Digital Onboarding: Systematic Review and Synthesis

Joëlle Simonet, Bern University of Applied Sciences, joelle.simonet@bfh.ch
Martina Becker, Bern University of Applied Sciences, martina.becker@bfh.ch
Sabrina Schell, Bern University of Applied Sciences, sabrina.schell@bfh.ch
Nikolaus Obwegeser, Bern University of Applied Sciences, nikolaus.obwegeser@bfh.ch

Introduction

The ongoing digitalization, further accelerated through the effects of the CoViD-19 pandemic, forced a widespread shift to a more digital workplace (Marsh et al., 2022). Remote and hybrid work will further increase in the future, especially for knowledge-intensive work (Bartik et al., 2020). This also affects the recruiting and onboarding of new hires, which is an important element for newcomer integration at the workplace. Prior research has firmly established that organizations with well-designed onboarding processes experience less turnover, better job attitudes and performance (Ellis & Bauer, 2017). Some characteristics of virtual collaboration, such as physical distance, a lack of face-to-face meetings, and the limited ability for informal socializing, can make it difficult for new hires to create a strong connection with their work environment (Britto et al., 2018). To overcome these challenges, organizations search for new approaches to shape the onboarding process in an effective and efficient way, by integrating digital tools.

Even though digital onboarding has received more attention due to the CoViD-19 pandemic triggered digital acceleration and this development will likely continue and become part of “future of work”, there currently exists no systematic overview and comprehensive understanding of the challenges and benefits that come with digital onboarding. To develop a more holistic understanding of how digital technology can support the onboarding process of new hires, there is a need for a systematic and integrative literature review across disciplinary boundaries. With this study, we aim to answer the following questions:

- What is the current academic body of knowledge on the role of digital technologies in the onboarding process of new hires?
- How can existing research on digital onboarding be synthesized across disciplines?

In this extended abstract we aim to shed light on the topics currently discussed in research about digital onboarding practices and identify current gaps in research. To achieve this, we present preliminary results of a systematic literature review (SLR) on digital onboarding. The literature sample identified is analyzed for several different dimensions, including for example the technologies used in the onboarding process, the onboarding functions addressed, and the outcomes of said strategies categorized according to Bauer (2010)’s widely used 4C framework (i.e., compliance, clarification, culture or connection). By studying the relations and patterns among these dimensions we aim to synthesize our current knowledge based on digital onboarding and pave the way towards a future research agenda.
Research Method

To gather an overview of current research on digital onboarding, we conducted a SLR using the Web of Science (WOS) database. To account for the interdisciplinary nature of the phenomenon at hand, we closely followed the guidelines provided by Paré et al. (2015) and Webster and Watson (2002) that are widely accepted in the IS community, merged with recommendations for SLRs in software engineering (Kitchenham & Charters, 2007).

For the literature search process, a structured query was used in the WOS database executed in May/June 2022. To define the query criteria, we explored several relevant articles and discussed their fit with our research questions. The search query consisted of three topical thesauri in a conjoint logic: onboarding, human resource context and the digital context. We then conducted a search for literature with the following search string: (onboarding OR "on-boarding" OR "organizational socialization" OR "socialization") AND (hire* OR employee* OR "human resources" OR HR OR "new* employ*" OR newcomer) AND (virtual* OR digital* OR remote* OR hybrid OR gamif* OR telework OR computer OR technol*).

Consequently, the search query returned a set of 439 articles. Figure 1 presents a PRISMA flow diagram (Page et al., 2021) depicting the filter process, as further described in the following. To be included in our sample, each article had to (a) contain a digital or technological element and (b) discuss the onboarding process of new hires as a core theme or at least to a significant part. In a first step, all article titles were screened and all unrelated articles were removed (98 articles). Furthermore, articles were excluded for their article format (editorial overviews, commentaries) or impact (based on publication date and citation count). Of the remaining 242 articles, 191 were excluded after abstract screening and 12 more after full reading. The final sample contained 39 articles, which formed the basis for our coding and analysis process.

Following the search and filter process we coded sample based on an iteratively
developed coding scheme. First, we coded various descriptive criteria, such as industry, empirical vs. conceptual, methodological approach, and underlying theory. Second, we iteratively extended the coding for type of work setting (desk-job/non-desk-job, remote/not remote). Finally, we added three specific sets of codes based on prior research conducted by Bauer (2010) and Attaran et al. (2020): onboarding levels (i.e., the intended outcomes of the onboarding process, such as compliance, clarification, culture and connection), onboarding functions (i.e., the different functional aspects of the onboarding process, such as recruiting, orientations, support tools and processes, coaching and support, training and feedback tools), and type of digital workplace solution (i.e., the type of technology used to support the onboarding process such as: business applications, messaging & communication, productivity, collaboration and workplace mobility).

Findings and Discussion

Our research indicates that digital onboarding has received only little scholarly attention until 2017. Figure 2 visualizes the growth of academic research between 2000 and June 2022, indicating a steadily rising scholarly interest from 2017 onwards. The CoViD-19 pandemic, affecting most countries around the world from 2020 and onwards, is likely to have contributed to the increased attention for the topic in recent years. In terms of publication outlets, the articles in our sample are split with two thirds published in academic journals (n = 26) and the remaining third in conference proceedings (n = 13). Our sample shows a wide distribution across different outlets with often only a single relevant publication, likely driven by the interdisciplinary nature of the phenomenon.

![Figure 2: Article types and publication year](image)

Our review also shows that the field currently shows little methodological diversity, with many single case studies (n = 13), some survey-based studies (n = 11), but only few multi-case (n = 3) or experimental studies (n = 6). About 50% of the sample did not base their research on any specific theoretic foundations. The other half of the sample did show a vast variety of applied theories. Only affordance theory, organizational socialization theory, social presence theory and organizational assimilation theory are applied more than once.

More than half (n = 25) of the sample discusses digital onboarding in a desk job work setting. Only six articles specifically address non-desk jobs, e.g., medical personnel, retail, hospitality, and nine cover onboarding scenarios that concern virtual teams. Six articles examine digital onboarding practices due to the CoViD-19 pandemic.

Based on the coding scheme outlined in the research methods, we mapped the articles in our sample along three dimensions: onboarding levels, onboarding functions, and type of
digital workplace solution. Initial results show that the that messaging & communication tools and their role for building connection are most prevalent in the sample. Similarly, business applications (e.g., learning management systems, HR tools) and their use for training and role clarification are discussed in the sample. The focus of the studied articles mostly lies on the new hire. In contrast to this, the role of other involved actors (i.e., the team, supervisor) during the onboarding process was rarely investigated. Relating thereto, we suggest that further research should investigate the roles of the involved actors as well as study the change of the self-presentation of the new hire. As for the digital workplace solutions, many of the articles in the sample discuss the application of a specific tool in a particular situation but neglect to look at the impact of an organization’s overall digital maturity on the onboarding process. More research is warranted to study the effect of technological maturity (i.e., the design and existence of relevant solutions and level of workplace mobility) on the onboarding process. Additional studies are particularly required to investigate how the technological setup influences digital onboarding for organizations with different work settings (i.e., non-desk jobs, desk job, on-site, hybrid, fully remote). Looking at the onboarding levels, most articles in the sample cover multiple outcomes with clarification and connection being more prevalent, followed by culture. The sample did not contain an article specifically studying onboarding activities aiming at achieving culture and compliance in combination. With workplaces being increasingly digital and getting more complex, it might be promising to study how compliance can be seen as an integral part of organizational culture and how shared values and norms can be passed on to new hires during digital onboarding.

The preliminary results of the SLR indicate that certain aspects of digital onboarding such as developing connections virtually or job training using digital tools have received researchers’ interest. However, more research is warranted to better grasp the phenomenon of digital onboarding.

**Conclusion**

We provide a review and preliminary synthesis of the current academic body of knowledge on digital onboarding. Our findings reveal an emerging field with growing scholarly attention from various disciplines. This can be considered a strength, as it generates insights from different, complementary perspectives, which is meaningful for such a complex and timely phenomenon. On the other hand, the interdisciplinarity also constitutes a challenge, as it requires continuous integration across potentially diverging academic discourses. Our review shows that relevant publications are few and widely distributed among a broad range of outlets, each with their own specific interest group. Future research is encouraged to strengthen the theoretical foundation and methodological diversity, which will support the development of a cumulative tradition across disciplines. As for the limitations, we should note that certain choices for the review protocol (e.g., choice of scientific database or search terms, exclusion of certain articles based on the impact) might have led to the omission of relevant articles. While this study is not able to provide a complete coverage of all related issues in the field of digital onboarding, it serves as a baseline for establishing the research agenda and addressing the gaps.
References


