, a **positivist research philosophy** was more appropriate to enable us achieve our research objectives.

5.3 Research Approach

There are three different research approaches: inductive approach, abductive approach and deductive approach. The **abductive approach** involves the collection of data to explore a phenomenon, identify themes and explain patterns, to generate a new – or modify an existing – theory which is subsequently tested (Saunders *et al.*, 2012, p. 665). The **inductive approach** involves the development of a theory as a result of the observation of empirical data (Saunders *et al.*, 2012, p. 672). By contrast to the inductive approach, the **deductive approach** involves the testing of a theoretical proposition by the employment of a research strategy specifically designed for the purpose of its testing (Saunders *et al.*, 2012, p. 669).

Drawing lessons from other studies, this research used a deductive approach to explore the scope of the influences of factors and practices that enable or restrict an effective learning and development environment within our case study organisation.

The next section below covers the research method used to answer the research questions, test the hypotheses and achieve the research objectives.

5.4 Research Method

This section covers the data collection technique, the research questionnaire, the research participants and how they were selected, and the technique used to collect and analyse data. The ethical considerations conclude this section.

5.5 Data Collection Techniques

Data can be collected through observations, using interviews or questionnaires. Each of these techniques is defined as follows:

- **Observations** — Sanders *et al.* (2012) define observations as 'the systematic observation, recording, description, analysis and interpretation of people's behaviour'. The observation can be through participant observation or structured observation. Participant observation is qualitative and our emphasis on discovering the meanings that people attach to their actions, while structured observation is quantitative and is more concerned with the frequency of actions. (Sanders *et al.*, 2012: 340).
- **Interviews** — an interview is 'a conversation between two or more people, requiring the interviewer to establish rapport, to ask concise and unambiguous questions, to which the interviewee is willing to respond and to listen attentively' (Sanders *et al.*, 2012, p. 372). There are three types of interviews: structured interviews, semi-structured interviews, and unstructured or in-depth interviews.
- **Questionnaires** — a questionnaire is a data collection technique in which each person is asked to respond to the same set of questions in a predetermined order (Sanders *et al.*, 2012 p. 679).

For this research, the questionnaire technique was used to collect primary data for two reasons. Given the global spread of the respondents, it was clear that observations and interviews required some level of contact or interaction with the participants, which could be challenging for our study. Second, observations and interviews require more time and resources to complete than questionnaires. Additionally, these techniques may require the support of other people in order to observe or interview a representative sample of people. We used purposive sampling for the study. These were staff who participated in the rollout of the in-house academy, senior leadership, and middle managers. The overall methodology used to generate data to inform the research interviews with staff, analysis of questionnaires and review of documents. A total of 250 out of a targeted sample of 300 staff completed the questionnaires from January 2024 to March 2024. This represents 83%. response rate and was a strong statistical sample to make generalizations of the purposively sampled respondents' perceptions and comments on the questions/factors that were analysed. In terms of gender diversity of staff, 55% were males and 45% were females.

The survey questionnaire was designed to collect data and opinions of participants. The questionnaire was used because this research involves the structured collection of data from selected employees of the case study organisation. *SurveyMonkey*, an online survey tool, was used to create and publish a web-based and self-completed questionnaire. Each respondent responded to the same set of questions and recorded their own answers online.

The organisation operates two major official language namely English and French; therefore, the main language of the survey was English and French translations have been added in parentheses directly in the question-and-answer text. This method was ideal

since responses were stored per question, and the results of the survey were combined in a single collector.

5.6 Research Questionnaire

As explained in the previous section, *SurveyMonkey* was used to design a web-based and self-completed questionnaire. The questionnaire consisted of eleven broad sections described in Table 1.

Table 1

Factors	Score
Reported skill Growth *- I have experienced an improvement in my technical skills after enrolling in the knowledge center/Amélioration des compétences signalée - J'ai constaté une amélioration de mes compétences techniques après m'être inscrit au centre de connaissances.*	3.8
Perception of support *- My line manager provides me with the required spaces and feedback to strengthen my application of the skills I have acquired/Perception du soutien - Mon supérieur hiérarchique me fournit l'espace et le retour d'information nécessaires pour renforcer l'application des compétences que j'ai acquises.*	3.7
User satisfaction *- I am satisfied with the overall programme content and structure/Satisfaction des utilisateurs - Je suis satisfait du contenu et de la structure générale du programme.*	3.5
Reach and commitment *-the company demonstrates strong organizational commitment to developing key people leaders across all functional areas/Portée et engagement - l'entreprise fait preuve d'un engagement organisationnel fort en faveur du développement de leaders clés dans tous les domaines fonctionnels.*	3.5
Strategy alignment *- the knowledge center fulfills the commitment to prioritize staff well-being and provide an enabling work environment/Alignement stratégique : le centre de connaissances respecte son engagement à donner la priorité au bien-être du personnel et à offrir un environnement de travail favorable.*	3.75
Accessibility and confidentiality *-there is equitable access to the knowledge center regardless of location, level or role/Accessibilité et confidentialité : l'accès au centre de connaissances est équitable, indépendamment du lieu, du niveau ou du rôle..*	4
Online learning *- the knowledge center's online approach has an emphasis on facilitated online learning through live interactive webinars and collaborative working/Apprentissage en ligne - l'approche en ligne du centre de connaissances met l'accent sur l'apprentissage en ligne facilité par des webinaires interactifs en direct et le travail collaboratif. .*	4
Offline learning *-the knowledge center's offline approach helps learners who have limited or no internet access and they can work through materials at their own pace and upload any course work when access to the internet becomes available/Apprentissage hors ligne : l'approche hors ligne du centre de connaissances aide les apprenants qui ont un accès limité ou inexistant à Internet. Ils peuvent ainsi travailler sur les supports à leur propre rythme et télécharger leurs travaux dès qu'ils ont accès à Internet.*	4
There is adequate action learning *that provides space for shared reflections/Il existe un apprentissage par l'action adéquat qui offre un espace pour des réflexions partagées.*	4
Self-directed learning- *the knowledge center's self-directed approach appeals to learners who already are experienced in independent learning and who already have a significant level of competence with the course content.*	3.6
Learning effectiveness/Efficacité de l'apprentissage	
I like the learning design, quality and formatting of materials/J'apprécie la conception pédagogique, la qualité et la mise en page d	3.9
The level of interaction with content, faculty, other learners is adequate/Le niveau d'interaction avec le contenu, les enseignants et les autres apprenants est adéquat.	4.2
I have built a learning community of practice with my fellow learners /J'ai créé une communauté d'apprentissage avec mes camara	3.8
There is a strong line of sight between what I have learned and its positive impact on the quality of my work/Il existe un lien évident entre ce que j'ai appris et son impact positif sur la qualité de mon travail.	4.3
Faculty satisfaction - I find the online facilitating experience personally rewarding and professionally beneficial/Satisfaction du corps enseignant - Je trouve l'expérience d'animation en ligne enrichissante sur le plan personnel et bénéfique sur le plan professionnel.	4.4
Learning & Development Pathways	
I see the value of the knowledge hub as it provides skills needed to grow in the organisation /Je comprends l'intérêt du centre de connaissances, car il fournit les compétences nécessaires pour évoluer au sein de l'organisation.	4.2
There is a vibrant promotion pathway culture in this organisation/ Il existe une culture dynamique de promotion au sein de cette org	4.3
There are opportunities to be seconded to other organisations to apply the skills from the knowledge hub/ Il existe des possibilités d'être détaché auprès d'autres organisations afin de mettre en pratique les compétences	3.3
I have benefited from job enrichment initiatives as a result of the acquisition of skills from the knowledge centre/ J'ai bénéficié d'initiatives d'enrichissement professionnel grâce à l'acquisition de compétences auprès du centre de connaissances.	3.7
I have had the opportunity to act for colleagues and the skills from the knowledge hub has contributed my level of confidence/J'ai eu l'occasion d'agir pour mes collègues et les compétences acquises grâce au centre de connaissances ont contribué à renforcer ma confiance en moi.	4.1
The interaction of peer learners during project visits has build a safe space to learn from other colleagues/ L'interaction entre les pairs lors des visites de projets a permis de créer un espace sûr pour apprendre des autres collègues.	4.5

5.7 Analysis of Table 1

Feedback on the delivery of the knowledge centre was analysed. Staff reported very high scores on reported skills growth, perception of line manager support, online and offline learning, action learning and self-directed learning. There were also very high scores on perceptions of the strategic alignment between the knowledge centre's programmes and accessibility and confidentiality, and staff wellbeing outcomes. The scores on learning effectiveness, knowledge transfer, communities of practice and faculty satisfaction were moderately positive. Very significantly, there were very strong scores on the integration between the knowledge centre, talent management and promotion pathways initiatives.

5.8 Diversity and Inclusivity Sensitivity Analysis of Knowledge Centre

Overall, nearly 70% of female staff surveyed strongly agreed with the statement 'our office implements learning and development programs that enable women to get new skills.

Sixty-five percent of women believe that the company has learning and development programs for women. By contrast, seventy percent of men are positive about the learning and development programs.

Eighty percent of staff from the global south believe that the company's approach to learning and development enhances their chances to grow, while seventy eight percent of staff from the global south believe that the company's approach to learning and development enables promotion pathways.

Ninety percent of staff with disabilities believed that the access to learning and development resources in the knowledge centre was conducive to their needs.

5.9 Talent Management and Succession Planning

In a focused group discussion with the senior leadership team, there was consensus that the knowledge center had provided key skills that support talent management and succession planning decisions. Eight out of ten promotions were filled by learners from the knowledge center, while the remaining two openings were filled via horizontal job rotation, e.g. staff already at the same level. Six staff members who were under consideration for promotions in the next eighteen months were also intentionally enrolled by senior leaders to pursue specific modules relevant to their future roles. The promotion pathway processes for three staff were suspended to enable them take additional modules in the knowledge centre that were relevant for their future roles.

6. Discussions

6.1 L&D Strategy Foundation - The Listening Tour

The L&D Listening Tour served as the foundational, diagnostic step, ensuring that all subsequent investments and initiatives were directly aligned with the organisation's expressed needs and preferences. This was a multi-faceted data collection process that systematically gathered quantitative data via an organisation -wide survey, focus groups

with managers and qualitative insights through in-depth interviews, and analysis of existing organisational human resources tools such as performance review summaries. The tour's findings provided the essential mandate and blueprint for the L&D roadmap, ensuring high relevance and buy-in for all subsequent program launches.

The tour identified People Management, Strategic Communication Skills (Peer-to-peer), and Coaching & Mental Health Support as the most critical developmental areas across the network. This finding directly validated the need for the LEAD Management Training Program, mental health programme, a Learning Management System that is strong in peer learning and authoring, and a pilot Strategy Course.

Feedback showed a strong preference for **Peer-to-Peer Learning** and **Social Learning** (e.g., coaching, mentoring, peer discussions) over purely self-paced online courses. This led to the design of the highly interactive, cohort-based LEAD Program and the peer-to-peer knowledge sharing model of the Knowledge Hub.

6.2 Infrastructure Development: The Knowledge Center

The Knowledge Center (KC) represents the most significant investment in L&D infrastructure, establishing the organisation's first centralized Learning Management System (LMS). Its primary objectives were to streamline onboarding for new hires, effectively combat information silos by centralizing organizational knowledge, and provide an accessible platform to cultivate a sustainable culture of self-directed continuous learning and teams' autonomy in creating content.

6.3 Impact on Engagement and Knowledge Capture

6.3.1 Content Volume

145 Courses Published (including comprehensive Onboarding paths, People Skills, and specific network content). This demonstrated the efficiency of capturing, structuring, and migrating vast amounts of institutional knowledge into a single source of truth.

6.3.2 Adoption Rate

Consistent Average Monthly Active User Rate of 40% (i.e., 1200 out of 3000 employees). Signifies high user adoption and consistent platform engagement, confirming the Knowledge center's successful integration into daily workflow.

6.4 Learning Investment

Over 650+ hours of total time spent learning were recorded on the platform. This data quantifies the organisation's collective investment in capacity building and professional development within the first four months of launch.

6.5 Satisfaction and Content Quality

Average Course Rating of 4.66 out of 5. (check excel sheet for analytic rigour). Indicates extremely high user satisfaction with the quality, relevance, and usability of the available learning content.

6.6 Managerial Excellence: Leaders for the Future Management Program

The Leaders for the Future program was a high-impact, six-module, cohort-based training initiative delivered in partnership with an external partner, specifically designed to address the organisation's top developmental need. The program's core focus was to develop a unified management philosophy across the organisation and build crucial core competencies to enable high potential high performing staff to grow into roles with more complexity, scope, scale and size.

6.7 Impact on Competency and Support

6.7.1 Reach and Commitment

198 registered line managers from all geographic areas in the program. Demonstrates strong organizational commitment to developing key people leaders across all functional areas.

6.8 User Satisfaction

85% of respondents reported being "Satisfied" or "Very Satisfied" with the overall program structure and content. Confirms the high quality and relevance of the program to the managers' daily roles.

6.9 Reported Skill Growth

Participants reported the most significant increases in confidence in two critical areas: Navigating difficult conversations in the workplace and effectively delegating to those they supervise. Self-reported evidence of competency development in areas identified as high priority by the Listening Tour.

6.10 Perception of Support

Significant reported increase in the perception that managers have received the necessary training and access to the tools needed for their roles. This was rated at 3.87 on average by 83% of line managers. This directly addresses organizational support gaps, boosting managerial confidence and reducing perceived stress.

A key strategic outcome of the Leaders for the Future programme was the identification of a structural need for better alignment among senior leaders (managers of line managers) to fully embed the new management culture. Key Leaders for the future concepts are now being integrated into the Knowledge Center as essential self-serve resources for new managers and as refreshers for the current cohort.

6.11 Personal Development and Mental Well-being Support

The mental well-being support programme was implemented as a core component of the L&D architecture. It strategically responded to the critical need for mental health and well-being support identified across the organisation. This service provided confidential, accessible support to all staff, offering 1:1 coaching/counseling sessions and digital

resources spanning topics like stress, anxiety, productivity, self-development, and work-life balance.

The platform maintains strict confidentiality, meaning specific usage metrics (individual user consumption, team usage) are not tracked to ensure user trust and privacy.

6.12 Strategic Fulfilment

The successful launch directly addressed a **key action areas mandated by leadership** following the 2022-23 engagement surveys. Fulfils the commitment to prioritize staff well-being and provide an enabling work environment.

6.13 Accessibility and Confidentiality

Provides 24/7 access to professional support and resources across the global organisation. Ensures equitable access to mental health services regardless of location, level or role. 72% of users accessing the platform were utilizing mental health support for the first time. Confirms that nilo. Health is successfully reaching and serving staff who previously lacked access to or were hesitant to seek mental health resources.

6.14 High User Satisfaction

Average Session Rating of 4.8 out of 5 (based on user feedback for 1:1 sessions) indicates extremely high perceived quality and effectiveness of the coaching and counseling support provided by the platform's professionals.

6.15 Consistent Engagement

53% Average Monthly Active User Rate (based on aggregate platform usage data). Demonstrates consistent and regular network engagement with the platform's resources (coaching, self-guided tools), signifying successful integration of the well-being support into the organisation’s culture. The mental well-being programme secures a necessary, long-term resource that underpins the health and sustainability of the organisation’s talent.

The strategic development of the L&D function, with the foundational Listening Tour, the launch of the Knowledge center, the high-impact Leaders for the future Program, and the provision of mental well-being coaching & well-being support, has fundamentally shifted how the organisation approached staff capability building. These initiatives have successfully established a resilient, data-informed infrastructure that directly addresses core organizational needs—specifically, managerial excellence, centralized knowledge sharing, professional development and mental well-being. This finding shows that L&D is well-positioned to evolve from an infrastructure-builder to a strategic upskilling partner, focusing on integrating L&D offerings deeper into talent and performance management processes and scaling successful models, such as the Knowledge center’s external capacity for partners and strategic alliances to meet the organisation’s future strategic goals.

In sum building a L&D architecture grounded on knowledge management principles requires a clear diagnostic listening tour, infrastructural development, a leader for the future programmes and personal development and mental wellbeing support components.

6.16 Leadership and Governance

Senior leadership support was very critical to implementing the knowledge center and the overall talent management approach of the organisation. The CHRO was given decision rights to implement the knowledge centre and also benefited from the support of the senior leavel woking group of the Managing Director for International development programmes and a member of the Board's HR committee. Regular updates were provided to staff, senior leadership as well as the Board. These updates covered successes, challenges and upcoming initiatives to strengthen the programme. As a show of political will, the Board approved a provision of 15% of the overall compensation budget to be allocated to the knowledge centre and supporting talent management and succession planning initiatives.

6.17 Values and Behaviors Competencies Framework

The content of the knowledge centre and the supporting talent management and succession planning initiatives were framed around the organisation's values and behaviors competencies framework document. This document defines ten core competences with sub-categories and standards of what effective and less effective demonstration of the values looks like. This framework also informed the content of the knowledge centre and was a guiding document for talent management, performance management and succession planning decisions by senior leadership. Three core capacity building factors that informed the design of the values and behaviours-based competencies framework were capability, skills and competencies. Capability focuses on individuals, what a person is able to deliver and where real opportunities are available and accessible to achieve what the person deeply cares about. It emphasizes the ability to convert resources into actual accomplishments beyond material achievements. Skills are specific, learnable abilities that enable an employee to perform tasks effectively. Competency is knowledge and behaviours that facilitate success in a job. Competencies are broader sets of knowledge, skills, and behaviors that contribute to overall success in a role. Skills are the building blocks, and competencies are the structures, systems and norms they create.

6.18 Moving from Concept into Practice

Based on the analysis and findings, we will now propose a framework to design and implement a learning and development architecture anchored on knowledge management philosophy and principles.

6.19 Knowledge Centre & Organisational Strategies

A knowledge centre is a key component of a learning and development architecture. It serves as an in-house academy within an organisation's learning and development architecture and must have a strong line of sight to organisational strategic priorities and organisational culture to support organisational effectiveness outcomes. An organisation must develop a Learning and Development Strategy as an integrated enabler of its overarching human resources strategy, which serves as the foundation for the learning and development architecture. A knowledge center which acts as an in-house academy is a key component of the L&D strategy and learning and development architecture, and should have à business partnering approach and partner with key teams who work in project management. This helps to build internal capacity for both staff and external partners and thereby promotes collaboration.

6.20 Operational Excellence

A knowledge centre as an enabler for an organisation's learning and development architecture ought to prioritise assessment of value for all work-based learning and development initiatives. This helps to build the case for providing learning and development resources to accelerate organisation-wide goals. A key enabler for an effective knowledge centre as an enabler for an organisation's learning and development architecture is to consistently address technical skills shortages in the knowledge centre staffing**.** It is important to conduct cost-benefit analysis of developing skills in-house versus outsourcing or a hybrid combination of both approaches. Another key enabler of an effective knowledge centre is robust data management to ensure more accessible and timely information to inform real time changes for learners. Another important enabler for an effective knowledge center is technology to ensure website and platform user-friendly improvements**.** This helps to increase access, familiarity with and improvements to the learner's management of courses online through dedicated IT support or direct access from the knowledge center to IT suppliers.

Operational excellence in a knowledge centre requires good understanding of the differences between the *'face-to-face', 'online', 'self-directed' and 'offline'* approaches to the courses and modules. Learners are offered the opportunity to take on-line quiz before taking up a course, to determine which option will suit their needs. Learners will usually have the choice over which approach they wish to undertake for each module. Learning coordinators will then establish suitability of the chosen approach to the individual and refer to a different approach where appropriate i.e. for some modules, the choice may be limited if a particular approach is unlikely to be effective for the given subject matter and self-directed will usually be focused on learners with prior experience of technology and content.

The face-to-face approach has an emphasis on learning in a facilitated workshop environment; however, it will most often incorporate elements of online and self-directed study where connectivity is possible. The online approach has an emphasis on facilitated online learning through live interactive webinars and collaborative working. The self-

directed approach appeals to learners who are already experienced in independent learning and who already have a significant level of competence with the course content. This option is typically used when work patterns are unpredictable and webinar times from online learning are not suitable. The learner will navigate through the blended learning process at their own pace, whilst still making use of opportunities for some online collaboration and tools from the resource centre within the knowledge center. The offline approach is for learners who have limited or no internet access. By providing them with offline learning materials, they can work through materials at their own pace and upload any coursework when access to the internet becomes available.

6.21 Andragogical Imperatives

A knowledge centre is for adult learners, and there is a need to adapt learning content for scalability and cost effectiveness into smaller, more usable and flexible learning units. It is also important to increase understanding, motivation for and engagement of informal learning through knowledge sharing, social learning, collaboration, public recognition, networking and sharing.

6.22 Quality Assurance

A knowledge centre, as a key component of an L&D architecture, must have key quality standards. These are:

1) **Student (Learner) Satisfaction:** This standard focuses on learner satisfaction, which is the most important key to continuing learning and looks at the effectiveness of all aspects of the learner experience from satisfaction with the course content and process, with support services and interaction with faculty and peers, exploring obstacles to engaging and how far learners are currently incorporating learning back into their work at the organisation.
2) **Access:** This standard focuses on meaningful and effective access to knowledge center learning courses and modules, from being made aware of available opportunities through effective marketing, and basic course information. It continues with providing course access (for example, quantity and variety of available program options, clear course information), seamless access to courses and appropriate learning resources. Access includes three areas of support: academic (such as tutoring, advising, and library); administrative (such as help with enrolments); and technical (such as hardware reliability and technical support).
3) **Scale:** This standard focuses on practices for scale to leverage key educational resources while offering new online learning opportunities to learners and faculty in these categories: cost effectiveness, organisational commitment, organisational infrastructure, technical Infrastructure, methodologies (e.g. for conserving costs, resources, time, effort), policy, partnerships and scalability.
4) **Learning Effectiveness:** This standard assesses learning design, quality and formatting of materials and takes a look at issues arising from these that impact

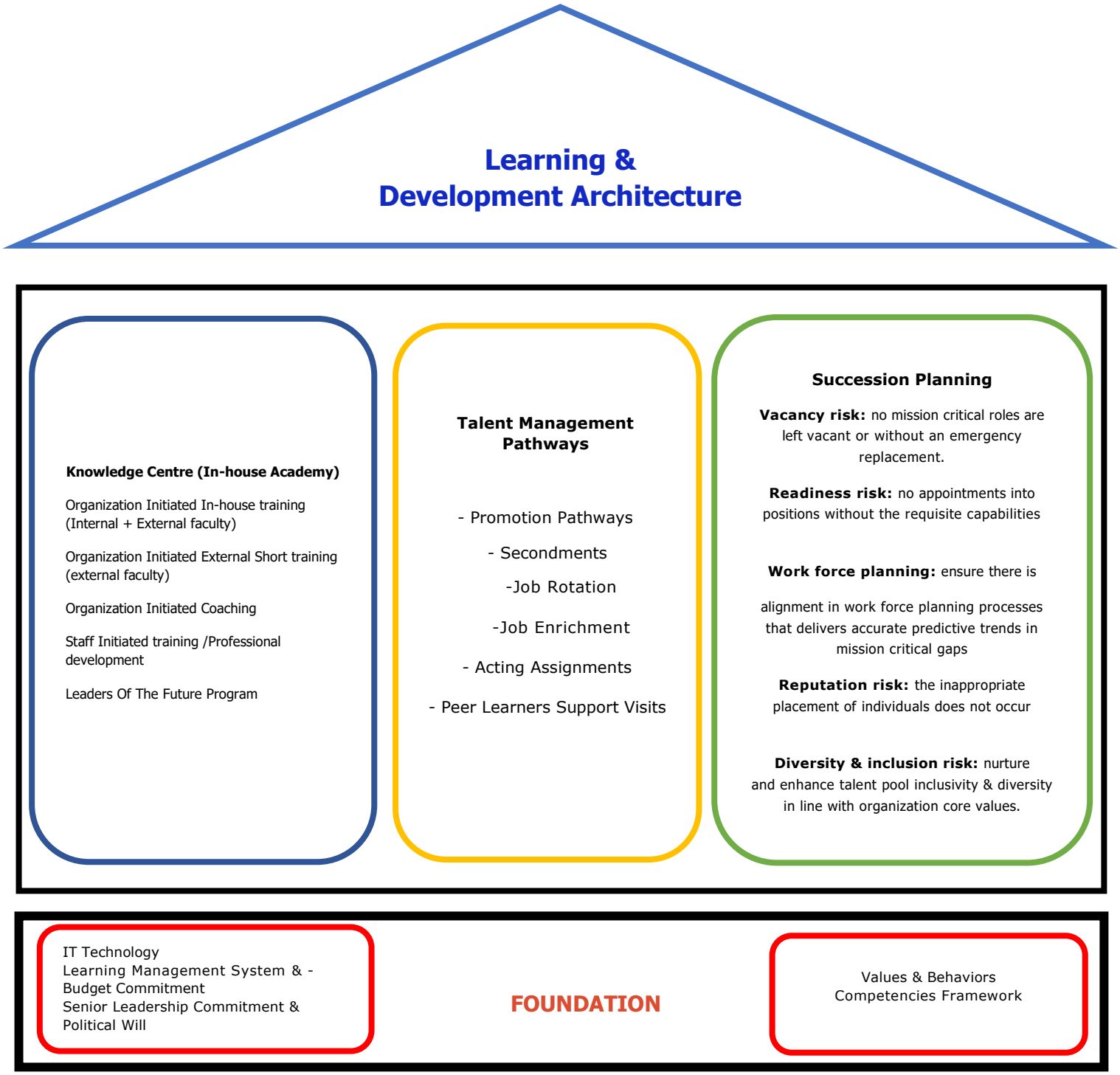
on the learner such as course design, learning resources, learner characteristics, andragogy, interaction (eg., with content, faculty, other learners; development of learning communities, etc.), assessment, and Learning Outcomes (eg. learner satisfaction, retention, achievement, performance, etc.)

5) **Faculty (knowledge center resource persons) Satisfaction:** This standard looks at the degree to which knowledge center faculty find the online facilitating experience personally rewarding and professionally beneficial. It will look at the professional development of knowledge center staff and explore the degree to which their staff experience a well-maintained technical infrastructure, good training in online instructional skills, and ongoing technical and administrative assistance. It also covers ongoing professional development for the knowledge center staff.

6.23 Leadership and Political Will

Senior leadership support is very critical to implementing the knowledge center and the overall talent management approach of the organisation. Leadership political will is reflected through approval of financial support to implement the knowledge centre and intentionally applying the organisationally approved values and behaviors competencies framework to guide the content of all learning and development initiatives, including talent management and succession management decisions.

Figure 2: Learning and Development Architecture



7. Conclusions

This study examined how a global organisation built a learning and development architecture. Our study concludes that an organisation's learning and development architecture requires key factors to ensure value for money.

Firstly, any learning and development architecture must be built on a sound knowledge management philosophy.

Secondly, there is a need for senior leadership commitment and political will to invest in employee learning and development that is derived from a learning and development strategy which flows from the overall Human Resources strategy.

Thirdly, there is a need to hire subject matter experts in adult learning, work-based and action learning who will guide the process and outcome.

Fourthly, an effective learning and development architecture in a global organisation is enabled by an appropriate IT infrastructure, which enables remote learning during online and offline periods.

Fifthly knowledge centre is the hub around which the learning and development architecture is built, as it serves as an in-house academy for designing and delivering content for learners in the organisation.

Sixthly, the content of the knowledge house must be anchored on the company's values and behaviors competency framework, which provides the "hard" and 'soft skills" for employees enrolled in the knowledge centre.

Finally, a learning and development architecture helps to integrate learning and development and talent and succession management initiatives in a coherent manner. In a global organisation a well-designed learning and development architecture facilitates equity, diversity and inclusivity to ensure learning and development resources are available, accessible and utilised transparently to drive organisational effectiveness.

7.1 Implications for Future Research

This study focused on one global organisation based in Canada with a presence in Asia, Africa, and Latin America. The findings, therefore, cannot be generalised across the board; however, it offers data and insights that can be replicated at scale for further analysis to confirm, modify or rebut the conclusions of this work.

Conflict of Interest Statement

The author declares no conflicts of interest.

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Casely Ato Coleman is a Senior Fellow of the leading Africa think tank, IMANI Center For Policy Education. Casely has over 30 years of experience in International Development, Human Resources and Organisational Leadership. He has worked in senior leadership roles for global organisations such as World Vision International, Plan International, European Climate Foundation, Meliore Foundation, with stints with the UNFPA. He has almost 18 years of experience teaching as a Visiting Professor of HR Strategy & Organisational Behavior at the Institute Superieur de Management (ISM), Senegal and was also a part time lecturer in HR and organisational behavior at the University of Ghana Business School. Casely started his HR career with SGS the world's leading testing and inspection company and later joined Western Telesystems (now Tigo) a leading player in the telecommunications sector in Ghana. Casely brings a practitioner scholarship lens to his work. His key areas of consulting and research include HR strategy execution, knowledge management, organisational culture, compensation, politics of industrial relations, organisational redesign, restructuring and change management and leadership in complex humanitarian contexts. He has degrees from the University of Ghana, University of Bergen, Norway and The London School of Economics, UK and an executive education certificate in Achieving HR Excellence from the Judge Business School, University of Cambridge, UK.

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