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The Impact of Linguistic Background and Interlocutor Visibility in Zoom Calls on Likeability, Prosocial Behavior, and Communicative Success

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Abstract

The continuous rise of speakers using English as a lingua franca (ELF) as well as the acceleration of the use of video calls in work and study contexts have brought more salience to the issue of non-native interaction in computer-mediated communication. Previous studies have suggested that ELF speakers sharing the same linguistic background tend to like each other more and may benefit from an increased communicative success and increased prosocial behavior from their interlocutor as compared to ELF speakers not sharing the same linguistic background. Additionally, previous research has implied that interlocutor visibility seems to positively impact likeability, prosocial behavior, and communicative success. No present study has, however, combined the two contexts of sharing of language background and interlocutor visibility in online settings to examine the effects on the previously mentioned variables. The present study aims to fill this gap in the literature with an experiment in which German and Dutch participants take part in a spot-the-difference task, after which they evaluate each other and their communication in a questionnaire. The results suggest that the sharing of the same language background does not impact likeability and prosocialness evaluations, as well as communicative success. Moreover, interlocutor visibility does not seem to affect likeability and prosocialness ratings but does facilitate communicative success to some degree.

Keywords: Zoom, linguistic background, interlocutor visibility, likeability, prosocial behavior, communicative success, ELF speakers

Introduction

One of the numerous impacts that globalization has created in today's world is the continuously increasing usage of the English language as a lingua franca by non-native speakers. Most English interactions in today's world take place between non-native speakers of English and these are believed to outnumber native speakers of English by three to one (Crystal, 2003). With the rising importance of English in the globalized world, more and more people are now working or studying with English as their lingua franca (ELF) in a non-native communication context. Moreover, with the rapid development of computer-mediated communication, which has especially accelerated due to the ongoing COVID-19 pandemic, platforms like Zoom, Microsoft Teams, and Skype are on the rise. Therefore, an increasing amount of communication is now taking place in online settings. These platforms allow their users to decide to switch their cameras off or on during a video call and this may have important communicative consequences. The present study aims to investigate the interplay between communication in an online context and communication in an L2 context, two developments of crucial importance nowadays, regarding potential impacts on factors related to communicative success. More specifically, this study will explore the potential impacts that the linguistic background of interlocutors, which can be shared or different, as well as visibility of the communicative partner may have on likeability evaluations, prosocial behavior, and communicative success.

Sharing of Linguistic Background

Due to the rising usage of ELF, a variable, highly dynamic, and adaptive use of the English language has developed (Baker & Hüttner, 2018). Non-native speakers have established a special variety of English in which they aim to cooperate and communicate successfully despite their limited language proficiency (Meierkord, 1998). Backus et al. (2013) labelled this phenomenon Inclusive Multilingualism to refer to the reality that the majority of non-native speakers have only incompletely mastered a foreign language and in speaking it, they do not aim for native speaker standards but instead for standards for attaining successful communication that arise from the respective context. While previous literature has often investigated the differences between native and non-native speech, the present study will place an emphasis on non-native interaction.

An important factor that plays into ELF communication is whether interlocutors share the same first language (L1) background with one another. Previous studies have shown that when non-native speakers share the same language background as listeners, they tend to be evaluated higher in terms of comprehensibility and intelligibility than non-native speakers with

a different language background and even higher than native speakers (Bent & Bradlow, 2003; Flowerdew, 1994; Major et al., 2002; Munro, Derwing, & Morton, 2006; Stibbard & Lee, 2006; Wang, 2007). This may point to increased communicative success in a non-native setting where people share the same language background. This assumption aligns with findings from a study conducted by Van Engen et al. (2010), in which data from a dialogue-based spontaneous speech task from native and non-native speakers of English were collected. The results showed that non-native participant pairs with a shared language background were more efficient in their interactions than non-native participant pairs with a different language background. This finding implies that successful communication depends on the alignment of interlocutors to one another with regard to native language background.

Increased communicative efficiency for non-native speakers with a shared L1 background may be explained with the interlanguage intelligibility benefit of foreign-accented speech, which suggests that non-native speakers tend to find speech from non-native speakers more intelligible when they share the same L1 background as their interlocutor (Bent & Bradlow, 2003; Major et al., 2002). High intelligibility facilitates the success of a conversation and could therefore lead to increased communicative success. In line with this finding, other studies have shown that sharing the same L1 background can facilitate solving collaborative tasks due to an increased quality of communication (McLeod et al., 1996; Noels, et al., 1996). However, while a study conducted by Yow and Lim (2019) also found that participants sharing two languages scored higher in a collaborative problem-solving task than participants not sharing the same languages, they attributed this phenomenon to the self-categorization theory, not to an improved communicative process. Self-categorization theory suggests that similar stimuli, such as an accent or ethnicity, can accentuate a sense of belongingness to the same social group (Turner and Reynolds, 2011). This explanation aligns with previous studies which have found that interlocutors sharing the same language feel closer to each other and therefore more comfortable, consequently leading to an improved quality of collaboration (Turner et al., 1987).

The sharing of the same linguistic background thus seems to be an important factor in ELF interaction and may also have an impact on how non-native speakers evaluate each other in terms of likeability. Previous studies have shown that people tend to evaluate each other more favourably when the accent of their interlocutor is more similar to their own as compared to interlocutors with a dissimilar accent (Giles & Johnson, 1981; Ryan & Sebastian, 1980). The similarity-attraction paradigm may offer an explanation to these findings. It claims that people

generally like another person more if they perceive that person to be similar to themselves (Byrne, 1971). It may therefore be assumed that when people share the same linguistic background, they will evaluate each other higher in terms of likeability. Following this line of reasoning, conversation partners sharing the same language background may also engage in more prosocial behavior because they feel more similar with the interlocutor as compared to conversation partners with different linguistic backgrounds. This would align with previous studies that have found that likeability tends to be positively associated with prosocial behavior (LaFontana & Cillessen, 2002; Lease et al., 2002a). Even children seem to be sensitive to different levels of prosocial behavior. A study conducted by Ladd et al. (1988) revealed that higher levels of prosocialness displayed by children at the outset of a school year seemed to result in higher likeability ratings by the end of the year.

Interlocutor Visibility

Another phenomenon that is observable on a global scale is that ELF communication is now increasingly taking place online, especially due to the necessary measures taken by governments all over the world as a response to the ongoing COVID-19 pandemic. With more and more interactions switching from face-to-face to computer-mediated communication, it is crucial to examine how this switch in the mode of interaction can impact non-native communication. According to the Media Richness Theory (Daft & Lengel, 1986), video calls are considered rich since they (1) provide non-verbal cues, (2) offer immediate feedback, and (3) are more personal than less rich media such as text messages or emails (Oviedo & Fox Tree, 2021). Nevertheless, even though video calls may provide a richer experience than phone calls or text messages, they entail several limitations. Previous studies have shown that interactions in video calls result in greater dissatisfaction with the overall communication, a decrease in mutual understanding and decisions, as well as an overall difficulty in trying to keep the interaction going (Hassell & Cotton, 2017). Moreover, interactions in video calls generally have fewer exchanges in turn-taking (Schweitzer & Duxbury, 2010; van der Kleij et al., 2009), can create anxiety in users leading to decreased participation and performance in interactions (Fuller et al., 2016), and makes virtually operating teams vulnerable to mistrust and communication breakdowns (Meyer et al., 2016). Due to these shortcomings, communicative success may be impaired in Zoom calls, especially when compared to face-to-face interactions.

Importantly, online video call platforms such as Zoom allow users to switch their cameras on and off during meetings. The impact of visibility in computer-mediated interactions may therefore play a crucial role in how (successfully) we communicate and evaluate each

other. Since video calls with active cameras provide nonverbal cues such as head nods or facial expressions, ambiguity during interactions is reduced and comprehensibility facilitated (Bruce, 1996), likely leading to improved communicative success. In line with this finding, Boyle et al. (1994) found that interlocutor visibility, not in online settings but in general, can significantly impact communicative effectiveness. Since visibility facilitates the transfer of information and turn-taking, communicative efficiency was greater for participants who were able to see each other than for participants who did not see each other. It would be interesting to see whether the current study can replicate these findings in a video call setting for ELF interaction.

A crucial non-verbal cue that is entailed in video calls with active cameras is eye contact. The presence or the lack of eye contact has been found to impact attitudinal evaluations. Previous studies have shown that when communicators are not able to establish eye contact, their communication was less personal (Lapidot-Lefler & Barak, 2012) and could even elicit emotions such as sadness and fear (Adams & Kleck, 2005). This may lead to the assumption that in non-visible conditions, communicators may feel less positive toward their interlocutor due to an impersonal communicative environment and its accompanying negative emotional state. Vice versa, when communicators are able to see each other, it may be assumed that they feel more positively toward their interlocutor due to the presence of nonverbal cues, which have been found to reduce uncertainty (Berger & Calabrese, 1975). Besides eye contact, a visible interlocutor in a video call also offers the opportunity for mimicry, which refers to the copying of movements, postures, and behaviors of the interaction partner. A study conducted by van Baaren et al. (2003 & 2004) found that participants who were exposed to mimicry by their interlocutor exhibited higher prosocial behavior than participants who had not been exposed to mimicry. This finding aligns with a study conducted by Müller et al. (2012) which revealed that participants who were mimicked displayed higher levels of prosocialness as reflected in their willingness to accompany their interlocutor to a train station than participants who had not been mimicked. Therefore, it may be assumed that in visible conditions, where conversation partners are naturally able to mimic their interlocutor, participants will display higher levels of prosocial behavior than participants that are not able to see one another.

While previous literature has provided valuable insights into the ways in which non-nativeness and interlocutor visibility can impact likeability, prosocialness, and communicative success, no current study has combined the two contexts of sharing of linguistic background and interlocutor visibility in an online setting as an attempt to investigate the effects on likeability, prosocial behavior, and communicative success. The current study aims to fill this

gap in the literature by looking at the effects of interlocutor visibility and linguistic background of German and Dutch participant pairs, who either have a shared linguistic background (i.e. German-German and Dutch-Dutch) or a mixed linguistic background (i.e. German-Dutch) in order to reveal insights into how this may impact perceived likeability and prosocialness of the interlocutor, as well as the overall communicative success.

The research question and hypotheses resulting from the literature review are the following:

RQ: What is the influence of interlocutor visibility and sharing of linguistic background on likeability, prosocial behavior, and communicative success in conversations in Zoom calls in ELF communication?

H1: *ELF speakers sharing the same linguistic background will score higher on communicative success than ELF speakers not sharing the same linguistic background.*

H2: *ELF speakers sharing the same linguistic background will evaluate each other higher in terms of likeability than ELF speakers not sharing the same linguistic background.*

H3: *ELF speakers sharing the same linguistic background will display more prosocial behavior than ELF speakers not sharing the same linguistic background.*

H4*: When ELF speakers are able to see their interlocutor, they will score higher on communicative success than ELF speakers who cannot see their interlocutor.*

H5: *When ELF speakers are able to see their interlocutor, they will evaluate them higher in terms of likeability than ELF speakers who cannot see their interlocutor.*

H6: *When ELF speakers are able to see their interlocutor, they will evaluate them higher in terms of prosocial behavior than ELF speakers who cannot see their interlocutor.*

From a theoretical perspective, the present study could contribute to the current literature by filling the research gap in the field of non-native online communication regarding variables including likeability, prosocialness, and communicative success. From a practical perspective, the present study may provide valuable insights for globally operating teams, such as global virtual teams, which are teams that are operating completely in the virtual sphere and consist of culturally diverse team members who may or may not share the same linguistic background. Results from the present study may help members and managers of global virtual teams become aware of the different factors that influence their communicative effectiveness and the way they perceive and evaluate each other.

Methodology

The aim of this study was to investigate the impact of interlocutor visibility and linguistic background of ELF speakers on likeability, prosocial behavior, and communicative success by letting participants take part in a spot-the-difference task, which was inspired by a study conducted by van Mulken and Hendriks (2015).

Design

The current study was an experiment and had a 2 × 2 between-subjects design with two independent variables: visibility (visible, not visible) and linguistic background (shared, mixed).

Materials

Stimuli

As stimulus material, two slightly different images were used and presented to the participant pairs. Both images display a farm with different animals, and a male and female farmer (see appendix A). The images were retrieved from www.elements.envato.com and were adapted by the researchers. The differences in the two images could be found in the location of objects, the number of objects, colour changes in objects, and additional objects in one of the images.

Instrumentation

Before participants attended the Zoom call, they filled in a pre-screening questionnaire via Qualtrics in their native language. In this questionnaire, they were asked about their name, age, email address, nationality, native language, and educational level. Furthermore, they were asked whether they had access to a stable Wi-Fi connection and a webcam on their computer and on what date and time they would be available to attend the Zoom call. Participants then self-assessed their English proficiency using an adapted version of the Language History Questionnaire (LHQ) (Li, et al. 2014; Li, et al., 2019). The adapted LHQ (see appendix B) asked about the age at which participants acquired the English language, the number of years that participants had used English, and whether they had been in one or more English-speaking countries for at least three months. Moreover, on a 7-point Likert scale anchored by very poorly – excellent, participants were asked to rate their own ability to speak and understand the English language.

Once the experimental part of the Zoom call was over (i.e., the spot-the-difference task), participants filled in an online questionnaire in Qualtrics in their L1 in which the dependent

variables were measured and the ability of the participants' interlocutor to speak and understand English. To measure perceived likeability, an established likeability scale was used (Reysen, 2005), which included eleven statements (e.g. 'This person is likeable', or 'This person is friendly; see appendix C) followed by 7-point Likert scales anchored by 'very strongly agree – very strongly disagree'. The reliability of these eleven items was good (α = .85). To measure prosocial behavior, an adapted version of the sixteen items of the Prosocialness for Adults was used (Capara, et al., 2005). The scale was adapted by directing the sixteen items (e.g. 'I think this person tries to help others' or 'I think this person shares things with their friends'; see appendix C) toward the interlocutor, not to oneself. The reliability of these sixteen items was good (α = .91). Communicative success was measured, firstly, by analysing the success of the task in terms of how many differences participant pairs were able to identify. A difference was noted down by the researchers when the participant pair mutually agreed on a difference, even if it was not a correctly found difference. This ensured that a found difference reflected a conversational agreement between the participant pair. The difference was noted down independently by both researchers and was later compared to ensure intercoder reliability. If there was disagreement about the number of found differences, the researchers looked at the recorded Zoom call to solve the disagreement. Secondly, communicative success was measured as perceived by the participant with two 5-point Likert scales. One scale aimed to measure the perceived success of the task and was adapted from a scale developed by Messner (2015), thereby indirectly measuring communicative success with five items (e.g. 'I am generally content with our collaboration', or 'I think the results of our collaboration could have been better'; see appendix C) anchored by completely agree – completely disagree. The reliability of these five items was moderate (α = .79). The second scale aimed to measure perceived communicative success directly with six items (e.g. 'The conversation with this person went smoothly' or 'Talking to this person was easy'; see appendix C) anchored by completely agree – completely disagree. The reliability of these six items was moderate (α = .73). Lastly, participants were asked to rate the ability of their interlocutor to speak and understand English on a 7-point Likert scale anchored by very poorly - excellent (see appendix C).

Participants

A total of 52 participants took part in the study and they attended the experiment in pairs (age: *M* = 23.96, *SD* = 3.35, range 20-30; 65.4 % female). Of those 52 participants, 24 were German (46.2%) and 28 were Dutch (53.8%). Moreover, 17 participants (32,1%) indicated an A-level degree as their current educational level, 23 participants (43.4%) indicated a bachelor's degree, 9 participants (17%) indicated a master's degree, and 3 participants (5.7%) indicated that they

were still in secondary education. Results from the Language History Questionnaire revealed the following findings: The majority of participants (59.6%) has been abroad in an English-speaking country for at least 3 months in the past. The average age at which participants had started to acquire the English language was 10.31 (*SD* = 2.96) and the average number of years that participants have used the English language was 13.35 (*SD* = 3.76). Additionally, participants rated their ability to speak English (*M* = 5.27, *SD* = 1.07) and their ability to understand the English language (*M* = 5.92, *SD* = 0.86). Moreover, participants were asked to rate the ability of their interlocutor to speak English (*M* = 5.85, *SD* = 0.78) and to understand the English language (*M* = 6.04, *SD* = 0.84).

To investigate whether linguistic background and interlocutor visibility have an impact on likeability, prosocial behavior, or communicative success, four groups were established which were exposed to different conditions in the experiment (shared L1 - visible, shared L1 - non-visible, mixed L1 - visible, mixed L1 - non-visible). In the shared L1 background condition, 14 participant pairs attended the Zoom call, where seven pairs were able to see their interlocutor and seven other pairs were not able to see their interlocutor. In the mixed L1 background condition, 12 participant pairs attended the Zoom call, where six pairs were able to see their interlocutor and six other pairs were not able to see their interlocutor. Thus, overall, 26 participant pairs attended the Zoom meetings.

The distribution of the several background variables across the experimental groups are summarized in Table 1 and 2. Chi-square tests and one-way ANOVAs were conducted to investigate whether the background variables were equally distributed across the four different groups. Gender (χ^2 (3) = 2.98, *p* = .395), educational level (χ^2 (15) = 11.94, *p* = .683), and people who went abroad to an English-speaking country (χ^2 (3) = 4.28, *p* = .232) were approximately equally distributed in all conditions. Several one-way ANOVAs revealed no significant differences in the conditions regarding age of participants (*F* (3, 48) = 0.21, *p* = .892), age of English language acquisition (*F* (3, 48) = 1.52, *p* = .222), number of years that participants have used English (*F* (3, 48) = 1.04, *p* = .385), self-assessed ability to speak (*F* (3, 48) = 0.79, *p* = .503) and understand English (*F* (3, 48) = 0.29, *p* = .833). Moreover, there were no significant differences in the conditions regarding the perceived ability of the interlocutor to speak (*F* (3, 48) = 0.19, *p* = .901) and understand English (*F* (3, 48) = 2.13, *p* = .109).

Table 1. Distribution of background variables in experimental groups

	Shared L1 with visibility (n = 14) M (SD)	Shared L1 no visibility (n = 14) M (SD)	Mixed L1 with visibility (n = 14) M (SD)	Mixed L1 no visibility (n = 14) M (SD)
Age	24.42 (3.52)	23.43 (3.35)	23.92 (3.48)	24.08 (3.37)
Age of English language acquisition	9.36 (4.25)	10.29 (2.34)	10.00 (2.34)	11.75 (1.96)
Number of years English used	14.50 (3.59)	12.64 (4.85)	13.92 (3.15)	12.25 (2.96)
English speaking ability	5.64 (1.22)	5.07 (1.00)	5.17 (1.19)	5.17 (0.84)
English understanding ability	6.07 (0.73)	5.93 (1.14)	6.83 (1.53)	5.75 (0.75)

Table 2. Distribution of background variables in experimental groups

		Shared L1 with visibility (n = 14) Frequency (%)	Shared L1 no visibility (n = 14) Frequency (%)	Mixed L1 with visibility (n = 14) Frequency (%)	Mixed L1 no visibility (n = 14) Frequency (%)
Gender	Male	5 (35.7%)	5 (35.7%)	2 (16.7%)	6 (50%)
	Female	9 (64.3%)	9 (64.3%)	10 (83.3%)	6 (50%)
	Other	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Educational level	A-Level	4 (28.6%)	5 (35.7%)	3 (25%)	5 (41.7%)
	Bachelor	8 (57.1%)	5 (35.7%)	6 (50%)	4 (33.3%)
	Master	1 (7.1%)	3 (21.4%)	3 (25%)	2 (16.7%)
	Still in secondary education	1 (7.1%)	1 (7.1%)	0 (0%)	1 (8.3%)
People who have been abroad	Abroad	11 (78.6%)	9 (64.3%)	6 (50%)	5 (41.7%)
	Not abroad	3 (21.4%)	5 (35.7%)	6 (50%)	7 (58.3%)

Procedure

When a participant pair joined the Zoom call, they were welcomed by two researchers and asked to keep their cameras and microphones off while the process of the experiment was explained to them. To check whether participants were able to see and hear the researchers, they were asked to write 'yes' in the chat function that the platform Zoom offers. Moreover, participants were instructed to only communicate in English during the entirety of the experiment. The experimenter then informed participants that they would take part in a spot-the-difference game with the goal to identify 10 differences between two similar-looking images, where one image only they would see and the other image only their experiment partner would see. The differences between the two images could be the location of objects, the number of objects, color changes in objects, or additional objects in one of the images. Participants were then briefly shown example images in order to better explain the concept of the spot-the-difference game. Following this, the pairs were split up in two breakout rooms with one researcher. The researcher shared their screen with the participant in the breakout room to display the image. They were given 2 minutes to look at the image and try to memorize it while being allowed to take simple notes. This ensured that the experiment did not measure participants' memory and that participants had enough material to talk about. The pair was then brought back to the main room of the video call, where participants in the visible condition were asked to turn their camera and microphone on, and participants in the non-visible condition were asked to only turn on their microphone. They were then given five minutes to try and identify the ten differences between the two images by communicating with their partner. During this time, the researchers did not interfere but independently noted down the number of differences that the pair found. Once the five minutes had passed, participants were asked to complete the online Qualtrics questionnaire while remaining in the Zoom call. Finally, participants were thanked for taking part in the experiment and were informed that they would be debriefed about the actual goal of the experiment via email after all data had been collected.

Statistical Treatment

In order to analyse the gathered data from the current experiment, five two-way ANOVAs were conducted to measure the effect of the L1 background of participant pairs (i.e. shared or mixed) and visibility of interlocutor (visible or not visible) on likeability, prosocial behavior, perceived success of the task, perceived communicative success, and on the number of differences found during the game. Moreover, Pearson's correlations were conducted to investigate potential correlations between the various dependent variables.

Results

Two-way ANOVAs

Table 3 depicts the ratings for likeability, perceived prosocial behavior, perceived task success, perceived communicative success, and the number of differences found during the task based on linguistic background and visibility.

A two-way ANOVA with linguistic background and visibility as factors revealed no significant main effects of linguistic background on likeability (F (1, 48) = 0.63, p = .430), and of visibility on likeability (F (1, 48) = 0.04, p = .841), and no significant interaction effect between linguistic background and visibility (F (1, 48) = 0.01, p = .972).

A two-way ANOVA showed no significant main effect of linguistic background on perceived prosocial behavior of interlocutor (F (1, 48) = 0.20, p = .654), no significant main effect of visibility on perceived prosocial behavior of interlocutor (F (1, 48) = 0.55, p = .463), and no significant interaction effect between linguistic background and visibility (F (1, 48) = 1.46, p = .233).

A two-way ANOVA showed no significant main effect of linguistic background on perceived success of the task (F (1, 48) = 0.46, p = .500), no significant main effect of visibility on perceived success of the task (F (1, 48) = 0.09, p = .766), and no significant interaction effect between linguistic background and visibility (F (1, 48) = 0.06, p = .816).

A two-way ANOVA showed no significant main effect of linguistic background on perceived communicative success (F (1, 48) = 2.52, p = .119). However, there was a significant main effect of visibility on perceived communicative success (F (1, 48) = 4.44, p = .040). Participant pairs that were able to see each other (M = 4.46, SD = 0.51) perceived the communicative success significantly higher than participant pairs that were not able to see each other (M = 4.20, SD = 0.39). There was no significant interaction effect between linguistic background and visibility (F (1, 48) = 0.10, p = .754).

A two-way ANOVA showed no significant main effect of linguistic background on differences found in the task (F (1, 48) = 0.07, p = .793), no significant main effect of visibility on differences found during the task (F (1, 48) = 0.99, p = .324), and no significant interaction effect between linguistic background and visibility (F (1, 48) = 0.51, p = .480).

Table 3. Means and standard deviations for likeability, prosocial behavior, perceived task success, perceived communicative success, and differences found in function of linguistic background and visibility (1 = completely disagree, 5 = completely agree; for differences found: 1-10)

	Visible		Non-visible		Total	
	M	(*SD*)	*M*	(*SD*)	*M*	(*SD*)
Likeability						
Shared L1	3.86	(0.53)	3.83	0.62	3.85	(0.56)
Mixed L1	3.75	(0.42)	3.73	(0.31)	3.74	(0.36)
Total	3.81	(0.48)	3.78	(0.49)	3.80	(0.48)
Prosocialness						
Shared L1	3.73	(0.56)	3.79	(0.55)	3.76	(0.54)
Mixed L1	3.83	(0.37)	3.57	(0.39)	3.70	0(0.39)
Total	3.78	(0.47)	3.69	(0.48)	3.74	(0.48)
Task success						
Shared L1	3.81	(0.99)	3.80	(0.77)	3.81	(0.87)
Mixed L1	3.72	(0.68)	3.60	(0.61)	3.66	(0.64)
Total	3.77	(0.85)	3.71	(0.70)	3.74	(0.77)
Communicative success						
Shared L1	4.54	(0.53)	4.31	(0.42)	4.42	(0.49)
Mixed L1	4.38	(0.50)	4.07	(0.32)	4.22	(0.44)
Total	4.46	(0.51)	4.20	(0.39)	4.33	(0.47)
Differences found						
Shared L1	6.57	(1.65)	7.57	(2.59)	7.07	(2.19)
Mixed L1	6.83	(1.53)	7.00	(2.41)	6.92	(1.98)
Total	6.69	(1.57)	7.31	(2.48)	7.00	(2.08)

Correlations

Table 4 summarizes all significant and non-significant correlations between the dependent variables (i.e., differences found, likeability, prosocial behavior, perceived task success, and perceived communicative success).

Likeability and prosocial behavior were found to be positively correlated (r (52) = .586, p < .001). Thus, likeability ratings of the interlocutor increased when participants perceived them to display prosocial behavior. Moreover, prosocial behavior and perceived success of the task were found to be positively correlated (r (52) = .349, p = .011). Thus, when participants perceived their interlocutor to display prosocial behavior, they tended to rate the success of the task higher. In addition, prosocial behavior and perceived communicative success were found to be positively correlated (r (52) = .346, p = .012). Thus, when participants perceived their interlocutor to display prosocial behavior, they tended to rate the success of their communication higher. Furthermore, perceived success of the task and perceived communicative success were found to be positively correlated (r (52) = .532, p < .001). Thus, when participants rated the perceived success of the task high, they tended to rate the perceived success of the communication high as well. Lastly, perceived success of the task and differences found during the spot-the-difference task were found to be positively correlated (r (52) = .447, p = .001). Thus, when participants rated the perceived success of the task high, they tended to find more differences in the task.

Table 4. Correlations (r) between differences found, likeability, prosocial behavior, perceived task success, and perceived communicative success. (N = 52)

	1.	2.	3.	4.	5.
1. Differences found					
2. Likeability	-.04				
3. Prosocial behavior	.22	.59**			
4. Perceived task Success	.45**	.25	.35*		
5. Perceived communicative success	.19	.24	.35*	.53*	

* p < .050, ** p < .010

Discussion and Conclusion

The purpose of this study was to investigate the effect of interlocutor visibility and linguistic background on likeability, prosocial behavior, and communicative success in an ELF context. Findings from the current study suggest that the linguistic background of ELF speakers does not impact their communication to a great extent. More specifically, whether communication partners share the same language background or not does not seem to affect their communicative success and how they evaluate each other in terms of likeability and prosocial behavior. The results therefore disconfirm hypotheses one to three. These results do not align with findings from previous studies which have shown that there tends to be increased communicative success between people sharing the same linguistic background compared to people with different linguistic backgrounds (McLeod et al., 1996; Noels et al., 1996; Yow and Lim, 2019). These contrasting findings may imply that other factors such as perceived difficulty of the spot-the-difference task or attention paid during the task may have had an impact on communicative success, rather than a shared or different linguistic background.

Moreover, previous studies have shown that communication partners with the same L1 background tend to like each other more than communication partners with a different L1 background (Giles & Johnson, 1981; Ryan & Sebastian, 1980), whereas findings from the present study imply that the language background does not impact likeability evaluations. These diverging findings may be because participants from the present study were not informed about the language background of their interlocutor. Consequently, the role of L1 background may not have had a high salience in the minds of participants, especially if they perceived the accent of their interlocutor as similar to their own. It could therefore be argued that participants who did not correctly recognize that their interlocutor did not share the same language background as them, felt more similar to them, or felt their accent was similar to their own, and therefore evaluated them similarly to interlocutors who did share the same language background. This assumption aligns with the similarity-attraction paradigm (Byrne, 1971) which claims that people are generally more attracted to others if they perceive them to be similar to themselves.

Importantly, likeability and prosocial behavior seem to be positively correlated, which concurs with previous studies (LaFontana & Cillessen, 2002; Lease et al., 2002a). Both variables are therefore related and may underlie a similar process, such as the similarity-attraction paradigm (Byrne, 1971) or the self-categorization theory (Turner and Reynolds, 2011). Both suggest that similarities between two people lead to greater liking and a sense of belongingness. Consequently, if I perceive someone as similar to myself, due to e.g. a similar

accent, I will like that person more and will act more prosocial toward that person. However, since prosocial behavior was measured as a perception, it may also be that the prosocialness ratings of the interlocutor were influenced by the likeability ratings of that person and did not accurately measure the prosocial behavior of the other person. This could have also caused the correlation between the two variables. Future research could therefore improve the current study design by measuring prosocialness by, e.g., asking participants to stay longer to perform a voluntary task, which was done by Abrahams and Bajo (2019), instead of measuring it as a perception of the interlocutor.

Generally, it may be that the sharing or not sharing of a linguistic background of participant pairs did not significantly impact the different variables because the German and Dutch culture and their verbal communication styles are rather closely related. For instance, on Hofstede's (1980) cultural dimensions, Germany and the Netherlands score similarly for power distance, uncertainty avoidance, and individualism, and in a study conducted by de Mooij (2014), both countries are described as having a direct and exacting communication style. With a sample that is linguistically and culturally more different from each other, there would likely be a greater chance to find differences in ratings regarding likeability, prosocial behavior, and communicative success. To further investigate this, future research could instead use participants from Western and Asian countries (e.g., Germany and Japan or the Netherlands and Korea), which differ significantly more on the cultural dimensions and in their communication styles.

Regarding the impact of interlocutor visibility, results from the present study suggest that participants evaluated each other similarly regarding likeability and prosocial behavior, no matter whether they could see each other or not. Hence, hypotheses four and five are disconfirmed. These findings align with those of Croes et al., (2020), where it was concluded that situations that offer nonverbal cues, which are also observable in Zoom calls with active cameras, do not lead to more attraction than situations that do not offer nonverbal cues. However, they do not align with previous studies which have found that a lack of nonverbal cues can elicit negative emotions (Adams & Kleck, 2005) and result in less personal interactions (Lapidot-Lefler & Barak, 2012), which in turn may lead to reduced liking of the interlocutor. These studies differ from the present study in the sense that the present study limited the time span in which participants were able to talk to each other to ten minutes, whereas other studies either did not set a time limit or gave them significantly more time. Due to the short amount of time given, participants may have been hesitant to evaluate their conversation partner

particularly poorly or positively in terms of likeability and prosocial behavior since they felt that they did not get to know them well enough.

Importantly, interlocutor visibility did impact the perceived communicative success, but not the perceived task success and the number of differences found, which were also measures of overall communicative success. Generalizations regarding the extent to which visibility impacts communicative success can therefore only be made within limits. Previous research has revealed that in visible conditions, communicative efficiency is improved due to the presence of nonverbal cues which reduce ambiguity and facilitate comprehensibility (Boyle, 1994; Bruce, 1996). This aligns with the present finding which showed that participants in the visible condition perceived their communication as more successful than participants in the non-visible condition. However, communicative success as measured in the differences found during the game and in the perceived success of the game did not seem to be impacted by interlocutor visibility. It could therefore be argued that the spot-the-difference game was not suitable for this particular study and did not accurately measure communicative success since it could have been too difficult or because participants did not pay proper attention to the game. This is also reflected in the correlations. The number of differences found was not positively correlated with the perceived communicative success, which means that participants evaluated the success of their conversation independently from how many mistakes they found in the game.

Regarding other correlations, prosocial behavior seems to be positively correlated with the perceived success of the task, which implies that an increase in prosocialness naturally aligns with an increase in the quality of collaborative problem-solving. However, what exactly causes an increase in prosocial behavior and perceived task success or whether there is a causal relationship between the two remains unclear. A potential explanation may nevertheless be found in the mimicking of interlocutors. Previous studies have suggested that participants exposed to mimicry by their interlocutors displayed higher levels of prosocial behavior than participants not exposed to mimicry (Jacob & Guéguen, 2013; van Baaren et al., 2003; van Baaren et al., 2004). Prosocial behavior also seems to be positively correlated with the perceived success of the communication. These two correlations imply that prosocialness is a crucial factor regarding the success and quality of ELF communication. Future research could further examine its role by investigating whether there is a causal relationship between prosocial behavior and the success of non-native communication. Overall, the large number of correlations present in the current data suggests that there may be an unidentified underlying

variable that is responsible for the found correlations. Factor analyses could have been conducted in order to examine this but the sample size was not sufficient for this.

The present study is limited in the sense that there were relatively few participants that took part in the experiment, resulting in a weaker data set, and the time during which participants were able to communicate with each other may not have been enough to form valid perceptions regarding likeability and prosocial behavior. Additionally, participants were not informed about the L1 background of their interlocutor, which people in the real world are usually aware of when they interact in a study or work context. This may have caused them to naturally assume that they were talking to someone with the same linguistic background as them, which would consequently explain why this variable seemed to have no impact on participants' evaluations. Lastly, the experimental environment in which participants performed the task and had to fill in the questionnaire may have damaged the ecological validity of the experiment. In other words, it was rather difficult to replicate an authentic work or study environment in which ELF speakers usually interact with each other and, as consequence, ratings and evaluations may not fully reflect reality.

Overall, the current study revealed that the sharing of a linguistic background between conversation partners seems to impact communicative success and likeability and prosocialness evaluations to a lesser extent than expected. However, future research is needed to investigate whether this finding holds for a larger sample and could also examine differences between ELF speakers that are culturally and linguistically more diverse, or between native and non-native speakers of English. Importantly, however, interlocutor visibility seems to have no effect on likeability and prosocial behavior but does seem to impact perceived communicative success. Future research could investigate the role of interlocutor visibility in online settings to examine whether visibility remains an important factor for communicative success even when more than two people, perhaps an entire class, are present in a video call.

In a practical sense, the present findings may present a helpful starting point for members and managers of global virtual teams, who are exposed to both the aspect of visibility in video calls and to different and shared language backgrounds. It may be useful to learn that not sharing the same language background does not significantly impair communicative success, and therefore overall productivity within these teams. Moreover, it would be important to implement a rule to switch on cameras during video conferences for members of global virtual teams since this has the potential to improve communicative success, and therefore overall productivity.

References

Abrahams, L., Hartsuiker, R. J., De Fruyt, F., & Bajo, M. T. (2019). Structural alignment and its prosocial effects in first and second languages. *Acta Psychologica, 199*, 102906.

Adams, R. B., Jr., & Kleck, R. E. (2005). Effects of direct and averted gaze on the perception of facially communicated emotion. *Emotion, 5*(1), 3–11.

Backus, A., Gorter, D., Knapp, K., Schjerve-Rindler, R., Swanenberg, A.P.C. (2013). Inclusive multilingualism: Concept, modes and implications. *European Journal of Applied Linguistics, 1*(2), 1-37.

Baker, W., & Hüttner, J. (2018). "We are not the language police": Comparing multilingual EMI programmes in Europe and Asia. *International Journal of Applied Linguistics, 29*(1), 78-94.

Bent, T., and A. R. Bradlow (2003) The interlanguage speech intelligibility benefit. *The Journal of the Acoustical Society of America, 114*(3), 1600–1610.

Berger, C. R., & Calabrese, R. J. (1975). Some explorations in initial interaction and beyond: Toward a developmental theory of interpersonal communication. *Human Communication Research, 1*(2), 99–112.

Boyle, E., Anderson, A.H., & Newslands, A. (1994). The effects of visibility on dialogue and performance in a cooperative problem solving task. *Language and Speech, 37*(1), 1-20.

Bruce, V. (1996). The role of the face in communication: Implications for videophone design. *Interacting with Computers, 8*(2), 166-176.

Byrne, D. (1971). *The attraction paradigm*. New York: Academic Press.

Capara, G. V., Steca, P., Zelli, A., & Capanna, C. (2005). A New Scale for Measuring Adults' Prosocialness. *European Journal of Psychological Assessment, 21*(2), 77-89.

Croes, E. A., Antheunis, M. L., Schouten, A. P., & Krahmer, E. J. (2020). The role of eye-contact in the development of romantic attraction: studying interactive uncertainty reduction strategies during speed-dating. *Computers in Human Behavior, 105*, 106218.

Crystal, D. (2003). *The Cambridge Encyclopaedia of the English Language*. Cambridge, UK: Cambridge University Press.

Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science, 32*(5), 554-571.

De Mooij, M. (2004). Translating advertising: Painting the tip of an iceberg. *The Translator, 10*(2), 179-198.

Flowerdew, J. (1994). Research of relevance to second language lecture comprehension - an overview. In J. Flowerdew (Ed.), *Academic Listening* (pp. 7–29). New York: Cambridge University Press.

Fuller, R. M., Vician, C. M., & Brown, S. A. (2016). Longitudinal effects of computer-mediated communication anxiety on interaction in virtual teams. *IEEE Transactions on Professional Communication, 59*(3), 166-185.

Giles, H. & Johnson, P. (1981). The role of language in ethnic group relations. In J. Turner & H. Giles (Eds.), *Intergroup Behavior*, Chicago: University of Chicago Press.

Hassell, M.D., & Cotton, J.L. (2017). Some things are better left unseen: toward more effective communication and team performance in video-mediated interactions. *Computers in Human Behavior, 73*, 200-208.

Hofstede, G. (1980). Culture and organizations. *International Studies of Management & Organization, 10*(4), 15-41.

Jacob, C., & Guéguen, N. (2013). The effect of employees' verbal mimicry on tipping. *International Journal of Hospitality Management, 35*, 109-111.

LaFontana, K. M., & Cillessen, A. H. N. (2002). Children's perceptions of popular and unpopular peers: A multimethod assessment. *Developmental Psychology, 38*(5), 635–647.

Lapidot-Lefler, N., & Barak, A. (2012). Effects of anonymity, invisibility, and lack of eye-contact on toxic online disinhibition. *Computers in Human Behavior, 28*(2), 434–443.

Lease, A. M., Kennedy, C. A., & Axelrod, J. L. (2002a). Children's social constructions of popularity. *Social Development, 11*(1),87–109.

Li, P., Zhang, F. A. N., Tsai, E., & Puls, B. (2014). Language history questionnaire (LHQ 2.0): A new dynamic web-based research tool. *Bilingualism, 17*(3), 673.

Li, P., Zhang, F.A.N., Yu, A., Zhao, X. (2019). Language History Questionnaire (LHQ3): An enhanced tool for assessing multilingual experience. *Bilingualism: Language and Cognition, 23*(5), 938-944.

Major, R., Fitzmaurice, S., Bunta, F., & Balasubramanian, C. (2002). The effects of nonnative accents on listening comprehension: Implications for ESL assessment. *TESOL Quarterly, 36*(2), 173–190.

McLeod, P.L., Lobel, S.A., & Cox. Jr. (1996). Ethnic diversity and creativity in small groups. *Small Group Research, 27*(2), 248–264.

Meierkord, C. (1998). Lingua franca English: Characteristics of successful non-native-/non-native-speaker discourse. *Erfurt Electronic Studies in English, 7*, 98.

Messner, W. (2015). Measuring existent intercultural effectiveness in global teams. *International Journal of Managing Projects in Business, 8*(1), 107-132.

Meyer, I. P., Bond-Barnard, T. J., Steyn, H., & Jordaan, J. (2016). Exploring the use of computer-mediated video communication in engineering projects in South Africa. *South African Journal of Industrial Engineering, 27*(2), 60-71.

Munro, M., Derwing, T., & Morton, S.L. (2006) The mutual intelligibility of L2 speech. *Studies in Second Language Acquisition*, *28*(1), 111–31.

Noels, K. A., Pon, G., & Clément, R. (1996). Language, identity, and adjustment: The role of linguistic self-confidence in the acculturation process. *Journal of Language and Social Psychology*, *15*(3), 246-264.

Oviedo, V.Y., & Fox Tree, J.E. (2021). Meeting by text or video-chat: Effects on confidence and performance. *Computers in Human Behavior Reports, 3,* 1-8.

Reysen, S. (2005). Construction of a new scale: The Reysen likeability scale. *Social Behavior and Personality*, *33*(2), 201-208.

Ryan, E. B. & Sebastian, R. J. (1980). The effects of speech style and social class background on social judgments of speakers. *British Journal of Social and Clinical Psychology, 19*(3), 229-233.

Schweitzer, L., & Duxbury, L. (2010). Conceptualizing and measuring the virtuality of teams. *Information Systems Journal*, *20*(3), 267-295.

Stibbard, R. M., & Lee, J.I. (2006). Evidence against the mismatched interlanguage speech intelligibility benefit hypothesis. *The Journal of the Acoustical Society of America, 120(*1), 433–42.

Turner, J.C., Hogg, M.A., Oakes, P.J., Reicher, S.D., & Wetherell, M. (1987). Rediscovering the social group: a self-categorization theory. Blackwell: Oxford/New York.

Turner, J. C., & Reynolds, K. J. (2011). Self-categorization theory. *Handbook of Theories in Social Psychology*, *2*(1), 399-417.

Van Baaren, R.B., Holland, R., Steenaert, B., & Van Knippenberg, A. (2003). Mimicry for money: Behavioral consequences of imitation. *Journal of Experimental Social Psychology*, *39*(4), 393-398.

Van Baaren, R. B., Holland, R. W., Kawakami, K., & Van Knippenberg, A. (2004). Mimicry and prosocial behavior. *Psychological Science*, *15*(1), 71-74.

Van der Kleij, R., Maarten Schraagen, J., Werkhoven, P, & De Dreu, C. K. (2009). How conversations change over time in face-to-face and video-mediated communication. *Small Group Research, 40*(4), 355-381.

Van Engen, K.J., Baese-Berk, M., Baker, R.E. Choi, A., Kim, M, & Bradlow, A.R. (2010). The Wildcat corpus of native- and foreign-accented English: Communicative efficiency across conversational dyads with varying language alignment profiles. *Language and Speech, 53*(4), 510-540.

Van Mulken, M., & Hendriks, B. (2015). Your language or mine? or English as a lingua franca? Comparing effectiveness in English as a lingua franca and L1–L2 interactions: implications for corporate language policies. *Journal of Multilingual and Multicultural Development*, *36*(4), 404–422.

Wang, H. (2007). *English as a Lingua Franca: Mutual Intelligibility and American Speakers of English*. Utrecht: Netherlands Graduate School of Linguistics.

Yow, W. Q., & Lim, T. Z. M. (2019). Sharing the same languages helps us work better together. *Palgrave Communications*, *5*(1), 1-11.

Appendix

Appendix A: Images used in spot-the-difference game

Appendix B: Adapted Language History Questionnaire (Li et al., 2014; Li et al., 2019)

1. Indicate the age at which you started using English and the total number of years you have spent using English in terms of listening and speaking
2. If you have lived or travelled in English-speaking countries for three months or more, then indicate the name of the country, your length of stay (in months), and the frequency of your used of the language for each country
3. Rate your current ability in terms of listening and speaking in English

Appendix C: Qualtrics Questionnaire

Likeability Scale (Reysen, 2015)

1. This person is friendly
2. This person is likeable
3. This person is warm
4. This person is approachable
5. I would ask this person for advice
6. I would like this person as a coworker
7. I would like this person as a roommate
8. I would like to be friends with tis person
9. This person is physically attractive
10. This person is similar to me
11. This person is knowledgeable

Prosocialness for Adults (Capara et al., 2005) adapted version

1. I think this person is pleased to help their friends/colleagues
2. I think this person shares things with their friends
3. I think this person tries to help others
4. I think this person is available for volunteer activities to help those who are in need
5. I think this person is empathetic with those in need
6. I think this person helps immediately those in need
7. I think this person does what they can to help other avoid getting into trouble
8. I think this person intensely feels what others feel
9. I think this person is willing to make their knowledge and abilities available to others
10. I think this person tries to consolidate those who are sad
11. I think this person easily lends money and other things

12. I think this person easily puts themselves in the shoes of those who are in discomfort
13. I think this person tries to be close to and take care of those in need
14. I think this person easily shares with friends any good opportunity that comes to them
15. I think this person spends time with those friends who feel lonely
16. I think this person immediately senses their friends' discomfort even when it is not directly communicated to them

Measured on a five-point Likert scale (anchored by strongly disagree – strongly agree)

Scale for perceived success of task (Messner, 2015)

1. I am generally happy with our collaboration
2. We are at least as effective as when I am interacting in my own language
3. We are at least as efficient as when I am interacting in my own language
4. I think the results of our collaboration could have been better
5. I think that we could have achieved more

Measured on a five-point Likert scale (anchored by strongly disagree – strongly agree)

Scale for perceived communicative success

1. The conversation with this person went smoothly
2. Talking to this person was easy
3. I think this person understood what I was saying
4. I understood what this person as saying
5. There were no misunderstandings
6. I was able to help the other person when they were, for example, stuck

Measured on a five-point Likert scale (anchored by strongly disagree – strongly agree)

Scale for perceived English level of interlocutor

1. Please rate the abilities of your interlocutor with regards to their ability to speak in the English language
2. Please rathe the abilities of your interlocutor with regards to their ability to understand the English language

Measured on a seven-point Likert scale (anchored by very poor – excellent)

Appendix D: Ethics checklist

Checklist EACH (version 1.6, november 2020)

You fill in the questions by clicking on the square next to the chosen answer ☐

After clicking, a cross will appear in this square ☒

1. Is a health care institution involved in the research?

Explanation: A health care institution is involved if one of the following (A/B/C) is the case:

A. One or more employees of a health care institution is/are involved in the research as principle or in the carrying out or execution of the research.
B. The research takes place within the walls of the health care institution and should, following the nature of the research, generally not be carried out outside the institution.
C. Patients / clients of the health care institution participate in the research (in the form of treatment).

☒ No → continue with questionnaire

☐ Yes → Did a Dutch Medical Institutional Review Board (MIRB) decide that the Wet Medisch Onderzoek (Medical Research Involving Human Subjects Act) is not applicable?
☐ Yes → continue with questionnaire
☐ No → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch CMO Regio Arnhem Nijmegen → end of checklist

2. Do grant providers wish the protocol to be assessed by a recognised MIRB?

☒ No → continue with questionnaire

☐ Yes → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch CMO Regio Arnhem Nijmegen → end of checklist

3. Does the research include medical-scientific research that might carry risks for the participant?

☒ No → continue with questionnaire

☐ Yes → This application should be reviewed by a Medical Institutional Review Board, for example, the Dutch CMO Regio Arnhem Nijmegen → end of checklist

Standard research method

4. Does this research fall under one of the stated standard research methods of the Faculty of Arts or the Faculty of Philosophy, Theology and Religious Studies?

☒ Yes → ..... **(**Standard experimental research into linguistic judgement of language fragments **, 2)** → continue with questionnaire

☐ No → assessment necessary, end of checklist

Participants

5. Is the participant population a healthy one?

☒ Yes → continue with questionnaire

☐ No → assessment necessary, end of checklist → go to assessment procedure

6. Will the research be conducted amongst minors (<16 years of age) or amongst (legally) incapable persons?

☐ Yes → assessment necessary, end of checklist → go to assessment procedure

☒ No → continue with questionnaire

Method

7. Is a method used that makes it possible to produce a coincidental finding that the participant should be informed of?

☐ Yes → assessment necessary, end of checklist → go to assessment procedure

☒ No → continue with questionnaire

8. Will participants undergo treatment or are they asked to perform certain behaviours that can lead to discomfort?

☐ Yes → assessment necessary, end of checklist → go to assessment procedure

☒ No → continue with questionnaire

9. Are the estimated risks connected to the research minimal?

☐ No → assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

10. Are the participants offered a different compensation than the usual one?

☐ Yes → assessment necessary, end of checklist → go to assessment procedure

☒ No → continue with questionnaire

11. Should deception take place, does the procedure meet the standard requirements?

☐ No → assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

12. Are the standard regulations regarding anonymity and privacy met?

☐ No → assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

Conducting the research

13. Will the research be carried out at an external location (such as a school, hospital)?

☒ No → continue with questionnaire

☐ Yes→ Do you have/will you receive written permission from this institution?

☐ No → assessment necessary, end of checklist → go to assessment procedure

☐ Yes → continue with questionnaire

14. Is there a contact person to whom participants can turn to with questions regarding the research and are they informed of this?

☐ No → assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

15. Is it clear for participants where they can file complaints with regard to participating in the research and how these complaints will be dealt with?

☐ No→ assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

16. Are the participants free to participate in the research, and to stop at any given point, whenever and for whatever reason they should wish to do so?

☐ No→ assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

17. Before participating, are participants informed by means of an information document about the aim, nature and risks and objections of the study? (zie explanation on informed consent and sample documents).

☐ No→ assessment necessary, end of checklist → go to assessment procedure

☒ Yes → continue with questionnaire

18. Do participants and/or their representatives sign a consent form? (zie explanation on informed consent and sample documents.

☐ No→ assessment necessary, end of checklist → go to assessment procedure

☒ Yes → checklist finished

If you want to record the results of this checklist, please save the completed file.

If you need approval from the EACH due to the requirement of a publisher or research grant provider, you will have to follow the formal assessment procedure of the EACH.