


# Chapter 2

## How Can I Help You Today?

### The Rise of Virtual Assistants in Human Resources Management

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#### ABSTRACT

*The pandemic context has fast-tracked the digital transformation of many organizations that pursued to dramatically change their organizational processes to survive in a global digital economy. While virtual assistants (VA), a specialized artificial intelligence-based chatbot, such as Alexa or Siri, have penetrated our private lives, many organizations are still trying to understand and evaluate why and how to integrate these technologies into their employees' workday. The study explores whether VAs can be used to support human resources (HR) trainee management software in a German organization and how it can be done. Four key HR areas of self-service, onboarding, training, and knowledge management were explored. Interviews were conducted to analyze which VAs' functions can be reused to support trainee management software in these four areas. The technology affordances and constraints theory were used to analyze data collected. The results showed that a VA's functions can support trainee management software especially in the areas of self-service, onboarding, and training.*

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## **INTRODUCTION**

After two years of pandemic, there is a widespread agreement that digital technologies have made our lives easier while global economy is becoming more digital as businesses are being more and more affected by digital technologies such as the Internet, mobile connectivity, cloud computing, big data, artificial intelligence (AI), Internet of Things, predictive and data analytics and other emerging digital technologies (Soto-Acosta, 2020). The COVID-19 context has accelerated the digital transformation of organizations and entire industries such as retail and education. Digital transformation is about radically rethinking how an organization uses technology, people, and organizational processes to fundamentally change its performance (Kane, 2019). Moreover, the pandemic impact on organizations has provided opportunities for new business models that are based on a combination of AI tools and traditional business models.

The field of Artificial Intelligence (AI) has gained more and more interest over the past 10 years as the underlying technologies are now able to fulfill the requirements to process large amounts of data (Io & Lee, 2017; Liao et al., 2019). Artificial Intelligence typically indicates a broad class of information technologies that allow a computer to execute tasks that normally require human cognition, including decision making. By identifying and learning reoccurring patterns in large sets of data, AI-based software tools or chatbots, understand, process, and answer user queries in textual or vocal form (Saukkonen et al., 2019).

A Virtual Assistant (VA) is a specialized chatbot that serves a specific purpose, that is, supporting users (Battineni, 2020). Virtual Assistants can be seen as a Digital Innovation as they fulfill the three criteria of Digital Innovation stated by Nambisan et al. (2017). First, VAs have a so-called innovation outcome, as they enable new services within the company (Tambe et al., 2019). Next, VAs use digital tools (e.g., data analytics and deep learning) to enable desired innovation outcome, and finally, the innovation outcome can be used and adapted to different contexts, for example, healthcare or Human Resources Management (HRM) (Laranjo et al., 2018; Tambe et al., 2019).

In the field of HRM VAs have not made as much progress yet compared to the other areas (Tambe et al., 2019). One of the main reasons why AI in general is rarely used in HRM is that some HR functions or some HR activities are unstructured, including recruitment, training, and maintenance (Jantan et al., 2010). For instance, it is not easy to measure what constitutes a “good employee,” assuming that most of the time “job requirements are broad, monitoring of work outcomes is poor, and biases associated with assessing individual performance are legion” (Tambe et al. 2019, p. 21). Factors such as “constraints imposed by small data sets, accountability questions associated with fairness and other ethical and legal constraints, and possible

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