Examining digital interviews for personnel selection: Applicant reactions and interviewer

ratings

Markus Langer, Cornelius J. König, and Kevin Krause

Universität des Saarlandes

Markus Langer, Cornelius J. König, and Kevin Krause, Fachrichtung Psychologie,

Universität des Saarlandes, Saarbrücken, Germany. This study is pre-registered on the Open

Science Framework (https://osf.io/hw2np/) and as an anonymous AsPredicted form

(https://aspredicted.org/x3ww5.pdf).

Correspondence concerning this article should be addressed to Markus Langer, Universität

des Saarlandes, Arbeits- & Organisationspsychologie, Campus A1 3, 66123 Saarbrücken,

Germany. Tel: +49 681 302 4767. E-mail: Markus.Langer@uni-saarland.de

ABSTRACT

Digital interviews are a potentially efficient new form of selection interviews, in which interviewees digitally record their answers. Using Potosky's framework of media attributes, we compared them to videoconference interviews. Participants ($N = 113$) were randomly assigned to a videoconference or a digital interview and subsequently answered applicant reaction questionnaires. Raters evaluated participants' interview performance. Participants considered digital interviews to be creepier and less personal, and reported that they induced more privacy concerns. No difference was found regarding organizational attractiveness. Compared to videoconference interviews, participants in digital interviews received better interview ratings. These results warn organizations that using digital interviews might cause applicants to self-select out. Furthermore, organizations should stick to either videoconference or digital interviews within a selection stage.

Keywords: personnel selection; interview; new technologies; applicant reactions

Introduction

Technology offers convenient ways to screen and select applicants. An emerging form of technology-based employment interviews is the digital interview, wherein interviewees digitally record their answers to (typically) digitally-presented interview questions, without live interaction with an interviewer (Brenner, Ortner, & Fay, 2016; Chamorro-Premuzic, Winsborough, Sherman, & Hogan, 2016). Providers of digital interviews and companies applying these interviews promote them to be more time- and cost-efficient than face-to-face interviews and other forms of technology-based interviews.

However, previous research has found negative impacts of other technology-mediated interview methods (e.g., phone and videoconference) in terms of applicant reactions and interviewee performance ratings (Blacksmith, Willford, & Behrend, 2016; Chapman, Uggerslev, & Webster, 2003; Sears, Zhang, Wiesner, Hackett, & Yuan, 2013). Given that digital interviews separate the interviewee and interviewer even more than other technology-mediated methods, we use Potosky's framework of media attributes (2008) to compare videoconference interviews with the lately emerging interview approach of digital interviewing regarding interviewer ratings and applicant reactions.

<div align="center">

Background and Development of Hypotheses

</div>

Technology for job interviews

Technology is widely used to improve the efficiency of job interviewing, to get a first personal impression of applicants, and to screen applicants before conducting personal face-to-face interviews (Bauer, Truxillo, Paronto, Weekley, & Campion, 2004). Over the years, technology has been used for job interviews in several ways. First, within telephone interviews, a representative of the organization asks applicants interview questions via telephone, meaning that interviewer and interviewee communicate solely through voice. Second, in videoconference interviews, interviewer and interviewee get to hear and see each

other through camera technologies. Third, in digital interviews, interviewees record themselves whilst answering interview questions which they receive through text, audio or video on an online platform, and interviewers can watch and rate these recordings at any time (Brenner et al., 2016).

Although digital interview technology in its basic form is not entirely different from videoconference interviews, digital interviews promise to offer much more flexibility (no need for scheduling), standardization (no influence of the interviewer on the interviewee), and analytical possibilities (possible automatic evaluation of the interviews) compared to telephone or videoconference interviews. Consequently, organizations seem to be highly interested in this type of interview, and digital interviews are described as one of the rising stars in personnel selection practice (Brenner et al., 2016; Chamorro-Premuzic et al., 2016; Schmerling, 2017). A web search for digital interview providers reveals more than 70 companies offering digital interview solutions (Software Advice, 2017). Moreover, HireVue, the largest provider of digital interviews in America, and viasto, HireVue's counterpart in Germany, deliver their digital interview solutions to many customers from several market sectors (HireVue, 2017a; viasto, 2017).

Applicant reactions to technology for job interviews

A meta-analysis by Blacksmith and colleagues (2016) revealed that compared to face-to-face interviews, conventional technology-mediated interview approaches are less accepted by interviewees. This finding can be a starting point for research investigating effects of new technology on interview outcomes. However, all of the studies included in the meta-analysis focused on telephone (e.g., Chapman et al., 2003) and videoconference interviews (e.g., Sears et al., 2013) (except for one study by Bauer et al., 2004, who used interactive voice response technology), and it is therefore necessary for research on digital interviews to go beyond these findings.

Investigating differences between videoconference interviews and digital interviews as a first step of hypothesis development

For the purpose of the current study, we need to understand what distinguishes videoconference and digital interviews, and Potosky's (2008) framework of media attributes for personnel assessment processes might be helpful. Although digital interviews did not yet exist when this framework was developed, it offers general ideas on attributes that possibly differ between administration media for personnel assessment processes. In the following paragraphs, we introduce Potosky's four general attributes of administration media and use them to clarify differences between videoconference and digital interviews. These attributes are: social bandwidth, interactivity, transparency, and surveillance.

First, social bandwidth describes the extent to which relevant communication information (e.g., verbal and nonverbal content) is exchangeable: A medium high on social bandwidth provides communicators with many possibilities to offer communication information. In contrast to videoconference interviews, digital interviews provide fewer communication channels and thus less social bandwidth. For instance, interviewers and interviewees do not see each other, they cannot direct nonverbal behavior at each other, and they cannot use backchanneling behavior (e.g., nodding; Frauendorfer, Schmid Mast, Nguyen, & Gatica-Perez, 2014).

Second, interactivity of a medium describes the extent to which it is possible to interact during a conversation (Potosky, 2008). In the case of digital interviews, interviewers only watch a recorded video of the interviewee answering interview questions. Even if a videoconference interview is completely structured, it still contains more interactivity than a digital interview.

Third, high transparency is given if there are no obstacles during communication and if the communicators do not realize that they are using a medium to communicate (Potosky,

2008). Transparency might be lower in digital interviews than in videoconference interviews: In digital interviews, interviewees have to record themselves whilst constantly only watching their own appearance on the screen. This reduces the transparency compared to videoconference interviews, as interviewees are interacting with the medium rather than with another person. In videoconference interviews, interviewees might realize that they are communicating with the interviewer through microphone and camera over the internet. However, unless there are severe technical issues, these aspects might not be salient after some time in the conversation, as interviewees become accustomed to the situation.

The fourth aspect in Potosky's (2008) framework is surveillance, which encompasses the fact or feeling that it might be possible for a third party to interrupt or monitor the conversation. Accordingly, communication through a medium high on surveillance appears to be public and observable by other people. It might be possible for a third party to hack into and interrupt or monitor a videoconference interview. However, as videoconference interviews are real-time interactions, it seems more obvious and likely that recorded digital interviews might be stored in a place where non-authorized persons could access the recordings. Thus, surveillance might be higher in digital interviews.

Investigating applicant reactions to digital and videoconference interviews as a second step of hypothesis development

All in all, regarding the attributes put forward by Potosky (2008), digital interviews seem to offer less social bandwidth, lower interactivity, lower transparency, and higher surveillance than videoconference interviews, leading to the assumption that applicant reactions to these interview approaches are likely to differ as well. As a next step of hypothesis development, and based on the ideas generated by Potosky's (2008) framework, it is possible to shed light on applicants' potential reactions to the two interview approaches concerning: (a) their affective reactions to the selection procedure (by examining the

creepiness of the procedure), (b) privacy concerns regarding the procedure, (c) perceived behavioral control during the procedure, (d) procedural fairness of the procedure (taking a closer look at the facets two-way communication, interpersonal treatment, and chance to perform), and (e) global fairness perceptions of the procedure.

Creepiness can be elicited by unfamiliar interactions with technologies (Tene & Polonetsky, 2015), and can be defined as a queasy feeling paired with uncertainty about how to behave or how to judge a situation (Langer & König, 2016). Videoconference interviews have been relatively commonplace for over a decade (Chapman et al., 2003). By contrast, digital interviews are a relatively new way of conducting selection interviews (Brenner et al., 2016), and this might already be sufficient to evoke feelings of creepiness. In addition, applicants do not interact with any representative of the organization during digital interviews but interact with software. Consequently, transparency as defined by Potosky (2008) is low because applicants are constantly reminded that they are communicating through technology, which could lend a strange feeling to the digital interview procedure.

Hypothesis 1a. Digital interviews will induce more creepiness than videoconference interviews.

Privacy concerns relate to the aspect of surveillance in Potosky's (2008) framework, because people with privacy concerns might feel that their privacy is being invaded through new technologies or selection procedures (Stone-Romero, Stone, & Hyatt, 2003). During both interview methods, sensitive personal data (e.g., face of the candidate, voice, and interview answers) are transferred via the internet. In the case of videoconference interviews, the interview can possibly be recorded to be rated later by additional interviewers, whereas for digital interviews, the recording is mandatory. This could result in more awareness of possible privacy concerns.

Hypothesis 1b. Digital interviews will induce more privacy concerns than videoconference interviews.

People in interpersonal interactions perceive behavioral control if they have the feeling to be, or in fact are, in control of their own behavior during such situations (Ajzen, 2002b). The social bandwidth of digital interviews appears to be lower than that of videoconference interviews (e.g., because applicants cannot receive or send nonverbal communication information). Thus, the controllability of the situation might be impaired. A reason for this could be that reduced social bandwidth and interactivity may partially deter applicants from using impression management, which is an especially impactful phenomenon used to gain control over the interview (Ingold, Kleinmann, König, & Melchers, 2015; Roulin, Bangerter, & Levashina, 2014). Although both interview approaches have in common that interviewees can use nonverbal impression management (e.g., smiling; Barrick et al., 2009), and self-focused impression management (e.g., applicants exaggerate their achievements; Peeters & Lievens, 2006), digital interviews restrain applicants from applying specific interviewer directed behavior and other-focused impression management (e.g., ingratiating with the interviewer or using mimicry behavior, cf. Chartrand & Bargh, 1999; Peeters & Lievens, 2006).

In conclusion, digital interviews seem to bear the potential to negatively impact several powerful possibilities to control and guide the interview in a direction beneficial for applicants (cf., Blacksmith et al., 2016).

Hypothesis 1c. Digital interviews will be evaluated lower on perceived behavioral control than videoconference interviews.

Different selection procedures can lead to differing applicant reactions on procedural justice facets covered by the model of Gilliland (1993). Most relevant for the comparison of digital interviews and videoconference interviews, and closely related to the aspects of social

bandwidth and interactivity, are interpersonal perceptions, expressed with the facets two-way communication, interpersonal treatment, and chance to perform.

Two-way communication is given if it is possible for applicants to ask questions, and to interact with the interviewer or organization (Bauer et al., 2001). Due to lower interactivity (i.e., asynchrony) of digital interviews, it is not possible to interact with the interviewer. In contrast, even if videoconference interviews are strictly structured, interviewees interact with interviewers in real time, and they might at least have the feeling that it is possible to ask questions during the interview.

Hypothesis 1d. There is less two-way communication in digital interviews than in videoconference interviews.

During a procedure in which applicants perceive good interpersonal treatment, applicants feel respected and treated with dignity and human warmth (Bauer et al., 2001). As there is no real interpersonal interaction in digital interviews, applicants cannot feel treated badly by an interviewer, but they might not feel "treated" in any way at all. This could send a negative signal to interviewees, making them aware that they are just one of many applicants.

A negative characteristic of videoconference interviews is inflexibility, as interviewees need to make time for the interview when the interviewer is available. In comparison, in digital interviews, applicants can record their interview answers at any time. This might be beneficial for the assessment of digital interviews. Nevertheless, this positive aspect of digital interviews might not compensate for the lack of interpersonal contact during the interview

Hypothesis 1e. Digital interviews will be evaluated lower on perceived interpersonal treatment than videoconference interviews.

The final facet of procedural fairness examined in this study is chance to perform, defined as applicants' feeling of being given enough possibilities to put their best foot

forward (Bauer et al., 2001). The same interview questions can be asked in videoconference interviews as in digital interviews; thus, objectively speaking, applicants have the same answering opportunities in both interview approaches. However, in videoconference interviews, applicants see the interviewer who shows, perhaps not even consciously (cf., Wilhelmy, Kleinmann, König, Melchers, & Truxillo, 2016), direct feedback on their interview answers (e.g., shaking his/her head), so applicants can adapt their answer accordingly, unlike in digital interviews. Lacking feedback can evoke insecurity over whether an answer was good or bad, and consequently add to applicants' feeling of being offered less chance to perform during the interview.

Hypothesis 1f. Digital interviews will offer less chance to perform than videoconference interviews.

Global fairness evaluations can be impaired if applicants' expectations of justice regarding selection procedures are violated (Ployhart & Ryan, 1998). In digital interviews, interpersonal communication – an aspect applicants particularly value (cf., Blacksmith et al., 2016) – is eradicated. Thus, modifying answers or adapting to the interviewer can be harder or even impossible, which might violate applicants' expectations of justice when reflecting on selection interviews (cf., Ployhart & Ryan, 1998).

Hypothesis 1g. Digital interviews will be evaluated as being less fair than videoconference interviews.

Effects of the interview approach on organizational attractiveness

Selection procedures can influence organizational attractiveness, which itself is crucial for the future of an organization, as high organizational attractiveness might lead to more organizational prestige, to being recommended as a good employer, and consequentially to a greater and more qualified applicant pool (Highhouse, Lievens, & Sinar, 2003). As we are comparing videoconference interviews and digital interviews, the aspect of

organizational attractiveness is especially important, because these interview approaches can be used early in the selection process. Accordingly, a large number of applicants might experience them, implying that there is also a broad range of people who potentially complain about them (cf., Van Hoye & Lievens, 2009). In addition, applicants could withdraw their application if they are dissatisfied with the selection procedure at an early stage of the selection process (Hausknecht, Day, & Thomas, 2004; Uggerslev, Fassina, & Kraichy, 2012).

The above-described aspects are all variables which affect applicants' evaluation of the organizational attractiveness of the selecting organization, and they might mediate the relation between the interview approach and perceived organizational attractiveness. Thus, we propose that:

Hypothesis 2. Digital interviews will have a negative effect on organizational attractiveness, mediated by creepiness, privacy concerns, perceived behavioral control, interpersonal facets of procedural fairness, and global fairness.

Effects of the interview approach on interviewer ratings

Interviewer ratings are influenced by the way the interview is conducted (Blacksmith et al., 2016). In face-to-face interviews, applicants receive better interview ratings than in videoconference interviews. Reasons for this might be that technical problems can occur during videoconference interviews, that there is less possibility for impression management, and that there are fewer communication channels available (Blacksmith et al., 2016).

In digital interviews, possibilities for impression management and communication channels are even more restricted. This could lead to similar effects on interviewer ratings as those found when comparing face-to-face to videoconference interviews (Sears et al., 2013). However, such effects can only be expected when comparing ratings of digital and videoconference interviews in which the interviewers who conducted the interview

themselves rate the interviewee. When comparing ratings of digital interviews and ratings of recorded videoconference interviews (i.e. other interviewers rate the recorded videoconference interview), there should be no differences in interviewer ratings as there was no interpersonal interaction between raters of the recorded videoconference interview and interviewees. Thus, similar to the digital interviews, there is less possibility for impression management, and there are fewer communication channels available.

Hypothesis 3. Participants of digital interviews will receive lower interview ratings than participants of live-rated videoconference interviews. This difference will not occur between the ratings of recorded videoconference interviews and digital interviews.[1]

Method

Sample

All participants of this study were students who could choose between course credit or a small amount of money. We consulted the meta-analysis of Blacksmith and colleagues (2016) to get an idea about imaginable effect sizes between digital and videoconference interviews for applicant reaction as well as rating measures. Blacksmith and colleagues (2016) found small to medium effect sizes for interviewer ratings and for applicant reactions in favor of face-to-face interviews compared to technology-mediated interviews. As digital interviews subtract interpersonal interaction more than videoconference interviews, we assume medium effect sizes in favor of videoconference interviews compared to digital interviews. In addition, we followed the results of Chapman, Uggerslev, Carroll, Piasentin, and Jones (2005) who found a small to medium relation of justice perceptions with organizational attractiveness for non-applicants, thus we expected a small to medium effect for the relation of our applicant reaction measures and organizational attractiveness. Consequentially, required sample size was determined following the suggestions of Fritz and MacKinnon (2007) who proposed that for detecting a mediation effect with a predicted

medium effect size for the relation of the independent variable and the mediator (i.e., standardized regression weight of 0.39) and a small to moderate effect size for the relation of the mediator and the dependent variable (i.e., standardized regression weight of 0.26) of the mediation an N of 116 participant would be needed for a power of $1-\beta = 0.80$.

As issues might occur during data collection within online experiments (e.g., technical problems, slow internet connection, participants interrupting the experiment), we continued data collection until our sample consisted of $N = 122$ participants. We had to exclude one participant who mentioned that his data should not be used since he had not taken the experiment seriously. Furthermore, we excluded seven participants (four in the videoconference and three in the digital interview condition) due to technical problems. The final sample consisted of $N = 113$ German students (67% female), of whom 49% studied psychology. The mean age was 24.90 years ($SD = 3.14$). At the time of the study, 35% of participants were in their Bachelors' degree, 40% in their Masters' degree, 13% already had a Masters' degree and 10% did not specify their educational background, and 46% of participants had already experienced more than five job interviews, 51% had experienced one to four job interviews and only 3% did not have any job interview experience.

Procedure

Overview. In the first stage, participants visited an online survey platform, where they were randomly assigned to the videoconference interview group or the digital interview group. They were then given a brief description of the respective interview condition. In both conditions, participants were informed that the interview would be recorded. Additionally, they were instructed to download software and to submit their email address.

Participants were then contacted by the experimenter via email with a description of the application situation (similar to Buehl & Melchers, 2017):

You have applied for an attractive Master's degree at a university in another city. You have received an invitation for a Skype interview [digital interview] as a pre-selection tool, since many people have applied for this Master's degree. The aim of this procedure is to get a personal impression of all applicants above and beyond their résumés, and to make a valid decision on which applicants will be invited for a following personal interview.

In this email, participants were also requested to dress for the respective interview as they would in a real application situation. After the interview, participants were directed to an online survey platform to respond to the concluding questionnaire containing all applicant reaction measures.

Interview questions. At the beginning of the interviews, participants were introduced to the procedure of the interview, and practiced the interview procedure by responding to a question in which they provided an identifier word to match videos and online survey answers.

In both interviews, interviewees were asked the same five interview questions (in German) which were taken from Buehl and Melchers (2017): 1. "What do you study and why did you decide to study this subject"; 2. "There are times when stress is very high. Can you remember a situation in which you had several deadlines at the same time; how did you handle this situation?"; 3. "What did you do if you did not understand complex contents of a course?"; 4. "Imagine you are doing a group project with four of your fellow students and you have to divide topics and tasks between each other. You have an exact idea of which part you want to deal with. However, another person in your group would also like to work on this part. What would you do?"; 5. "Imagine you fail an important exam, even though you were well prepared. How would you prepare for the retry exam?".

Digital interviews. For the digital interview procedure, we followed the process of Brenner and colleagues (2016), common practices for digital interviews (Brenner, 2016;

Schmerling, 2017), and suggestions provided during personal contact with F. S. Brenner[2] (November 15th, 2016). To manage recordings of digital interviews, we used the video recording tool Clipchamp (www.clipchamp.com).

In advance to their interview, participants were instructed to download Google *Chrome (*www.google.com/chrome*).* Then, they received an email with a link to an online platform where they could complete their digital interview within a deadline of five days after receiving the email. In the beginning of the digital interview, applicants read instructions on how the digital interview will be conducted. Every interview question was presented in text form and interviewees were presented with a countdown clock of 60 seconds to read the question. After these 60 seconds, the button for the recording disappeared and it was no longer possible for interviewees to record an answer for the respective interview question. After clicking on the recording button, a separate browser window opened, in which interviewees had to turn on their webcam and microphone. Interviewees then started the recording and had up to three minutes of recording time to answer the interview question. After stopping the recording, they clicked "submit video". After submitting the video, participants had up to 15 seconds before they were directed to the next interview question.

Videoconference interviews. All videoconference interviews were conducted by two Master's degree students of industrial and organizational psychology who received a two-hour frame-of-reference training session before their first interview (Roch, Woehr, Mishra, & Kieszczynska, 2012).

For the videoconference interviews, participants were instructed to download Skype (www.skype.com). Then they received an email where they could choose among different dates to schedule their videoconference interview. The videoconference interviews were recorded using ActivePresenter (www.atomisystems.com). At the beginning of the videoconference interview, the interviewer informed the interviewee that the interview would

be a structured interview, and that there would therefore be no follow-up questions and the interviewee would not be permitted to ask any questions. We chose structured interviewing as it is more comparable to digital interviews, in which there are no follow-up questions and no possibility for interviewees to ask questions.

Interview scoring. For the live videoconference interview rating, interviewers who conducted the interview rated the interview performance directly after the videoconference interview. For the rating of the recorded videoconference interviews, we divided the videoconference interview into five parts. Each part showed the interviewee's answer to an interview question but did not show a picture or voice of the live interviewer, to avoid the second rater being influenced by the picture or voice of the live interviewer. For digital interviews, the same interviewers who conducted the videoconference interviews rated the digital interview recordings, which consisted of five videos (one for every answer of a participant).

Interviewer ratings. For all interviews (live and recorded videoconference interviews, digital interviews) ratings were generated with eleven items (see Appendix) rated from 1 (*does not apply*) to 7 (*does apply entirely).* Five of these items were taken from Buehl and Melchers (2017), and represented rating keys for the respective interview question. The remaining six items were taken from Langer, König, Gebhard, and André (2016), and reflected the general impression of the interviewee.

Interrater reliability. At the end, half of the videoconference interviews and half of the digital interviews were rated by a human resource professional with three years of experience in a human resource department of a large German company to support the generalizability of the interviewer ratings. This rater received the same two-hour frame-of-reference training as the student raters (Roch et al., 2012). We calculated the interrater reliability of the ratings of the student raters in the interview conditions and the ratings of the

HR professional. Interrater reliability for live rated videoconference interviews (based on

$n = 27$) was $r = .51$, $p = < .01$, for ratings of recorded videoconference interviews (based on

$n = 27$) $r = .50$, $p = < .01$, and for digital interviews (based on $n = 30$) $r = .55$, $p = < .01$.

Applicant reaction measures. The Appendix lists all applicant reaction items and

item sources. The items were rated from 1 (*strongly disagree*) to 5 (*strongly*

agree). Creepiness was measured with the Creepiness of Situation scale (Langer & König,

2016), which comprises 10 items, five for each of its facets (emotional creepiness and creepy

ambiguity). Privacy concerns were measured with five items (Malhotra, Kim, & Agarwal,

2004; Smith, Milberg, & Burke, 1996). Perceived behavioral control was measured with eight

items. The authors developed the items following the suggestions of Ajzen (2002). Two-way

communication, interpersonal treatment, and chance to perform were each measured with

four items taken from a German version of the Selection Procedural Justice Scale (Bauer et

al., 2001; Warszta, 2012). Global fairness was measured with three taken from Warstza

(2012). Organizational attractiveness was measured with 15 items (Highhouse et al., 2003;

Warszta, 2012) adapted to fit the context of the experimental design as we were measuring

attractiveness of a university.

Results

Applicant Reaction Hypotheses

Table 1 and Table 2 provide an overview of study variables' intercorrelations,

descriptive statistics and results of the *t*-tests for the respective hypotheses. We used

MANOVA and one-tailed follow-up *t*-tests (cf., Spector, 1977) for hypotheses 1a-g

examining the difference between the interview conditions for creepiness, privacy concerns,

perceived behavioral control, two-way communication, interpersonal treatment, opportunity

to perform, and fairness. The overall MANOVA showed that videoconference and digital

interviews differed significantly on the mentioned variables, $F(8, 104) = 15.67$, $p < .01$, *Wilks'* $\lambda = .45$.

As Table 2 shows, we found that participants in digital interviews reported weakly to moderately more creepy ambiguity, moderately more emotional creepiness, and digital interviews induced slightly more privacy concerns. Additionally, digital interviews were rated as permitting much less two-way communication and providing strongly worse interpersonal treatment. However, we found no difference between the interview methods for ratings of perceived behavioral control, chance to perform, and fairness. Therefore, hypotheses 1a, 1b, 1d, and 1e were supported, but hypotheses 1c, 1f, and 1g were not.

For Hypothesis 2, we conducted mediation analyses linking interview type with organizational attractiveness via the proposed mediators. However, consistent with the negligible zero-order relation between interview type and organizational attractiveness, we found both the direct and indirect effects to be zero.

Interviewer Rating Hypothesis

We expected digital interview ratings to be lower than live videoconference interview ratings, but not lower than recorded videoconference interview ratings. However, digital interviews ratings were weakly to moderately higher than ratings in live videoconference interview and moderately higher than the recorded videoconference interview ratings (see Table 1). Hypothesis 3 was thus not supported.

<div align="center">

Discussion

</div>

The goal of this study was to investigate digital interviews as an emerging technology for personnel selection (Brenner et al., 2016). To this aim, we compared them to the well-established technology-mediated interview approach of videoconference interviewing. The results showed that previous research on technology for job interviews might not apply to digital interviews, since considerable differences in applicant reactions, and even more

strikingly, in interviewer ratings were revealed. In general, we found that using digital interviews can be detrimental for (a) affective, (b) privacy-related and (c) interpersonal aspects of applicant reactions compared to using videoconference interviews.

First, as a negative affective consequence of digital interviews, participants experienced more creepiness during digital interviews than during videoconference interviews. Drawing on theoretical arguments on creepiness in the context of novel technologies (Tene & Polonetsky, 2015), we can reason that this difference might be due to the fact that digital interviews are not yet as common as videoconference interviews. If practitioners' and researchers' predictions that digital interviews will become increasingly popular come true (Brenner et al., 2016; Chamorro-Premuzic et al., 2016), this might reduce the creepiness felt during digital interviews. Nevertheless, the current results should raise awareness that digital interviews can evoke negative emotional consequences. Another explanation for the findings regarding creepiness might be drawn from the assumption that Potosky's (2008) aspect of transparency is lower in digital interviews because applicants have to record and constantly watch themselves answering interview questions, which results in a strange and seemingly creepy interaction. Creepiness might cause applicants to refrain from taking part in interactions including such new technologies and to develop negative impressions of organizations that use such technologies (cf., Tene & Polonetsky, 2015). In the case of digital interviews, this might mean that applicants cancel the digital interview and, through word-of-mouth, have a negative influence on the perceptions of organizations using this approach (Van Hoye & Lievens, 2009).

Second, findings indicate that digital interviews can result in applicants having concerns about their privacy during such situations, which supports our assumption that Potosky's (2008) aspect of surveillance is more pronounced within digital interviews. Compared to having a conversation over the internet using a camera and microphone, digital

interviews seem to induce more concerns about providing private data that might be misused, as applicants have to explicitly press buttons to record and submit videos to a selecting organization. This finding might be worrisome for organizations, because previous research has shown that increased privacy concerns lead to lower test-taking motivation and impaired organizational intentions (e.g., buying the organizations' products or recommending the organizations to friends, Bauer et al., 2006).

Third, interpersonal perceptions of procedural justice, more precisely two-way communication and interpersonal treatment, were found to be markedly lower in digital interviews, and we found surprisingly large effect sizes (over $d = 1.00$). The magnitude of effects is particularly striking given that our videoconference interviews were highly structured, meaning that there was no real two-way communication between the interviewers and interviewees other than interviewers reading questions, and thus no especially empathic interpersonal treatment. These results add to, and go beyond, previous research findings that technology for job interviews can be detrimental for interpersonal aspects of job interviews (e.g., Blacksmith et al., 2016; Chapman et al., 2003; Sears et al., 2013), because our results indicate that digital interviews seem to be perceived as even less personal than videoconference interviews, which are already perceived as less personal than face-to-face interviews. Thus, especially high-potential applicants may self-select out of the selection procedure because they might have the feeling that they at least deserve a conversation with a representative of the organization instead of being treated like "one of many" applicants.

In spite of the negative effects of digital interviews on affective reactions, privacy concerns, and interpersonal perceptions, it might be comforting for providers of digital interviews and organizations using digital interviews that the use of digital interviews did not negatively affect organizational attractiveness. Furthermore, the results showed no differences between the interview conditions for perceived behavioral control, opportunity to

perform, and fairness, although such null results should be treated with caution. In the case of perceived behavioral control, participants might have had less control over influencing the interviewer during digital interviews compared to videoconference interviews (cf., Blacksmith et al., 2016), but they had greater control over preparing their answers, and the two effects might have cancelled each other out. The greater control over preparing answers lay in the fact that participants had 60 seconds of preparation time before starting the interview, which is consistent with best practice of digital interviews (Schmerling, 2017).

This preparation time of 60 seconds might also have had consequences for the opportunity to perform and for fairness perceptions. Even though participants perceived a lower opportunity to perform because there was no interviewer to signal that they were on the right track with their answer, they did have the opportunity to prepare and structure their answer for 60 seconds, possibly resulting in stronger feelings of opportunity to perform. Moreover, although participants' justice expectation of an interviewer talking to them during an interview were not met, the 60-second preparation time possibly led to higher fairness evaluations. In addition, participants knew that their answer could be up to three minutes duration. This might also have provided an increased feeling of fairness, as such information regarding the acceptability of the length of an answer is not provided during videoconference interviews. An interesting finding supporting this possibility is that in the general notes provided by the interviewers, participants in digital interviews were more often described as answering in a "detailed" manner ($n = 21$ in digital interviews vs. $n = 10$ in videoconference interviews), whereas participants in videoconference interviews were more often described as answering in a "short" manner ($n = 2$ in digital interviews *vs.* $n = 17$ in videoconference interviews).

The 60-second preparation time might also have impacted interview ratings. We found that participants in digital interviews received higher interview ratings, which is in

contrast to our hypothesis. According to previous arguments and findings (Blacksmith et al., 2016; Ingold et al., 2015; Roulin et al., 2014), digital interviews should lead to lower interview ratings than videoconference interviews because they are even less interactive and there is less opportunity for impression management than in videoconference interviews, which themselves were found to evoke less favorable interview ratings than face-to-face interviews. However, the additional preparation time might have helped the digital interview participants to come up with more thought-through answers and thus to achieve higher interview ratings than participants in the videoconference interview condition. We would like to mention that all the potential effects of the preparation time (i.e., potentially increasing perceived controllability, fairness, interview ratings) indicate that there is a clear need for research to clarify its effects. For instance, less preparation time could lead to increasingly demanding interviews implying that it could be a parameter for organizations to strategically modify digital interviews.

Moreover, preparation time is just one small aspect of digital interviews which research has not yet understood. Further exemplary aspects are the administration form (e.g., questions in text or videos), automatic evaluation of digital interviews, and validity of digital interviews. Undoubtedly, we need more research on digital interviews.

Limitations

There are four limitations we need to address. First, participants did not experience a real application situation but a mock interview for a hypothetical Master's degree. Therefore, it remains to be shown whether our results can be generalized to real application situations, in which there is more at stake. Presumably, even more pronounced differences between the two interview conditions would be found within real application situations. Nevertheless, insights into interview ratings are at least likely to be generalizable, because the interrater reliability of the student raters and the HR professional rater was rather high. Moreover, the ratings of

the HR professional and the student ratings revealed similar differences between the two interview types, with participants of digital interviews receiving higher interview ratings than participants of videoconference interviews, $t(55) = 3.10$, $p < .01$, $d = 0.82$. Second, as participants were predominantly students, the results might not apply for older applicants and applicants for hierarchically higher positions. However, for the screening of entry-level positions, the results of this study should be highly relevant. Third, we did not use any commercially available digital interview program, which might offer more convenient and more attractive-looking ways of conducting digital interviews. Nevertheless, we ensured that our digital interview followed best practice recommendations regarding preparation time, recording time, question delivery, and technical details. Furthermore, by not using a commercially available program, we were able to conduct independent research (i.e., participants had no reason to fear that our research was sponsored).

Main Practical Implications

Digital interviews are an exciting and flexible way to gain a first personal impression of an applicant, but organizations should be aware that they are not merely another type of videoconference interview. Organizations should closely monitor whether digital interviews lead to applicants self-selecting out of the interview process because (a) they would have expected more interpersonal care from the organization, (b) they experienced negative affective reactions during the interview, or (c) they did not want to provide a recording of themselves to a selecting organization due to concerns about what would happen to their private data and where it would be stored. If an organization realizes that applicants start to withdraw from the application process because of the use of digital interviews, it might be time to go back to classical videoconference interviews or to think about ways to improve applicant reactions of digital interviews. An idea to improve applicant reactions could be to

provide applicants with information about digital interviews (cf., McCarthy et al., 2017), however this assumption needs to be tested by future research.

In addition, organizations should not use both videoconference and digital interviews during the same selection stage. Even worse is the idea to allow applicants to decide whether they would like to take part in a digital interview or a videoconference interview (e.g., in an attempt to increase applicant reactions). Instead, organizations should choose to use either videoconference or digital interviews and stick to the same procedure for every applicant in a selection process. This way, the organization can prevent disparate treatment of applicants using distinct interview formats. Organizations might otherwise end up rejecting high-potential applicants just because they took part in a videoconference interview instead of a digital interview.

Future Research

Digital interviews offer tremendous possibilities for future research. For example, based on our findings on interview ratings, future studies could examine how ratings of face-to-face and digital interviews differ. It is possible that face-to-face interviews will lead to better ratings than digital interviews; however, it might also be the case that the effect of preparation time leads to better interview ratings in digital interviews than in face-to-face interviews. Additionally, the digital interview was evaluated by human raters in the current study, but practitioners already use machine learning algorithms to automatically rate interviews (e.g., digital interviews offered by the company HireVue). It is highly important to conduct validity research to establish whether human-rated digital interviews or automatically rated interviews are as valid as face-to-face interviews. Furthermore, when automatically assessed digital interviews are used, there is no longer any human influence on the interview. Thus, it would be fruitful to look at applicant reactions to the automatic evaluation of digital interviews.

Additionally, negative applicant reactions might be mitigated using organization presentation videos before the actual digital interview begins. Providers of digital interviews (e.g., HireVue; HireVue, 2017b) promise that such videos, in which a recruiter presents the organization and the job to applicants, can be beneficial for applicant reactions. This could especially be true for applicant reactions covering interpersonal perceptions because applicants might feel treated with more respect if there is at least a video showing a representative of the organization who introduces the organization and the job.

Furthermore, we did not measure efficiency of the interview methods which might be a highly relevant measure regarding the comparison of different interview types. For instance, our interviewers reported that digital interviews were much easier to conduct than videoconference interviews (e.g., because there were no scheduling issues, they could rate the interviews whenever they wanted). Measures of efficiency were not covered in previous research on technology-mediated interviews and our study also missed to explicitly compare the efficiency of the interview forms. Therefore, future research could capture measures of efficiency (e.g., how much time was necessary to schedule the interview) to evaluate the practicality of different interview approaches.

Moreover, it is not yet clear how organizations and recruiters themselves evaluate digital interviews. It might be that they appreciate these interviews because of their flexibility and efficiency, but it is equally possible that they assess these interviews as threatening their own work. Digital interviews remove the interaction with applicants from the recruiter's job, which might be a part of the work that recruiters actually enjoy.

Conclusion

Job interview research has generated a tremendous amount of personnel selection research (Macan, 2009), and with digital interviews, this trend is likely to continue. Digital interviews are a novel alternative for conducting interviews and they offer many new

directions for research. This study is among the first to shed light on the emerging interview approach of digital interviewing and will hopefully lead to researchers becoming as interested in this topic as practitioners already are.

References

Ajzen, I. (2002a). Constructing a TPB questionnaire: Conceptual and methodological

considerations. Retrieved from

http://chuang.epage.au.edu.tw/ezfiles/168/1168/attach/20/pta_41176_7688352_57138

.pdf

Ajzen, I. (2002b). Perceived behavioral control, Self-Efficacy, locus of control, and the

theory of planned Behavior1. *Journal of Applied Social Psychology*, *32*, 665–683.

https://doi.org/10.1111/j.1559-1816.2002.tb00236.x

Barrick, M. R., Shaffer, J. A., & DeGrassi, S. W. (2009). What you see may not be what you

get: Relationships among self-presentation tactics and ratings of interview and job

performance. *Journal of Applied Psychology*, *94*, 1394–1411.

https://doi.org/10.1037/a0016532

Bauer, T. N., Truxillo, D. M., Paronto, M. E., Weekley, J. A., & Campion, M. A. (2004).

Applicant reactions to different selection technology: Face-to-Face, interactive voice

response, and computer-assisted telephone screening interviews. *International

Journal of Selection and Assessment*, *12*, 135–148. https://doi.org/10.1111/j.0965-

075x.2004.00269.x

Bauer, T. N., Truxillo, D. M., Sanchez, R. J., Craig, J. M., Ferrara, P., & Campion, M. A.

(2001). Applicant reactions to selection: Development of the Selection Procedural

Justice Scale (SPJS). *Personnel Psychology*, *54*, 387–419.

https://doi.org/10.1111/j.1744-6570.2001.tb00097.x

Bauer, T. N., Truxillo, D. M., Tucker, J. S., Weathers, V., Bertolino, M., Erdogan, B., &

Campion, M. A. (2006). Selection in the information age: The impact of privacy

concerns and computer experience on applicant reactions. *Journal of Management*,

32, 601–621. https://doi.org/10.1177/0149206306289829

Blacksmith, N., Willford, J. C., & Behrend, T. S. (2016). Technology in the employment

    interview: A meta-analysis. *Personnel Assessment and Decisions*, *2*, 12–20.

Brenner, F. S. (2016). Bridging the scientist-practitioner gap: Einflussfaktoren auf die

    Bewerberakzeptanz bei neuen Technologien am Beispiel zeitversetzter Video-

    Interviews [Bridging the scientist-practitioner gap: Influences on applicant reactions

    in novel technologies through the example of asynchronous video-interviews]. In T.

    Verhoeven (Ed.), *Candidate experience: Ansätze für eine positiv erlebte*

    Arbeitgebermarke im Bewerbungsprozess und darüber hinaus [Candidate experience:

    Approaches for a positive employer brand in the selection process and beyond] (pp.

    71–89). Wiesbaden, Germany: Springer.

Brenner, F. S., Ortner, T. M., & Fay, D. (2016). Asynchronous video interviewing as a new

    technology in personnel selection: The applicant's point of view. *Frontiers in*

    Psychology, *7*, 863. https://doi.org/10.3389/fpsyg.2016.00863

Buehl, A.-K., & Melchers, K. G. (2017). Individual difference variables and the occurrence

    and effectiveness of faking behavior in interviews. *Frontiers in Psychology*, *8*, 686.

    https://doi.org/10.3389/fpsyg.2017.00686

Chamorro-Premuzic, T., Winsborough, D., Sherman, R. A., & Hogan, R. (2016). New talent

    signals: Shiny new objects or a brave new world? *Industrial and Organizational*

    Psychology, *9*, 621–640. https://doi.org/10.1017/iop.2016.6

Chapman, D. S., Uggerslev, K. L., Carroll, S. A., Piasentin, K. A., & Jones, D. A. (2005).

    Applicant attraction to organizations and job choice: A meta-analytic review of the

    correlates of recruiting outcomes. *Journal of Applied Psychology*, *90*, 928–944.

    https://doi.org/10.1037/0021-9010.90.5.928

Chapman, D. S., Uggerslev, K. L., & Webster, J. (2003). Applicant reactions to face-to-face and technology-mediated interviews: A field investigation. *Journal of Applied Psychology*, *88*, 944–953. https://doi.org/10.1037/0021-9010.88.5.944

Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: the perception–behavior link and social interaction. *Journal of Personality and Social Psychology*, *76*(6), 893. https://doi.org/10.1037//0022-3514.76.6.893

Frauendorfer, D., Schmid Mast, M., Nguyen, L., & Gatica-Perez, D. (2014). Nonverbal social sensing in action: Unobtrusive recording and extracting of nonverbal behavior in social interactions illustrated with a research example. *Journal of Nonverbal Behavior*, *38*, 231–245. https://doi.org/10.1007/s10919-014-0173-5

Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18*, 233–239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

Gilliland, S. W. (1993). The perceived fairness of selection systems: An organizational justice perspective. *Academy of Management Review*, *18*, 694–734. https://doi.org/10.2307/258595

Hausknecht, J. P., Day, D. V., & Thomas, S. C. (2004). Applicant reactions to selection procedures: An updated model and meta-analysis. *Personnel Psychology*, *57*, 639–683. https://doi.org/10.1037/e518612013-214

Highhouse, S., Lievens, F., & Sinar, E. F. (2003). Measuring attraction to organizations. *Educational and Psychological Measurement*, *63*, 986–1001. https://doi.org/10.1177/0013164403258403

HireVue. (2017a). HireVue Customers. Retrieved August 5, 2017, from https://www.hirevue.com/customers

HireVue. (2017b). HireVue OnDemand. Retrieved August 5, 2017, from

    https://www.hirevue.com/products/video-interviewing/ondemand

Ingold, P. V., Kleinmann, M., König, C. J., & Melchers, K. G. (2015). Transparency of

    assessment centers: Lower criterion-related validity but greater opportunity to

    perform? *Personnel Psychology*, 467–497. https://doi.org/10.1111/peps.12105

Langer, M., König, C. J., Gebhard, P., & André, E. (2016). Dear computer, teach me

    manners: Testing virtual employment interview training. *International Journal of*

    Selection and Assessment, *24*, 312–323. https://doi.org/10.1111/ijsa.12150

Macan, T. (2009). The employment interview: A review of current studies and directions for

    future research. *Human Resource Management Review*, *19*, 203–218.

    https://doi.org/10.1016/j.hrmr.2009.03.006

Malhotra, N. K., Kim, S. S., & Agarwal, J. (2004). Internet users' information privacy

    concerns (IUIPC): The construct, the scale, and a causal model. *Information Systems*

    Research, *15*, 336–355. https://doi.org/10.1287/isre.1040.0032

McCarthy, J. M., Bauer, T. N., Truxillo, D. M., Campion, M. C., Van Iddekinge, C. H., &

    Campion, M. A. (2017). Using pre-test explanations to improve test-taker reactions:

    Testing a set of "wise" interventions. *Organizational Behavior and Human Decision*

    Processes, *141*, 43–56. https://doi.org/10.1016/j.obhdp.2017.04.002

Microsoft Corporation. (2017). About Skype. Retrieved from

    https://www.skype.com/de/about/

Open Science Collaboration. (2015). Estimating the reproducibility of psychological science.

    Science, *349*, 1–8. https://doi.org/10.1126/science.aac4716

Peeters, H., & Lievens, F. (2006). Verbal and nonverbal impression management tactics in

    behavior description and situational interviews. *International Journal of Selection and*

    Assessment, *14*, 206–222.

Ployhart, R. E., & Ryan, A. M. (1998). Applicants' reactions to the fairness of selection procedures: The effects of positive rule violations and time of measurement. *Journal of Applied Psychology*, *83*, 3–16. https://doi.org/10.1037/0021-9010.83.1.3

Potosky, D. (2008). A conceptual framework for the role of the administration medium in the personnel assessment process. *Academy of Management Review*, *33*, 629–648. https://doi.org/10.5465/amr.2008.32465704

Roch, S. G., Woehr, D. J., Mishra, V., & Kieszczynska, U. (2012). Rater training revisited: An updated meta-analytic review of frame-of-reference training: Rater training revisited. *Journal of Occupational and Organizational Psychology*, *85*, 370–395. https://doi.org/10.1111/j.2044-8325.2011.02045.x

Roulin, N., Bangerter, A., & Levashina, J. (2014). Interviewers' perceptions of impression management in employment interviews. *Journal of Managerial Psychology*, *29*, 141–163. https://doi.org/10.1108/JMP-10-2012-0295

Schmerling, D. (2017). *Caught on video: Best practices in one-way video interviewing*. Panel discussion presented at the SIOP 2017, Orlando, FL.

Sears, G., Zhang, H., Wiesner, W. D., Hackett, R. W., & Yuan, Y. (2013). A comparative assessment of videoconference and face-to-face employment interviews. *Management Decision*, *51*, 1733–1752. https://doi.org/10.1108/MD-09-2012-0642

Smith, H. J., Milberg, S. J., & Burke, S. J. (1996). Information privacy: Measuring individuals' concerns about organizational practices. *MIS Quarterly*, *20*, 167–196. https://doi.org/10.2307/249477

Software Advice. (2017). Video Interview Software. Retrieved August 5, 2017, from http://www.softwareadvice.com/hr/video-interviewing-comparison/

Spector, P. E. (1977). What to do with significant multivariate effects in multivariate analyses of variance. *Journal of Applied Psychology*, *62*, 158. https://doi.org/10.1037/0021-9010.62.2.158

Stone-Romero, E. F., Stone, D. L., & Hyatt, D. (2003). Personnel selection procedures and invasion of privacy. *Journal of Social Issues*, *59*, 343–368. https://doi.org/10.1111/1540-4560.00068

Tene, O., & Polonetsky, J. (2015). A theory of creepy: Technology, privacy, and shifting social norms. *Yale Journal of Law and Technology*, *16*, 59–102.

Uggerslev, K. L., Fassina, N. E., & Kraichy, D. (2012). Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. *Personnel Psychology*, *65*, 597–660.

Van Hoye, G., & Lievens, F. (2009). Tapping the grapevine: A closer look at word-of-mouth as a recruitment source. *Journal of Applied Psychology*, *94*, 341–352. https://doi.org/10.1037/a0014066

viasto. (2017). viasto Customers. Retrieved September 5, 2017, from https://www.viasto.com/kunden/

Warszta, T. (2012). *Application of Gilliland's model of applicants' reactions to the field of web-based selection*. [Unpublished dissertation]. Christian-Albrechts Universität Kiel, Germany. Retrieved from http://macau.uni-kiel.de/receive/dissertation_diss_00008734

Wilhelmy, A., Kleinmann, M., König, C. J., Melchers, K. G., & Truxillo, D. M. (2016). How and why do interviewers try to make impressions on applicants? A qualitative study. *Journal of Applied Psychology*, *101*, 313–332. https://doi.org/10.1037/apl0000046

Footnotes

1. Following the call for open research (Open Science Collaboration, 2015), this study was pre-registered. In the pre-registration, there were additional exploratory hypotheses, which we decided to exclude for reasons of readability; results can be provided on request.

2. Special thanks to Falko Brenner, who supported us with very useful insights.

Table 1.

Correlations and Cronbach's Alpha of the Study Variables

Scale	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Creepy Ambiguity	*.71*												
2. Emotional Creepiness	.55**	*.81*											
3. Privacy Concerns	.35**	.33**	*.79*										
4. Perceived Behavioral Control	-.31**	-.38**	-.25**	*.71*									
5. Two-Way Communication	-.28**	-.39**	-.33**	.29**	*.66*								
6. Interpersonal Treatment	-.26**	-.33**	-.31**	.09	.70**	*.91*							
7. Chance to Perform	-.34**	-.17	-.04	.49**	.38**	.29**	*.89*						
8. Fairness	-.34**	-.23**	-.21*	.48**	.44**	.41**	.67**	*.85*					
9. Organizational Attractiveness	-.23**	-.29**	.01	.30**	.26**	.20*	.31**	.29**	*.94*				
10. Live Skype Ratings[a]	-.30*	-.01	-.18	.30*	.01	.24	.23	.21	.04	*.95*			
11. Recorded Skype Ratings[a]	-.09	.13	.31*	.14	.09	.19	.13	.09	.05	.39**	*.96*		
12. Digital Interview Ratings[b]	-.28*	-.34**	-.05	.37**	-.04	.03	.27*	.15	.10	-	-	*.96*	
13. Interview Method	.19**	.29**	.17	.07	-.49**	-.71**	-.12	-.13	-.07	-	-	-	-

Note. Coding of interview method: 0 = videoconference interview, 1 = digital interview, [a] = based on 54 participants, [b] = based on 59 participants. $N = 113$. Numbers in the diagonal represent Cronbach's alpha of the scales.
[*]$p < .05$, [**]$p < .01$

Table 2.

Descriptives and Results of the t-Tests for the Interview Conditions

Scale	Videoconference Interview M (SD)	Digital Interview M (SD)		$t(111)$	d	95% CI (for d)
Creepy Ambiguity	2.44 (0.60)	2.68 (0.67)		2.00[*]	0.38	[0.01, 0.75]
Emotional Creepiness	1.71 (0.53)	2.11 (0.76)		3.30[**b]	0.61	[0.23, 0.98]
Privacy Concerns	2.73 (0.73)	2.99 (0.80)		1.83[*]	0.34	[-0.03, 0.71]
Perceived Behavioral Control	3.73 (0.54)	3.81 (0.59)		0.76	0.14	[-0.23, 0.51]
Two-Way Communication	3.22 (0.67)	2.34 (0.88)		-6.00[**b]	-1.13	[-1.52, -0.72]
Interpersonal Treatment	4.41 (0.46)	3.19 (0.74)		-10.68[**b]	-1.98	[-2.41, -1.53]
Chance to Perform	2.86 (0.79)	2.67 (0.84)		-1.22	-0.23	[-0.60, 0.14]
Fairness	3.57 (0.81)	3.34 (0.87)		-1.42	-0.27	[-0.64, 0.10]
Organizational Attractiveness	3.66 (0.53)	3.58 (0.60)		-0.75	-0.14	[-0.51, 0.23]
Live Skype Ratings	4.83 (0.92)	-	versus Recorded Skype	-1.42[a]	-0.22	[-0.83, 0.41]
Recorded Skype Ratings	4.63 (0.98)	-	versus Digital Interviews	3.02[**]	0.57	[0.19, 0.95]
Digital Interview Ratings	-	5.23 (1.12)	versus Live Skype	-2.04[*]	-0.39	[-0.76, -0.02]

Note. For all rows except for the interview ratings, we compared videoconference and digital interviews, hence a positive d value indicates higher values for digital interviews. CI = confidence interval, [a] = for this comparison we used a dependent t-test with df = 53, [b] = for these *t*-tests df was corrected for inhomogeneity of variances. $n_{\text{videoconference interview}} = 54$, $n_{\text{digital interview}} = 59$.
[*]$p < .05$, [**]$p < .01$

Appendix

Items Used in the Current Study

Scale	Items	Source
Interview Rating	*The applicant:*	
	Was able to present his study choice in an adequate manner.	Buehl & Melchers (2017)
	Showed resilience.	Buehl & Melchers (2017)
	Showed problem solving abilities.	Buehl & Melchers (2017)
	Showed that he/she is able to manage conflicts within a team.	Buehl & Melchers (2017)
	Showed that he/she can handle challenging situations.	Buehl & Melchers (2017)
	Is a suitable applicant.	Langer et al. (2016)
	Convinced me.	Langer et al. (2016)
	Is a suitable student for this Masters'degree.	Langer et al. (2016)
	Sold him/herself well.	Langer et al. (2016)
	Would receive a place at the university.	Langer et al. (2016)
	On a scale from 0-100, the applicant would receive XXX points.	Langer et al. (2016)
Creepiness		
Emotional Creepiness	During this situation, I had a queasy feeling.	Langer & König (2017)
	I had a feeling that there was something shady about this situation.	Langer & König (2017)
	I felt uneasy during this situation.	Langer & König (2017)
	I had an indefinable fear during this situation.	Langer & König (2017)
	This situation somehow felt threatening.	Langer & König (2017)
Creepy Ambiguity	During this situation, I did not know exactly what was happening to me.	Langer & König (2017)
	I did not know how to judge this situation.	Langer & König (2017)
	During this situation, things were going on that I did not understand.	Langer & König (2017)
	I did not know exactly how to behave in this situation.	Langer & König (2017)
	I did not know exactly what to expect of this situation.	Langer & König (2017)
Privacy Concerns	In such an interview, it is important to me to keep my privacy intact	Malhotra et al. (2004)
	In such an interview, I am concerned about my privacy.	Malhotra et al. (2004)
	Such interviews threaten applicants' privacy.	Self-developed
	Private data submitted during such interviews could be misused.	Self-developed
	During this interview, I provided private data that will be stored safely. (r)	Smith et al. (1996)
Perceived Behavioral Control	Through my performance, I could influence the result of the interview.	Self-developed

	I am sure that I was in control of the interview.	Self-developed
	During the interview, I think that I convinced my conversation partner that I have what it takes.	Self-developed
	This procedure is uncontrollable for the respective participant. (r)	Self-developed
	The result of the interview depends on the participants themselves.	Self-developed
	The interview is unpredictable. (r)	Self-developed
	During such an interview, it is possible to control the conversation.	Self-developed
	This interview allows applicants to present themselves as they intend to.	Self-developed
Two-way Communication	There was enough communication during the interview.	Bauer et al. (2001), Warstza (2012)
	I was satisfied with the communication that occurred during the interview.	Bauer et al. (2001), Warstza (2012)
	I would have felt comfortable asking questions about the interview if I had any.	Bauer et al. (2001), Warstza (2012)
	I was comfortable with the idea of expressing my concerns.	Bauer et al. (2001), Warstza (2012)
Interpersonal treatment	During the interview, I was treated politely.	Bauer et al. (2001), Warstza (2012)
	During the interview, I was treated with respect.	Bauer et al. (2001), Warstza (2012)
	I was satisfied with my treatment during the interview.	Bauer et al. (2001), Warstza (2012)
Chance to perform	I could really show my skills and abilities through the interview.	Bauer et al. (2001), Warstza (2012)
	This interview allowed me to show what my job skills are.	Bauer et al. (2001), Warstza (2012)
	This interview gave me the opportunity to show what I can really do.	Bauer et al. (2001), Warstza (2012)
	I was able to show what I can do on the interview.	Bauer et al. (2001), Warstza (2012)
Global Fairness	All things considered, this selection procedure was fair.	Warszta (2012)
	I think this interview is a fair procedure to select people for the job.	Warszta (2012)
	I think the interview procedure was fair.	Warszta (2012)
Overall organizational attractiveness	For me, this university would be a good place to study.	Highhouse et al. (2003)
	This university is attractive to me.	Highhouse et al. (2003)
	I am interested in learning more about this university.	Highhouse et al. (2003)
	A place for a Masters' degree at this university would be very appealing to me.	Highhouse et al. (2003)
	If this university invited me for a face-to-face job interview, I would go.	Highhouse et al. (2003)
	I would accept a place for a Masters' degree at this university.	Highhouse et al. (2003)
	I would make this university one of my first choices.	Highhouse et al. (2003)
	I would like to study at this university.	

Students are probably proud to say that they study at this university.	Highhouse et al. (2003)
This university probably has a reputation as being an excellent university.	Highhouse et al. (2003)
There are probably many who would like to study at this university.	Highhouse et al. (2003)
This is a reputable university to study at.	Highhouse et al. (2003)
I would recommend this university to friends.	Warstza (2012)
I have friends who would be interested in this university.	Warstza (2012)
I would recommend others to apply at this university.	Warstza (2012)

Note. (r) = reverse coded. All items were presented in German.