Title: Exploring the Use of a Virtual Interview Coach to Support Job Seekers with Autism Learn Interview Skills

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Abstract

Job seekers on the autism spectrum often struggle to obtain employment due to challenges with social interactions and verbal and written communication skills. In this study, we propose to develop and evaluate a virtual interview coach (chatbot) to support job seekers on the autism spectrum in learning behavioral interview skills using the STAR method. Following the development of the virtual interview coach, participants will interact with the coach for one week. At the end of this one-week trial period, we will conduct semi-structured interviews with participants. Participants will also engage with pre and post-test measures to evaluate the efficacy of the interview coach. The study will also employ a thematic analysis to understand the experiences of job seekers on the autism spectrum as they interact with the virtual coach. This information will help to design future iterations of the virtual interview coach and to develop future research studies on the effectiveness of the virtual interview coach for job seekers on the autism spectrum. This research also explores the broader applicability of AI and virtual assistants in employment training and support contexts.

Introduction

Individuals on the autism spectrum face numerous challenges when seeking employment. Job seekers with autism often require job coaching and support, which is resource-intensive and challenging to scale (Wehman et al., 2016). While AI has shown promise in developing nonverbal communication skills within interviews (Kumazaki et al., 2017), and chatbots have been successful in teaching job-related tasks (Grund et al., 2020), the use of AI-enabled chatbots to teach interview skills to job seekers on the autism spectrum still requires exploration. In this study, we will develop and evaluate a virtual interview coach (chatbot) designed to teach behavioral interview skills to job seekers on the autism spectrum using the STAR method (Lin, 2010). This study will ask the following research questions:
1. How do job seekers on the autism spectrum perceive the usefulness of a virtual interview coach in learning interview skills?
2. What are the potential benefits and challenges of using a virtual coach for employment support with job seekers on the autism spectrum?
3. What are the design implications for future iterations of the interview coaching app?

Methodology

Procedure. This study has been approved by Temple University's Institutional Review Board. This exploratory pilot study will begin by developing a virtual interview coach (chatbot) integrated into an interview coaching application. The chatbot will be developed through prompt engineering and designed to teach the user to answer behavioral interview questions using the STAR method. Fifteen job seekers on the autism spectrum will be recruited through the professional network of researchers and social media and will be compensated for their time. Participants will first engage with a pre-test mock interview with researchers. Next, with guidance from the researchers, participants will interact with the virtual interview coaching application over the course of a week. Following the week's interaction, participants will engage with a post-test mock interview. Semi-structured interviews will also follow this one-week interaction phase to gather qualitative data on participants' experiences as well as their feedback and suggestions for the future design of the prototype. We will analyze the differences between pre and post-test mock interviews per participant. Data will also be analyzed using a thematic analysis (Braun & Clark, 2023) to identify themes derived from participants' experiences interacting with the virtual interview coach.

Design of Chatbot. Learning the STAR process (framing answers to questions with Situation, Task, Action, and Result) provides a framework for job seekers to learn to answer behavioral interview questions to share their workplace experience (Lin, 2010). From literature grounded in developing interview skills, we designed a prototype of an interview coach using OpenAI's ChatGPT. We will provide system prompts for ChatGPT (GPT-4) to incorporate the STAR process (Phillips & Gully, 2015; Lin, 2010). We will provide examples of the job coach using behavior skills training, which incorporates instruction, modeling, practice, and feedback to provide feedback to the user (Simmons et al., 2023). We will also provide ChatGPT with two 'personas,' Andrew, a job seeker, and Marta, an interview skills job coach. For Andrew, we will provide an example and non-example of using the STAR method correctly in a response. For Marta, we will provide instructions on how to use behavior skills training, defining it as using instruction, modeling, rehearsal, and feedback, with specific examples of how to respond to the user using this method. We will also provide an example of feedback delivery for correct and incorrect responses. We will test and adjust the prompts for the chatbot until it reliably produces the desired response.

Conclusion

By developing and evaluating a virtual interview coach for interview skills training, this research aims to contribute to the broader understanding of how chatbot technology can support job seekers on the autism spectrum in overcoming employment challenges, particularly during the interview process. The findings will provide valuable insights into the potential benefits and challenges of using chatbots for job seekers in employment support and the design of future interview coaching applications.

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