University of Tartu

Faculty of Social Sciences

Institute of Education

Curriculum of Educational Technology

Navigating Opportunities and Insecurities in EdTech Adoption for Employee Onboarding: An HR Perspective

MA thesis

Supervisor: Emanuele Bardone, Ph.D.

Abstract

Navigating Opportunities and Insecurities in EDTECH Adoption for Employee Onboarding: An HR Perspective

This research examines the possibilities and uncertainties that Human Resource (HR) professionals encounter when implementing Educational Technology (EdTech) for employee onboarding within the Philippines. Organizations that move to hybrid approaches also transform their onboarding procedures by implementing learning management systems (LMS) together with video conferencing tools and gamification platforms. The research employed a qualitative method through semi-structured interviews with six HR professionals across various Philippine industries. The thematic analysis produced six fundamental themes, which included onboarding delivery and tools and engagement through gamification and digital literacy challenges, institutional support and training, and organizational goal alignment and evaluation mechanisms.

This research adds value to digital workplace learning by revealing HR professionals' views on technology-based onboarding.

Keywords: digital literacy, EdTech adoption, employee onboarding, educational technology, HR practices, gamification, reverse mentoring

Table of Contents

List of Acronyms

COVID-19	–	Coronavirus Disease 2019
EdTech	–	Educational Technology
HR	–	Human Resource
HRMS	–	Human Resource Management System
IT	–	Information Technology
LMS	–	Learning Management System
Tech	–	Technology

Chapter 1 - Introduction

The structure of this thesis presents the introductory chapter as the starting point, setting the stage and tone by introducing the chosen topic and providing context to highlight the underlying rationale of this study.

1.1.Introduction

The human resource department maintains primary responsibility to implement employee onboarding procedures. Organizations achieve better employee retention rates and higher employee engagement levels and better performance results through their onboarding processes. The conventional onboarding process used to depend on in-person training, printed documentation, and repetitive administrative tasks. These traditional methods were proven effective but often presents scalability and consistency challenges. Organizations have rapidly adopted Educational Technology (EdTech) solutions since the COVID-19 pandemic which has driven them to implement digital onboarding improvements.

Adopting educational technology (EdTech) for employee onboarding presents opportunities and insecurities for human resource (HR) professionals. According to Lut (2024), organizations that integrate EdTech into onboarding experience improved knowledge retention and engagement among new hires. On the other hand, Sultana (2024) observed that some technical issues, like software compatibility and poor IT support, have made seamless implementation impossible. Bryan (2024) further elaborates that self-paced learning modules may not be as effective for employees due to the lack of human interaction, which often results in disengagement and reduced motivation. The aforementioned findings indicate that EdTech offers scope to improve efficiencies during the onboarding process; however, organizations need to mitigate the technical and engagement barriers that impact the probable adoption of EdTech.

According to HR professionals, the implementation of EdTech faces significant resistance to change. The research conducted by Bansal et al. (2023) shows that employees lacking experience with digital tools experience high levels of technology-related onboarding process stress, negatively affecting their motivation levels. According to research by Viterouli et al. (2024), HR professionals struggle to adapt EdTech solutions to company culture and training requirements. The research indicates that EdTech needs organizations to provide digital literacy training and customizable solutions and evaluation frameworks for complete effectiveness in onboarding.

Chapter 2 - Theoretical Overview

The chapter integrates relevant theories, prior studies, and conceptual frameworks for educational technology (EdTech) applications in employee onboarding. The chapter links established theoretical frameworks to this study's goals while discussing the benefits and risks of digital onboarding systems. The research problem, together with its objectives and research questions, are presented in this chapter.

2.1. Theoretical Foundations

2.1.1. Technology Acceptance Model (TAM) (Davis, 1989)

The Technology Acceptance Model (TAM) explains how individuals accept and use technology based on two key factors: Perceived Usefulness (PU), which refers to the degree to which an individual believes technology will enhance job performance, and Perceived Ease of Use (PEOU), which refers to the degree to which an individual believes that using technology will be effortless.

In digital onboarding, employees and HR professionals must perceive EdTech as valuable (PU) and user-friendly (PEOU) to adopt it successfully. Resistance to change often arises when employees struggle with digital interfaces or do not see the direct benefits of digital learning. Companies must ensure that EdTech solutions align with TAM principles to enhance adoption. Adopting LMS platforms such as Totara in corporate onboarding exemplifies TAM principles. Employees may perceive high usefulness (PU) in structured and accessible content delivery, but those unfamiliar with digital interfaces might experience low ease of use (PEOU), leading to resistance.

2.1.2. The Constructivist Learning Theory (Piaget, 1950; Vygotsky, 1978)

The constructivist learning theory posits that learners actively construct knowledge through interaction with their environment. Digital onboarding programs leverage adaptive learning, AI-driven personalized pathways, and interactive modules, which align with constructivist principles by allowing employees to engage with content self-directedly. According to Vygotsky's Zone of Proximal Development (ZPD), employees learn best when training materials are neither too simple nor too complex but just within their potential for learning with guided assistance. The adaptive nature of EdTech ensures that employees receive training tailored to their needs, increasing engagement and retention. Unlike traditional onboarding, which follows a fixed curriculum, EdTech tools such as AI-driven learning platforms personalize onboarding paths based on an employee's background and

learning pace. This aligns with Vygotsky's Zone of Proximal Development (ZPD), ensuring content difficulty matches individual learning potential.

2.1.3. The Socialization Theory (Van Maanen & Schein, 1979)

The onboarding process aligns closely with organizational socialization, a concept introduced by Van Maanen and Schein (1979). This theory suggests that new employees undergo three phases: anticipatory socialization, encounter, and change/acquisition. Traditional onboarding methods focus on face-to-face interactions to facilitate socialization, but digital platforms aim to replicate and enhance this process through interactive and immersive experiences. EdTech, particularly learning management systems (LMS), gamified training, and virtual reality (VR) simulations, supports employees in transitioning smoothly into an organization's culture, work environment, and performance expectations. Understanding the theoretical foundations of onboarding, including the role of socialization, constructivist learning, and technology adoption, provides a framework for analyzing how digital solutions reshape the employee experience. To further contextualize these theories, the following section defines onboarding, its phases, and its role in organizational success.

While all three theoretical models offer valuable insights, this study primarily applies the Technology Acceptance Model (TAM) as its primary analytical lens. TAM explores how HR professionals assess EdTech based on perceived usefulness and ease of use—two core factors influencing technology adoption. In contrast, Constructivist Learning Theory and Socialization Theory are used as supporting frameworks. These help to interpret broader themes related to learning engagement, cultural integration, and emotional connection during onboarding. Together, these theories provide a comprehensive lens to analyze the adoption and design of digital onboarding programs in hybrid work environments.

2.2. Onboarding

The Society for Human Resource Management defines employee onboarding as integrating new employees into an organization (SHRM, 2023). The onboarding process usually begins when a candidate receives an offer and continues until the employee demonstrates readiness to contribute to the company (Spiceworks, 2025) after their initial training. Training facilitation is a significant process component because this phase enables employees to gain role clarity and develop the necessary skills for success in their positions. The management of onboarding tasks falls under shared responsibility between HR and

managers, yet HR takes the lead because their connection with new hires begins prior to employee entry.

The employee lifecycle starts with onboarding, but some organizations also implement onboarding for internal transfers or rotations when employees move between departments or take different roles. The process of onboarding existing employees who move to new roles or departments is called “crossboarding” and involves skill development and knowledge expansion (AIHR, n.d.).

2.3. Onboarding Phases

The new employee onboarding timeline is often divided into four distinct phases, which are the following (Wren, 2024):

a. Pre-boarding - this phase occurs before the official start date to prepare new hires for their upcoming role. The primary responsibilities during this stage include equipment setup, profile creation, and government documentation completion.
b. Orientation - occurs during the first day or week of new hire employment to present the company’s mission, values, and cultural principles. The initial orientation stage includes delivery of fundamental policy details and procedural instructions together with stakeholder meetings and compliance requirements to help new employees understand the workplace properly.
c. Training - during this phase, new hires develop the skills, knowledge, and competencies needed for their roles. Training sessions, usually lasting from one week to two months, cover job-specific tasks and broader organizational processes. This phase will be the focus of this paper.
d. Transition - this phase begins as new hires complete training and fully immerse themselves in their roles. They gain hands-on experience, collaborate with team members, and contribute to organizational goals. This is also the phase in which new hires slowly take on more responsibilities beyond training and practice.

Organizations that want to improve their onboarding strategies now use educational technology (EdTech) to boost efficiency and engagement and achieve scalability. The following section examines how EdTech solutions create opportunities to optimize and enhance onboarding processes.

2.4. Opportunities in Implementing and Integrating EdTech in Onboarding

Organizations can benefit from the adoption of digital tools for employee onboarding, which enable standardized, efficient, and automated onboarding processes. EdTech enhances training resource accessibility and enables personalized learning pathways, which supports an employee-centered onboarding strategy. The implementation of analytics tools within EdTech systems enables HR teams to monitor employee development while spotting development needs for their workforce. These advantages have the greatest impact in the pre-boarding phase because organizations can achieve reduced costs and time savings and improved employee retention through digitized content and standardized procedures (Dunne, 2024).

EdTech integration brings two main advantages: its ability to scale and its enhanced accessibility features. Organizations using digital tools can deliver a uniform onboarding program to employees spread across various locations, which is fundamental for companies with operations in different global regions. Through Learning Management Systems (LMS) platforms such as Totara, new hires obtain immediate access to training content so they can study independently at their preferred pace and from anywhere. Such flexible onboarding systems enable organizations to grow their distributed and hybrid workforces by adapting to their changing needs.

EdTech delivers substantial benefits regarding cost-effectiveness alongside operational efficiency. Organizations can lower the costs associated with traditional face-to-face training because they no longer need to invest in venue rental, printing materials, and facilitator expenses. EdTech solutions perform automated administrative tasks while providing HR professionals with detailed reporting functions that monitor onboarding development and learning achievement assessment. Data-driven insights enable HR departments to transition from logistics management to delivering strategic workforce integration and engagement initiatives.

EdTech platforms enhance learning engagement by using interactive and gamified content, which improves student knowledge retention. Kahoot! shows how gamification can transform learning experiences into more entertaining and long-lasting memories. Organizations use point badges and quizzes as interactive components to preserve learner motivation, which leads to better comprehension, improved workforce preparedness, and enhanced long-term performance.

Thoughtful EdTech implementation during onboarding creates a transformative experience for employees and enables organizations to enhance operational efficiency, strategic talent development, and scalability.

2.5. Insecurities in Implementing and Integrating EdTech in Onboarding

Employee onboarding benefits from EdTech applications, yet its implementation brings multiple security concerns and several obstacles. Organizations view onboarding as a time-consuming process that forces them to seek artificial intelligence (AI) automation solutions for this task. The main AI application in this setting serves to personalize onboarding content. Through AI system analysis of employee backgrounds, skillsets, and work experience, AI systems create personalized onboarding content for individual employee needs, according to SHRM (2023).

The 2024 Enboarder survey of 1,040 Australian, American, and British employees revealed that poorly designed digital tools for onboarding create more problems than they solve. According to the study, onboarding improves when great technology supports the process, yet bad software always performs worse than no software at all. The study found that 74% of participants had used onboarding technology systems. The three most important factors that made onboarding technology successful were access to information and connection to colleagues, peers, and managers, which shows that onboarding technology must strengthen accessibility and human interaction.

Despite the promising advancements, organizations still encounter various technological obstacles that make it difficult to implement EdTech solutions. Onboarding platforms experience integration challenges when deployed with existing HR management systems (HRMS) because outdated infrastructure and poor modular design create compatibility problems. Technical barriers in the system can either delay implementation or force organizations to spend money on system upgrades and technical assistance.

Organizations experience widespread opposition when attempting to introduce new solutions. The transition from traditional onboarding practices to digital systems faces resistance from organizational stakeholders and employees working within the organization. The opposition towards change may result from employees' limited digital skills and negative views toward technology or their natural preference for face-to-face interactions. A successful transition to EdTech-enabled onboarding depends on sufficient training programs alongside effective change management approaches because organizations need employee support to adopt new technologies.

The process of determining onboarding technology impact and return on investment (ROI) proves to be a complicated challenge. Most Learning Management Systems (LMS) offer detailed reporting functions, yet multiple tools lack sufficient analytics that enable HR

teams to assess onboarding performance properly. Measuring the effectiveness of EdTech implementation becomes challenging because there are no reliable performance indicators to show whether employees learn better, adapt faster, and become more satisfied. The uncertainty about EdTech's effectiveness creates challenges for HR leaders in defending investments in digital solutions during strategic planning.

Thoughtful implementation, continuous evaluation, and cross-departmental collaboration remain essential for successful EdTech integration. Organizations must handle these challenges with care because digital onboarding requires alignment with strategic goals while maintaining effectiveness and inclusivity.

2.6. Strategies for Successful EdTech Implementation

2.6.1. Aligning EdTech with Business Objectives

Human Resources professionals, for the most part, are responsible for ensuring that educational technology implementation is aligned with business objectives and workforce requirements. A strategic methodology improves the pertinence and efficacy of onboarding initiatives.

2.6.2. Providing Digital Literacy Training

Organizations should provide digital literacy workshops to employees and HR personnel to mitigate opposition to change. Training sessions can enhance confidence in utilizing EdTech technologies and can highlight the benefits of integrating them into the employee onboarding process.

2.6.3. Ensuring Data Security and Compliance

The implementation of strict cybersecurity protocols, together with data protection regulations, helps reduce privacy issues. The organization maintains data integrity through regular audits and compliance assessments while working with its IT and Security team.

2.6.4. Leveraging Analytics for Continuous Improvement

Human Resources professionals should employ analytics and feedback systems to evaluate the efficacy of onboarding processes. Data-driven insights facilitate the ongoing enhancement of EdTech products.

2.7. Rationale

The research foundation comes from my previous role as Operations Lead at a tech company. Like many HR professionals, the COVID-19 pandemic required me to adopt new employee onboarding methods in 2020. I used creative problem-solving and tinkering to develop a new onboarding process during that period. My experience included implementing multiple LMS platforms to support new hire learning needs within our organization while addressing changing client requirements. I learned a lot while developing new processes, but ultimately, having more information about this particular area of EdTech would have helped me massively.

Organizations like mine currently operate in a hybrid setup, requiring employees to be in the office only two to three times a week. Having experienced the insecurities and opportunities that technology presents for fully remote new hires, I am eager to explore the evolving role of EdTech in employee onboarding. This research goes beyond personal observations to identify effective strategies for integrating technology into the workplace across fully remote, hybrid, and in-office setups.

This research focuses on HR professionals responsible for implementing EdTech and new policies in the onboarding process. This study aims to provide valuable insights and practical guidance to empower HR professionals in decision-making by identifying the insecurities and opportunities of adopting technology for employee onboarding.

Previous studies on EdTech and workplace learning (e.g., Bansal et al., 2023; Viterouli et al., 2024) emphasize the effectiveness of LMS platforms, gamification, and AI-driven onboarding but do not thoroughly examine the barriers that HR professionals encounter when implementing these technologies. Furthermore, while studies acknowledge employee resistance to digital onboarding (Bryan, 2024), few provide a structured analysis of how HR professionals navigate these insecurities to ensure smooth adoption.

While my personal experience highlighted the potential of LMS platforms in onboarding, I also observed significant resistance from employees unfamiliar with digital tools. Additionally, there was limited guidance for HR professionals on navigating these challenges. This study addresses these gaps by exploring opportunities and insecurities in digital onboarding adoption.

2.8. Research Aim and Research Question

The research investigates organizational challenges and possibilities of EdTech implementation in employee onboarding procedures and develops solutions to these

challenges while showcasing available opportunities. Identifying these obstacles enables HR professionals and organizations to create successful solutions that improve onboarding experiences.

2.8.1. Research Questions

- What insecurities do organizations face when integrating EdTech into their onboarding processes, and how do they address them?
- What opportunities do organizations experience when integrating EdTech into their onboarding processes, and how do they handle these opportunities?
- The findings of this research can provide HR and organizational practices with valuable information to help companies create successful technology-based onboarding systems that boost employee engagement and retention and operational efficiency. The research will interview HR professionals who lead onboarding initiatives.

Chapter 3 - Methodology

The research methodology section of this chapter describes the study design, sample selection procedures, data collection methods, and analysis techniques. This section explains the approach through which researchers studied HR professionals' experiences of implementing Educational Technology (EdTech) for employee onboarding.

3.1. Research Design

The research design of this study implements a qualitative descriptive approach that aligns with Creswell and Poth's (2018) interpretive framework. The research design suits the purpose of understanding the complex subjective experiences of HR professionals who use EdTech tools for onboarding their employees in different organizational environments.

Semi-structured interviews represent the main data collection approach because they combine organized questioning with the ability to follow participants' responses. Through this method, participants can describe their specific situations, yet researchers maintain the ability to discover new themes (Braun & Clarke, 2019). Qualitative research methods enable researchers to gain a deep contextual understanding and reveal detailed information that standard surveys or quantitative methods might miss.

The research incorporates secondary data from academic literature, industry reports, and company onboarding materials to achieve triangulation purposes. The findings gain validation by establishing links between personal stories and overall trends in EdTech implementation and HR digital transformation (Yin, 2018). The research gains credibility through triangulation while matching academic and professional discourses.

The primary interviews receive additional support through observation data collection. The researcher recorded onboarding practices by capturing audio or video content, conducting system tours, or taking field notes when possible. The researcher monitored how new employees interacted with digital tools through direct observations of LMS navigation gamification demonstrations and buddy check-in sessions. The collected notes underwent analysis together with interview transcripts to discover matching and differing patterns.

Ethical procedures that included voluntary participant participation and participant confidentiality, along with informed consent, were followed strictly.

3.2. Sample Selection

The research employs purposive sampling to pick participants who directly use EdTech tools for onboarding and possess relevant experience in this field. The researcher selected this sampling approach to acquire firsthand knowledge from professionals who understand digital transitions within HR practice.

The following criteria defined the participant requirements for eligibility:

- Two years of experience should be present for onboarding responsibilities and digital learning implementation.
- Participated in or directed the implementation of an EdTech onboarding tool during the previous 24 months.

The established criteria guaranteed that study participants had firsthand experience with EdTech implementations during onboarding processes. The study involved six participants who came from local and regional as well as global HR roles. The selected participant number followed methodological standards that show 6-12 interviews usually lead to data saturation in research with homogeneous participant groups (Guest et al., 2006).

Professional networks and industry referrals served as the methods for participant recruitment. The final selection of participants depended on their availability and accessibility, together with their ability to maintain data privacy regulations.

3.3. Data Collection

The research used semi-structured interviews to collect data because they provided structured questions alongside opportunities for participants to share unstructured answers. The research team conducted virtual and face-to-face interviews based on participant choices about session format. The interview sessions lasted between 30 to 60 minutes.

The interview guide provided participants with a structured approach to answer questions from the following core topics:

- Experiences with EdTech tools used in onboarding,
- Perceived effectiveness and challenges, and
- The use of gamification and simulations as employee engagement strategies.

The study examined how different departments worked together and what support mechanisms were in place.

- Employee feedback and onboarding improvement reflections.

The interview questions appear in Appendix A. The research team tested the interview guide with an HR professional who did not participate in the study to enhance the questions' clarity and interview flow.

Additional observation data collection occurred when possible. The research team obtained access to onboarding platforms (LMS dashboards), training materials, and process walk-throughs. The research notes documented tool implementation methods, new hire system usage patterns, and the types of human support integrated into the digital experience through buddies and HR-led demos.

The study utilized organizational case studies, academic journal articles, and industry reports as secondary data to support the interviews and observation findings and establish context.

All ethical standards were adhered to during the data collection period. The participants received confidential informed consent documents while maintaining the right to withdraw from the study at any time. The final report does not include all identifying company and individual names.

3.4. Data Analysis Methods

The research used thematic analysis as its analytical method, following Braun and Clarke's (2006) six-phase framework. The researcher conducted multiple readings of transcripts and notes to develop a deep understanding of the collected data. The researcher conducted initial coding by generating inductive codes from raw data to identify recurring patterns.

The researcher grouped the generated codes into wider thematic categories. The researcher examined new findings to ensure consistency with the research goals.

- Theme Definition – Themes were named and clearly described based on their content and scope.
- The research findings received thematic organization through participant quotes.

The research applied three credibility and trustworthiness techniques to enhance its quality:

1. Data triangulation – Comparing interview, observation, and secondary data sources
2. Peer debriefing – Sharing emerging themes with an academic peer for validation

3. The research journal functioned as a reflexive tool to track potential bias because of the researcher's background in HR operations.

The coding process naturally produced themes without any predefined expectations. After their identification, the themes were connected to the theoretical frameworks presented in Chapter 2.

Chapter 4 - Results

The research findings from six HR professionals in the Philippines and global/regional roles are presented in this chapter to explore Educational Technology (EdTech) adoption for employee onboarding. In line with the study's objective to examine both the opportunities and insecurities HR professionals face when implementing EdTech in onboarding, this chapter addresses the central research questions concerning the practical experiences, perceived benefits, and emerging challenges in digital onboarding practices. Thematic analysis revealed six primary themes: (1) Onboarding Delivery and Tools, (2) Engagement and Gamification, (3) Challenges and Digital Literacy, (4) Support and Training, (5) Alignment with Organizational Goals, and (6) Evaluation and Feedback Mechanisms. While EdTech enhances scalability and learner engagement, its effectiveness depends on human support, digital readiness, and organizational alignment.

4.1. Onboarding Delivery and Tools

The participants employed different digital tools for onboarding support according to their organizational requirements, digital readiness, and team organization. The core platforms included Zoom, Microsoft Teams, Workday, Totara, Absorb LMS, Confluence, and client-based learning systems. The organizations used Kahoot, Mentimeter, and Slack as additional engagement tools to boost communication and interaction.

Participant 1 and Participant 3 emphasized that distributed teams require team-wide interaction through tools like Zoom and Google Meet. Participant 2 explained how Workday automation and AI chatbots made the process more efficient. Participant 3's organization used Confluence and Totara to deliver content, while Participant 4 implemented gamified features through Absorb LMS. Participant 6 explained that their organization used two LMS platforms while implementing AI-powered simulations throughout the onboarding process.

> *"We use both our LMS and client systems… even simulate the live environment." – Participant 6*
>
> *"We're traditional with Confluence, but we do demos on Zoom or in-person." – Participant 4*

These examples reflect the diverse ecosystem of onboarding tools in use and show how companies are blending traditional systems with more interactive, scalable platforms.

This foundation of digital infrastructure sets the stage for strategies aimed at fostering engagement and learner motivation.

4.2.Engagement and Gamification

Remote and large-scale onboarding programs achieved better participant engagement through gamification elements, which included online bingo cards, timed quizzes, badge-based certifications, and simulation-based learning. The strategies proved vital for creating interactive and socially engaging onboarding experiences. The use of merchandise rewards, according to Participant 1, proved effective for encouraging participation, and Participant 3 explained how gamified content helped new hires assimilate into the company culture. Participant 5 highlighted quizzes as a method to boost learner attention, but Participant 6 pointed out that storylines and knowledge checks worked well for interaction while warning about potential learning fatigue from automated systems.

> *"People are more interactive compared to using materials that are too manual like PowerPoint." – Participant 3*
>
> *"There's a risk of fatigue—some trainees just click next without reading." – Participant 6*

These accounts show that gamification in onboarding requires careful planning to maintain learner interest without creating excessive cognitive overload. The success of these strategies depends heavily on the digital preparedness of participants.

4.3. Challenges and Digital Literacy

Despite the potential of EdTech tools, participants encountered challenges related to digital literacy, resistance to new platforms, and connectivity issues—particularly in hybrid or global contexts. These issues were often more pronounced among older employees or those unfamiliar with certain technologies.

Participant 1 responded by introducing reverse mentoring, where younger employees helped older colleagues adapt to new platforms. Participant 3 recalled initial hesitation among team members, which was eventually overcome through hands-on experience. Participants 5 and 6 highlighted the problem of adoption fatigue, though Participant 6's organization addressed this by evaluating digital skills during recruitment to minimize onboarding friction.

> *"Some are not that familiar… once they see it's not complicated, they become more excited." – Participant 3*

> *"We target those skills in recruitment to avoid adoption issues later." – Participant 6*

These responses highlight the critical need for foundational digital skills in EdTech implementation. They also connect to the importance of structured support systems during onboarding.

4.4. Support and Training

Participants emphasized that effective onboarding goes beyond platform availability—it depends heavily on support structures. These included buddy systems, peer learning networks, tool demonstrations, and ongoing evaluations.

Participant 4 shared how weekly buddy check-ins created space for continuous learning and feedback. Participant 5 emphasized the importance of tool demos before launching new systems, helping to ease anxiety and ensure smooth adoption. Participant 6's organization conducted daily evaluations during onboarding to monitor progress and adapt strategies in real-time.

> *"Once a week, the buddy checks in… and if they need help, we incorporate the feedback." – Participant 4*
> *"We made sure HR showed how to use the tool before launching it." – Participant 5*

Such practices ensure that onboarding remains a human-centered experience, building confidence and capacity among new hires. They also support alignment with broader organizational objectives.

4.5. Alignment with Organizational Goals

Several participants noted that onboarding was not merely about information delivery but also about reflecting and reinforcing organizational values, digital maturity, and compliance expectations. This was particularly evident in how companies personalized content or managed risks related to data security. Participant 2 discussed curating learning paths using platforms like Coursera and Udemy to align onboarding with business needs. Participant 4 emphasized creating a sense of connection beyond just technology. Participants

5 and 6 raised concerns about the safe use of tools like ChatGPT, reinforcing the need for policy awareness and secure implementation.

> *"It's not just about the tool; new hires should feel connected." – Participant 4*
> *"We had to block AI tools like ChatGPT because of confidentiality risks." – Participant 5*
> *"The LMS reflects our mission and values… it's globally standardized." – Participant 6*

These insights illustrate that onboarding is increasingly strategic, with EdTech serving as a vehicle not only for training but also for cultural integration and organizational coherence.

4.6. Evaluation and Feedback Mechanisms

Finally, participants shared their approaches to evaluating onboarding effectiveness, ranging from surveys and Likert-scale ratings to structured feedback loops. While some, like Participant 1, conducted regular reviews, others encountered issues with the accessibility and actionability of feedback data. Participant 5 explained how survey data shaped content adaptation, and Participant 6 shared that daily assessments and learner responses were used to improve onboarding modules on a rolling basis.

> *"We have quantifiable measures like Likert scale… to review processes or improve." – Participant 1*
> *"The LMS is continuously updated based on feedback." – Participant 6*

This feedback-centered approach closes the loop between implementation and refinement, reinforcing the importance of adaptability in onboarding design. It also underscores how the success of digital onboarding depends on continuous iteration informed by user experiences.

4.7. Summary

The results demonstrate that all participants recognized the value of EdTech in onboarding while acknowledging its limitations. Common themes included the importance of engagement through gamification, the need for digital support structures, and the tension between automation and human connection. A consistent message emerged: successful

onboarding combines technological efficiency with personalized and socially interactive experiences.

Chapter 5 - Discussion

The research examined how HR professionals perceive positive and negative aspects of Educational Technology (EdTech) during employee onboarding processes. The research supports the main research question by showing that EdTech allows for standardized onboarding processes at scale, but its effectiveness depends on issues affecting learner participation, inclusivity, and emotional connection.

The study revealed that while EdTech enables scalable, consistent, and efficient onboarding experiences, it also presents challenges in engagement, inclusivity, and emotional resonance. These findings confirm the central research question and expand the current literature on digital onboarding design.

The Technology Acceptance Model (TAM) (Davis, 1989; Venkatesh & Davis, 2000) helps explain these dual perspectives. The participants found EdTech useful for automation and content reach, but the perceived ease of use depended on their digital literacy and institutional support. Several participants emphasized that comfort with technology, rather than technical expertise, was sufficient for effective implementation, particularly when strategies such as reverse mentoring were employed to bridge generational gaps.

Drawing from Constructivist Learning Theory (Vygotsky, 1978; Jonassen, 1991), the study underscores the importance of socially situated, interactive onboarding practices. Participants noted a risk of disengagement when onboarding relied heavily on passive learning management system (LMS) content. In contrast, formats that included social interaction, such as peer mentoring, live demonstrations, and gamified tasks, were described as more effective and meaningful.

Socialization Theory (Van Maanen & Schein, 1979) further contextualizes the findings, emphasizing that onboarding is not merely informational but deeply connected to cultural assimilation, identity formation, and role clarity. Participants 5 and 6 highlighted the importance of aligning onboarding content with broader compliance and cultural integration goals, including concerns about data privacy and responsible technology use. These factors are often overlooked in existing onboarding literature but emerged as central to effective implementation.

The study results, together with relevant theoretical frameworks, produce multiple practical recommendations to enhance EdTech-enabled onboarding processes in

organizational environments. Organizations need to unite technological solutions with personal human contact in their operations. LMS platforms provide scalable solutions, yet they fail to deliver the relational elements that new hires need to feel connected to their colleagues. The combination of live sessions with buddy systems and collaborative onboarding tasks helps reduce digital content impersonality by creating stronger feelings of belonging among new employees.

Organizations need to dedicate resources toward developing digital capabilities within their HR teams. The participants demonstrated that new hires needed only basic technology comfort instead of advanced technical skills to complete their onboarding process successfully. HR professionals need structured training, peer learning opportunities, and an internal IT team or EdTech specialist access to become proficient in leading and maintaining digital onboarding initiatives.

Third, onboarding programs should prioritize personalization. Through LMS analytics, organizations can segment content delivery based on employee roles, prior experience, and individual learning preferences. A customized approach to onboarding delivers better engagement while maintaining content relevance for each learner.

The core principle of onboarding strategies needs to include inclusive design. The digital literacy differences between employees, especially between generations, require some employees to need extra support. The training program needs to teach employees about platform usage while simultaneously providing support to those who lack internet access or have minimal experience with digital tools.

The implementation of strong departmental collaboration represents an essential recommendation. The success of onboarding depends on HR, IT, and leadership teams working together to maintain uniform messaging, platform functionality, and cultural integration. The effectiveness of onboarding suffers when different departments operate independently from each other.

Organizations must establish formal feedback systems to gather information from their new hires. Collecting feedback through systematic processes should guide continuous improvements to onboarding materials and delivery approaches. Recent employees who participate in co-design activities help make onboarding materials more relevant and valuable to new employees.

Organizations must address privacy and ethical risks when implementing AI tools because they have become essential in modern business operations. Training modules should

provide employees with knowledge about responsible AI technology use, including ChatGPT, data handling across borders, automation bias, and confidentiality protection.

These recommendations provide HR professionals with a unified approach to improving digital onboarding design and delivery and effectiveness in modern hybrid work environments.

Chapter 6 - Limitations and Future Research

While this research provides important insights into the experiences of HR professionals navigating EdTech adoption, several limitations should be acknowledged.

First, the study involved a small, purposive sample of six participants. Although their perspectives offer rich, context-specific data, the findings are not generalizable to all industries, organizational sizes, or cultural contexts. Broader research across diverse sectors, including healthcare, government, and non-profits, would enhance understanding of EdTech onboarding in varied environments.

Second, the study provides only HR professional viewpoints as its main findings. Future research needs to hear from new employees who receive onboarding and the providers and learners to understand their experiences with EdTech implementation. The study would provide a complete understanding of onboarding success, learner participation, and emotional connection.

Third, the study relies on self-reported interview data, which makes the findings vulnerable to memory bias, social desirability, and organizational loyalty effects. Future research must use multiple data sources to enhance result reliability by including onboarding performance metrics, LMS usage data and completion rates, and retention outcomes.

Fourth, this study did not differentiate results by organizational size, digital maturity, or onboarding scope (e.g., global vs. local processes). These factors likely influence how EdTech is adopted and experienced. Comparative studies would clarify how context shapes onboarding strategies and tool effectiveness.

The findings from this study suggest several promising paths for future research that would enhance the comprehension of EdTech-enabled onboarding processes. A crucial research path requires researchers to conduct studies that analyze mixed samples of HR professionals and employees who receive onboarding training. A comprehensive evaluation of onboarding effectiveness becomes possible through this approach because it combines design and delivery assessments with recipient experience evaluation.

The research needs to extend over time because longitudinal studies play a crucial role in academic research. The assessment of employee integration and engagement, together with retention rates throughout time, enables researchers to determine whether quality onboarding at the start generates lasting organizational benefits. Studies about employee adaptation throughout their work period after onboarding would increase the value of this field.

Design-based or participatory action research represents a suitable method for future research. The involvement of HR practitioners during the development and assessment of onboarding tools ensures that the solutions remain practical and useful for those who will use them. The collaborative research approach serves as a bridge that connects theoretical knowledge to practical implementation.

The research should combine quantitative system data with qualitative findings in future studies. The reliability of research findings and their generalizability will improve when researchers include LMS analytics data and performance indicators alongside completion rates. The collected data points allow researchers to assess if perceived engagement produces concrete behavioral outcomes.

Research should investigate how different types of workers experience their onboarding process. The onboarding requirements, along with difficulties, face substantial variations between remote workers and blue-collar staff members, freelancers, and international new hires. The development of adaptable onboarding strategies requires knowledge about how different organizational contexts affect employee needs and challenges.

Research into AI-based onboarding requires a detailed analysis of ethical and practical matters because the practice continues to expand. Digital onboarding systems need research-based studies to explore their ability to handle privacy concerns, employee trust issues, and automated bias that appears in automated systems. The relevance of these concerns increases in global organizations because different legal frameworks and cultural expectations regarding data use exist.

The digital workplace continues to evolve rapidly, so ongoing research needs to address the three key challenges of inclusivity alongside effectiveness and ethical responsibility for designing human-centered and context-aware onboarding systems that scale appropriately.

Acknowledgments

I would like to express my sincere gratitude to Emanuele Bardone, who served as my thesis supervisor and program director. The steady encouragement he provided along with his belief in my goal to unite EdTech interests with corporate background maintained my focus and inspiration from start to finish.

I am deeply thankful to Natia Akhvlediani, for her insightful guidance and her compassionate nature which supported me during the most difficult moments of this project. Her support provided me with clarity at my most critical moment.

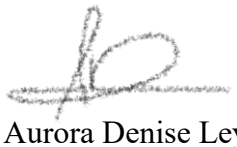
I appreciate the valuable discussions and authentic feedback and ongoing backing that my classmates provided. Your open nature transformed what could have been an overwhelming experience into a meaningful educational journey because you welcomed me into the program without formal education background.

The completion of this thesis depended on HR professionals who dedicated their time to share their life experiences. The genuine spirit of ‘bayanihan’ became evident through their willingness to participate and share honest stories which I will always treasure. Their voices provided essential depth and meaningful relevance to this research.

I want to express my gratitude to Raffy because his silent strength along with his ongoing support has been vital to me. My family and friends together with my colleagues and all of you demonstrated patience and encouragement which sustained me throughout this work. I share this accomplishment with all of you.

Author's Declaration

I hereby declare that I have written this thesis independently and that all contributions of other authors and supporters have been referenced. The thesis has been written in accordance with the requirements for graduation theses of the Institute of Education of the University of Tartu and is in compliance with good academic practices.



Aurora Denise Leynes

24/05/2025

References

AIHR. (n.d.). *Crossboarding*. Retrieved March 2025, from https://www.aihr.com/hr-glossary/crossboarding/

Banaghan, D. (2025). *Why is onboarding so important?* Occupop. Retrieved February 25, 2025, from https://www.occupop.com/blog/why-is-onboarding-so-important

Bansal, A., Panchal, T., Jabeen, F., Mangla, S. K., & Singh, G. (2023). A study of human resource digital transformation (HRDT): A phenomenon of innovation capability led by digital and individual factors. *Journal of Business Research, 157*, 113611. https://doi.org/10.1016/j.jbusres.2022.113611

Bayraktaroglu, D. (2024, December 23). *Digital onboarding: How modern tools are revolutionizing employee onboarding*. Bounti. Retrieved March 8, 2025, from https://bounti.co/guides/digital-onboarding

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. Qualitative Research in Sport, Exercise and Health, 11(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Bryan, S. R. (2024). *Pastors' experiences within a self-paced online learning professional development course: A qualitative study* - ProQuest. https://www.proquest.com/openview/0a3d270951c0a117035f7c256747ec8c/1?pq-origsite=gscholar&cbl=18750&diss=y

Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Denzin, N. K., & Lincoln, Y. S. (2018). *The SAGE handbook of qualitative research* (5th ed.). SAGE Publications.

Dunne, C. (2024, April 15). *What are the benefits of digital onboarding?* Learning Pool. Retrieved March 8, 2025, from https://learningpool.com/blog/digital-onboarding

Enboarder. (2024). *2024 state of employee onboarding report: What new starters want from onboarding (And what to avoid)*. Retrieved 2024, from https://info.enboarder.com/hubfs/2025%20FY%20-%20Content/Enboarders%202024%20State%20of%20Employee%20Onboarding%20Report.pdf

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? *An experiment with data saturation and variability*. *Field Methods, 18*(1), 59–82. https://doi.org/10.1177/1525822X05279903

Learning Box. (2022, November 30). *5 benefits of eLearning in employee onboarding*. Retrieved February 25, 2025, from https://learningbox.online/en/column/blog-new-employee-training-e-learning/

Lut, L. T. Y. (2024). *Enhancing onboarding with AI: Designing a modern conversational agent for onboarding*. LUTPub. https://lutpub.lut.fi/handle/10024/167606

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.

Olmstead, L. (2025, January 15). *User onboarding: Best practices, challenges, stages*. The Whatfix Blog | Drive Digital Adoption. https://whatfix.com/blog/user-onboarding/

Parker, L. (2024, April). *What is the onboarding process for HR?* beSlick. Retrieved February 25, 2025, from https://beslick.com/what-is-the-onboarding-process-for-hr/

SHRM. (2023). *Onboarding 2.0: The AI revolution in employee integration*. Retrieved December 2023, from https://www.shrm.org/mena/topics-tools/news/technology/onboarding-2-0--the-ai-revolution-in-employee-integration

SHRM. (2023). *Understanding employee onboarding*. SHRM. Retrieved June 2023, from https://www.shrm.org/ResourcesAndTools/tools-and-samples/toolkits/Pages/understanding-employee-onboarding.aspx

Spiceworks. (2025). *What is employee onboarding process? Definition, templates, and best practices*. Retrieved January 2025, from https://www.spiceworks.com/hr/recruitment-onboarding/articles/what-is-new-employee-onboarding/

The business benefits of digital onboarding. (2024, March 17). *KYC Chain*. Retrieved March 8, 2025, from https://kyc-chain.com/the-business-benefits-of-digital-onboarding/

Vincent, D. (2023, October 27). *Transforming onboarding for 2025: The pros and cons of going digital*. Lift HCM. Retrieved March 8, 2025, from https://lifthcm.com/article/benefits-challenges-digital-employee-onboarding

Viterouli, M., Belias, D., Koustelios, A., Tsigilis, N., & Papademetriou, C. (2024). Time for change. In *Advances in human resources management and organizational development book series* (pp. 267–307). https://doi.org/10.4018/979-8-3693-3466-9.ch014

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* https://doi.org/10.2307/j.ctvjf9vz4

Wren, H. (2024). Employee onboarding*: What it is, steps, and 6 free checklists*. Retrieved 2024, from https://www.zendesk.com/blog/employee-onboarding/

Appendix 1. Consent Form

CONSENT FORM

Study Title: Navigating Opportunities and Insecurities in EdTech Adoption for Employee Onboarding: An HR Perspective

Please read the following information carefully and ask any questions you may have before agreeing to participate in this study.

Introduction: I have been provided with information regarding the research study mentioned above. I have had the opportunity to ask questions and discuss the study, and I have received satisfactory answers to all my questions. I understand that the purpose of this study is to explore the opportunities and insecurities faced by HR professionals in Edtech adoption for employee onboarding.

Data Anonymity: I understand that the data I will provide will be anonymized to ensure confidentiality. This means that my name or any other identifying information will be removed, and my responses will be reported in a way that cannot be linked back to me.

Voluntary Participation and Withdrawal: My participation in this study is voluntary, and I have the right to withdraw at any time without providing a reason before May 15, 2025. I understand that my withdrawal will not have any negative consequences, and any data associated with my participation will be removed from the study.

By signing below, I confirm that I have read and understood the information provided in this consent form, and I voluntarily agree to participate in this study.

Also, I confirm that:

I am an HR professional and I have experience in adopting Edtech for employee onboarding.

I permit the researcher to do a voice recording of the interview and to take notes.

Participants Signature:_____ Date: _____

Non-exclusive license to reproduce the thesis and make the thesis public

I, Aurora Denise Leynes ,
(author´s name)

1. grant the University of Tartu a free permit (non-exclusive licence) to

reproduce, for the purpose of preservation, including for adding to the digital archives of the University of Tartu until the expiry of the term of copyright, my thesis

Navigating Opportunities and Insecurities in EdTech Adoption for Employee Onboarding: An HR Perspective ,
(title of thesis)

supervised by Emanuele Bardone ;
(supervisor´s name)

2. grant the University of Tartu a permit to make the thesis specified in point 1 available to the public via the web environment of the University of Tartu, including via the digital archives, under the Creative Commons licence CC BY NC ND 4.0, which allows, by giving appropriate credit to the author, to reproduce, distribute the work and communicate it to the public, and prohibits the creation of derivative works and any commercial use of the work until the expiry of the term of copyright;

3. am aware of the fact that the author retains the rights specified in points 1 and 2;

4. confirm that granting the non-exclusive licence does not infringe other persons' intellectual property rights or rights arising from the personal data protection legislation.

Aurora Denise Leynes
29/05/2025