

Bachelor Thesis Draft Version

Reducing discrimination based on accent in the workplace:
perceptions of American accented and non-native Dutch accented
English

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Abstract

Discrimination based on accent is a phenomenon that occurs regularly, especially in today's globalising world. Surprisingly, there have not been conducted many researches attempting to diminish accent-based discrimination. In this study, a prejudice control text had been used as an intervention to assess whether it affected speakers' evaluations. Dutch listeners were asked to evaluate a native American accented or a nonnative moderate Dutch accented job pitch. In the experimental condition, the listeners received a prejudice control text, whereas those in the control condition did not receive any treatment. The two accented speakers were evaluated significantly differently on understandability and attitudinal evaluations. Strikingly, as opposed to previous studies that were successful in reducing discriminatory tendencies in the workplace, the prejudice control intervention appeared to have no influence on speaker evaluations. Potential explanations of these results are discussed.

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Theoretical framework

In a globalising world, communicating in a language other than one's native tongue is a phenomenon that occurs regularly. The English language is widely used as a global language or lingua franca and leads to an increase of communication between native and/or non-native speakers of English (Beinhoff, 2014; Cheng, 1999). A lingua franca can be defined as a language that is not the mother tongue of any of the participants (Van Mulken & Hendriks, 2015). Non-native speakers of English have varying levels of competence in English, and speak with different non-native accents. Accent has been defined as a unique mode of sound production that is influenced by a speaker's dialect or native language (Edwards, 1992). A non-native accent is one of the most salient characteristics of people from different linguistic backgrounds (Derwing & Munro, 2009; Moyer, 2004) and evokes senses of disfluency, foreignness and in turn a general categorisation as nonnative amongst native speakers as well as nonnative speakers (Roessel, J., Schoel, C., Zimmermann, R., & Stahlberg, D., 2019). Fuertes, J. N., Gottdiener, W. H., Martin, H., Gilbert, T. C., & Giles, H. (2012) conducted a meta-analysis of the effects of speakers' accents on interpersonal evaluations, distinguishing between standard and non-standard accents. In Fuertes et al. (2012), a non-standard accent is a nonnative accent or one that is used by a minority group of the population. A standard accent is the accepted accent by the majority population. Fuertes et al. (2012) found that speakers with standard accents are rated more positively on status, dynamism and solidarity than speakers with non-standard accents.

Evaluations of individuals that speak with a non-standard accent are likely to lead to discrimination (Blair & Connor, 1978; Gluszek & Dovidio, 2010; Lippi-Green, 1997; Ryan & Giles, 1982; Ryan, E. B., Giles, H., & Sebastian, R. J., 1982). Gluszek & Dovidio (2010) reported that standard accents grant people access to political, economic, educational forums and opportunities, whereas non-standard accents impart stigma upon speakers of them. Research showed that even nonnative listeners appear to downgrade nonnative accented speech of their own linguistic background. In employment settings, standard-accented speakers were found to be rated significantly higher than non-standard-accented speakers (Fuertes et al., 2012). Individuals who speak with a non-standard accent appear to have a noteworthy disadvantage as compared to individuals who speak with a standard accent. Roessel et al. (2019) found for instance that speakers with strong German accented English were rated lower in hireability than speakers with a native English accent by German listeners.

Several studies have mentioned that it would be of interest to see how discrimination effects due to accent could be reduced (e.g. Nejjari, W., Gerritsen, M., van Hout, R., & Planken, B., 2020). By investigating whether awareness of possible discrimination based on accent could reduce the effects of prejudice, the first step is taken into reducing employment discrimination in the workplace. To our knowledge, there have only been a few studies that tried to alleviate discrimination with regards to native and non-native accents in job application contexts. Hansen, Rakić, & Steffens (2014) studied accent effect on evaluations of Turkish accented and American English accented job applicants introducing an intervention to reduce accent-based discrimination tendencies. Participants in the experimental condition talked to a confederate in a foreign language before the experiment. Hansen et al. (2014) found that participants who were not exposed to the experimental condition to reduce discrimination tendencies evaluated the Turkish accented speakers more negatively than the American accented speakers. When exposed to the experimental condition, the participants tended to evaluate the Turkish and American accented speakers as equally competent (Hansen et al., 2014). Roessel et al. (2019), who studied accent effect on hireability ratings, found that raising awareness of biased reactions to the non-native German accent and the American English native accent enables German students to correct discriminatory evaluation tendencies. In their experiment, a written prejudice treatment was used (Roessel et al., 2019).

To be able to reduce discriminatory evaluations based on accent, it is of importance to see what causes speaker evaluations to differ. Several researchers have tried to explain discriminatory tendencies based on accent. Deprez-Sims & Morris (2010) conducted a study in which they assessed the influence of accents on the evaluation of job applicants. Participants from the US were asked to evaluate an audiofile of an applicant with one of three accents: Midwestern US, French, or Colombian. They found that the applicant with the Midwestern US accent was evaluated more positively than the applicant with the French accent, but that the Colombian accent was evaluated similarly to the Midwestern US accent. According to Deprez-Sims & Morris (2010) these results are consistent with the similarity-attraction hypothesis, which states that demographic variables will impact judgements of decision-makers based on the degree to which the applicants are viewed as similar or dissimilar. The latter could mean that a listener from the same background as the speaker would evaluate the speaker more positively than a speaker that has a different background. However, Hendriks, B., van Meurs, F., & Reimer, A. (2018) speak of a feeling of “vicarious shame” that listeners may experience

when speakers who are members of their in-group speak with a clearly noticeable non-native accent in their foreign speech, and therefore expected that these speakers will be downgraded. Their findings showed that lecturers with a moderate Dutch accent in their English were evaluated less positively than lecturers with a slight Dutch accent or native English accent by Dutch students (Hendriks et al., 2018). Nejjari et al. (2020) speak of a so-called ‘native speaker norm’ that Dutch people may have, meaning that proficiency as an L2 English speaker is only truly achieved when the speaker’s language skills match those of an L1 English speaker. If this norm is not met, the speaker may be evaluated more negatively.

In the present study, we aimed to investigate whether a written prejudice control intervention would help to reduce discriminatory tendencies in job application contexts. More specifically, how nonnative listeners of the same linguistic background as the nonnative speaker evaluate the job pitch of a nonnative speaker and native speaker. This led to the following research question:

RQ1: To what extent are non-native speakers of English evaluated differently than native English speakers in job application contexts?

The main interest of this study lies in the question whether the perceptions of non-native listeners can be influenced by a prejudice control condition. This topic is of high relevance since reducing employment discrimination would create equal chances for job applicants. This led to the second research question:

RQ2: To what extent can possible effects of accentedness on hiring success be reduced by raising awareness of such effects?

The current study aimed to contribute to Roessel et al.’s (2019) research who studied non-native listener evaluations of non-native speakers of the same linguistic background, controlling for potential discrimination based on accent. The evaluation of the accented job applicants will be based on attitudinal evaluations (likeability, status and competence), understandability (perceived intelligibility and comprehensibility) and finally the degree of hireability. Perceived comprehensibility refers to the ability to understand the individual meaning of the words and how words put together express meaning within a specific context (Nejjari et al., 2020). Perceived intelligibility refers to how utterances are deciphered into individual sound patterns that form words and sentence-level elements (Nejjari et al., 2020).

The three measures to assess the attitudinal evaluations were based on Bayard et al. (2001), Nejjari et al. (2012), Hendriks et al. (2018), and Nejjari et al. (2020). To ensure finding a significant difference between the native and nonnative accent during the experiment Dutch participants had been chosen as Hendriks, van Meurs & Hogervorst (2016) and Hendriks et al. (2018) showed that Dutch listeners rate moderately Dutch accented speakers in general significantly more negatively on attitudinal evaluations than slightly Dutch accented and native English accented speakers. Hendriks et al. (2016) investigated the perception of moderately and slightly Dutch accented English in an educational context. They found that moderately Dutch accented instructors were evaluated as less comprehensible, competent and likeable than slightly Dutch accented and native accented instructors. Hendriks et al. (2018) investigated how Dutch and German students evaluate Dutch and German lecturers with moderate and slight non-native English accents in terms of speaker competence, likeability, and intelligibility. They found that moderately accented Dutch lecturers were evaluated as less competent than the native English accented and slightly Dutch accented speakers by Dutch listeners. However, the moderately and slightly Dutch accented English and the native accented English were considered to be equally intelligible and likeable.

As opposed to Hendriks et al. (2018) and Hendriks et al. (2016), who used British English or Received Pronunciation (RP) as the native English accent in their studies, an American accent was used. As Fuertes et al. (2012) found a stronger effect for the native American accent than for the RP accent when compared against non-standard accents, one can hypothesise that stronger differences on attitudinal evaluations will be found between the native American accent and the non-native Dutch accent than when the RP accent would have been compared with the Dutch accent. One study that looked at evaluations of Dutch-accented English and American-accented English is a study by Nejjari et al. (2020). Nejjari et al. (2020) conducted an experiment in which German, Singaporean, and Spanish listener groups' responses were compared to three English accents (Dutch-accented English, standard British, and American English) in different communication contexts (a lecture, an audio tour, and a job pitch). In terms of speech understandability, higher intelligibility was found for American English for the German and Spanish listener groups. For comprehensibility, there were no strong differences found between the accents. However, for comprehensibility in the communication contexts, job pitches were seen to be the least comprehended by the listener groups (Nejjari et al., 2020). This might be explained by unfamiliarity with job pitch situations.

To control for comprehensibility in the communication context of a job interview and to ensure ecological validity, Human Resource students and working people were used as participants in the present research because they are most likely to be familiar with the hiring process. HR students are expected to have theoretical knowledge about job interviews and working people are expected to have practical knowledge about the job finding process.

As mentioned before, the evaluation of the accented job applicants were based on attitudinal evaluations (likeability, status and competence), understandability (perceived intelligibility and comprehensibility) and finally the degree of hireability. With regards to attitudinal evaluations, it is expected that American accented English will be more positively evaluated than Dutch accented English. This is because of the ‘vicarious shame’ (as mentioned in Hendriks et al., 2018) Dutch listeners may feel when they hear a Dutch person talk with a Dutch accent in their English speech.

H1 American-accented English receives higher evaluations than Dutch-accented English on attitudinal evaluations (status, competence and likeability).

However, with regards to understandability, one can hypothesise that the American accented English will be evaluated as equally intelligible as the Dutch accented English for the Dutch listeners. This would be because of the high level of English and familiarity with the Dutch accent by Dutch listeners. Furthermore, in Hendriks et al. (2018), it was found that Dutch listeners evaluated the native English accent and the nonnative moderate Dutch accent to be equally intelligible.

H2 American-accented English and Dutch-accented English are perceived as equally intelligible by Dutch listeners.

For perceived comprehensibility, it is expected that the moderately Dutch accented job pitch will be evaluated as less comprehensible than the native American accented job pitch following the results of Hendriks et al.’ (2016) study. This can be explained by the ‘native speaker intelligibility benefit’ as mentioned in Hendriks et al. (2016), meaning native accents would be easier to understand than non-native accents for native as well as non-native listeners.

H3 American-accented English is perceived to be more comprehensible than Dutch-accented English by Dutch listeners.

The main interest of this study lies in the question whether the perceptions of non-native listeners can be influenced by a prejudice control treatment. This topic is of high relevance since reducing employment discrimination would create equal chances for job applicants. As Roessel et al. (2019) found strong effects for that raising awareness of biases based on accent enables people to correct discriminatory evaluation tendencies using a written prejudice control measure, one can hypothesise that Dutch listeners will evaluate the Dutch speakers less negatively when exposed to a written prejudice control text.

H4 Dutch listeners exposed to the prejudice control text evaluate Dutch participants less negatively than Dutch listeners who did not receive any treatment.

Methodology

Materials

In this experiment, we aimed to find out whether there are differences between the evaluations of native versus non-native English accented job pitches and whether these evaluations could be influenced when job recruiters are made aware of discrimination based on accent. The first independent variable was therefore “type of accent” with the levels “native accent” and “non-native accent”. Two recordings of an English job pitch were used for this experiment: one in which a moderate American-accent (native accent) was used and one in which a moderate Dutch-accent (non-native accent) was used. The job pitch consisted of strong arguments for why the speaker should get the position they are applying for to prevent negative judgements by the listeners based on the qualities of the speaker, following Roessel et al. (2019). The text of the job pitch is based on Nejari et al. (2020) and can be found at p. 24 figure 1.3. of the appendix.

The experiment was a verbal-guise experiment: a Dutch and an American speaker were selected to produce the two accents with relatively the same tone of voice to avoid participants responding to the voice characteristics of the two speakers (Cooper, 1975). The speakers were selected by means of a pretest based on Jesney (2004). During the pre-test, 20 Dutch speakers of English were asked to assess the degree to which 10 audio fragments, half of them American accented and the other half Dutch accented, sounded American or Dutch. They were asked to complete a questionnaire in which they rated the following statements on a 7 items Likert-scale

anchored with “completely disagree - completely agree”: “This speaker sounds like a native speaker of English”, “This speaker has a strong foreign accent in English” and “This speaker sounds like a native speaker of American English”. The questionnaire also included a drop-down menu in which the participants were asked to indicate which country they thought the speaker was from. Furthermore, the audio fragments were evaluated on voice quality (pleasantness and naturalness) and speaker confidence, based on Hendriks et al. (2018). For the main experiment, the pair of speakers were chosen that sounded respectively most authentically Dutch and most authentically American and that were judged to be most similar on voice characteristics. In addition, the pair had to have a rather similar speech rate to make sure the audio files were the same in all conditions. In the main experiment the same questions regarding voice quality and speaker confidence were used as control variables. The reliability of the voice characteristics comprising three elements was acceptable: $\alpha=.76$.

The second independent variable was “prejudice control”. The prejudice control text was based on Roessel et al. (2019) and Microsoft (2021), see figure 1 below.

Figure 1. Prejudice Control text

Attention: The following organization stresses a diverse workforce and working environment. All qualified applicants will receive consideration for employment without regard to age, gender identity or expression, ethnicity and accentedness. Please consider this when listening to the following audio recording and try not to base your evaluations on feelings or stereotypes that might be evoked during the audio fragment.

Subjects

For this experiment, 142 Dutch Human Resources students from Dutch universities or universities of applied sciences and working people were asked to participate. A participant was considered to be an HR-student when he or she was enrolled in an HR study program at the time of conducting the experiment. A participant was considered to be a working person when he or she fulfilled a parttime or fulltime job and when he or she had experience with a job hiring process. All participants were recruited via social media (e.g. LinkedIn, Facebook and Instagram). In total there were 93 female participants (65.5%), 48 male participants (33.8%) and one participant who preferred not to indicate gender (0.7%). The ages of the participants ranged from 18 years old to 67 years old ($M=29.73$, $SD=13.09$). In this study, 17

Human Resource students (12%) and 11 Human Resource students who also had a job (7.7%) participated. Furthermore, there were 86 working people (60.6%) and 28 participants who were not employed but previously applied for jobs (19.7%).

Design

The design of this study was a 2 (native vs. non-native accented English) x 2 (prejudice control vs. no prejudice control) between-subjects verbal-guise design. This design had been chosen to control for the possible recognition of the differences in accent, the recognition of the usage of the same content in both the job pitches, and therefore the discovery of the research aim. The participants were randomly assigned into four groups, see figure 2 below.

Figure 2. Distribution of the participants over the experimental conditions

	Type of accent	
	American	Dutch
Prejudice control	31	40
No prejudice control	41	30

Instrumentation

A questionnaire was created in Qualtrics with questions regarding the job pitch to find out how the participants evaluated the job pitches. A limitation mentioned by Roessel et al. (2019) with regards to the language used in the questionnaire, was that the questionnaire was held in the L1 of the listeners. De Langhe, Puntoni, Fernandes, & Van Osselaer (2011) found that participants tend to give more intense emotional scale responses when using L2 than when using L1 anchoring points. By creating a questionnaire in English more extreme responses of the participants were expected, leading to clearer differences between the evaluations. For an overview of the questionnaire, see figure 1.4. p. 24 in the appendix.

The questions in the questionnaire were based on the dependent variables understanding of the message (perceived comprehensibility and perceived intelligibility), attitudinal evaluations (likeability, status, and competence), and the participants' willingness to hire. See figure 3 at page 12 for an overview of the variables. The questions regarding perceived comprehensibility were based on Hendriks et al. (2016), Munro, M. J., Derwing, T. M., & Morton, S. L. (2006) and Nejjari et al. (2020). Perceived comprehensibility was assessed through six 7-point Likert scale questions: "I have to listen very carefully to the speaker", "The

speaker speaks clearly”, “The speaker is barely understandable”, “The speaker is difficult to comprehend”, “I have problems understanding what the speaker is talking about” and “I do not understand what the speaker means”. The reliability of ‘perceived comprehensibility’ comprising six items was good: $\alpha=.83$. Consequently, the mean of the six items was used to calculate the compound variable ‘Comprehensibility’. Perceived intelligibility was measured through five 7-point semantic differentials, based on the technique used by Hendriks et al. (2018) and Munro et al. (2006), starting with the statement “I think what the speaker is saying is...” and anchored by “very easy to recall - very difficult to recall”, “hard to recall – very difficult to recall”, “uncomplicated to recall - complicated to recall”, “rather simple to recall - rather tough to recall”, and “demanding to recall - undemanding to recall”. The reliability of ‘perceived intelligibility’ comprising five items was also good: $\alpha=.92$. The mean of the five items was used to calculate the compound variable ‘Intelligibility’.

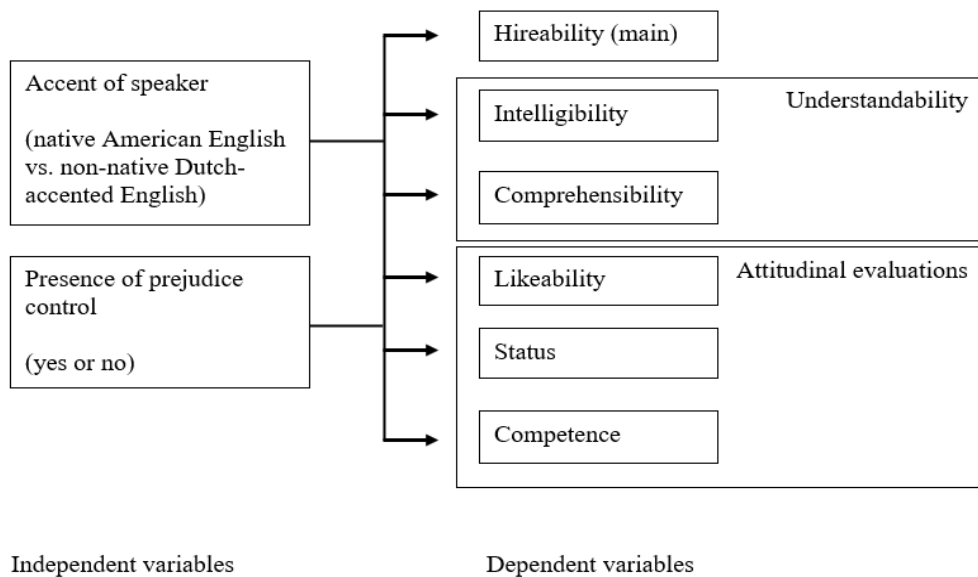
The questions regarding attitudinal evaluations were based on Bayard et al. (2001), Nejari et al. (2012), Hendriks et al. (2018), and Nejari et al. (2020), and all consisted of 7-point Likert scales, starting with the base statement “In my opinion, the speaker sounds...” and anchored by “completely disagree/completely agree”. Likeability of the speaker was measured by the items “credible”, “sympathetic”, “warm”, “humoristic”, “tactful”, “polite”, “irritating” and “unfriendly”. The reliability of ‘likeability’ comprising eight items was acceptable: $\alpha=.78$. The mean of all eight items was used to calculate the compound variable ‘Likeability’. Status of the speaker was measured by the items “authoritative”, “trustworthy”, “self-confident”, “influential”, and “has a powerful voice”. The reliability of the status construct comprising five items was also acceptable: $\alpha=.78$. The mean of the five items was used to calculate the compound variable ‘status’. Lastly, competence was measured by the items “reliable”, “intelligent”, “competent”, “hardworking”, and “educated”. The reliability of ‘competence’ comprising five items was good: $\alpha=.89$. The mean of the five items was used to calculate the compound variable ‘competence’.

To assess the degree of hireability, five measures were implemented including the degree to which participants would recommend employing the candidate, their general impression of the candidate, and the professional qualification of the candidate based on Roessel et al. (2019). The measures were conducted by means of five 7-point Likert scales questions, anchored by “completely disagree/completely agree”. The questions will be the

following: “I would recommend employing this job applicant.”, “I have a very positive impression of the job applicant.”, “I have a very negative impression of the job applicant.”, “the job applicant is professionally qualified.” and “the job applicant is not professionally qualified.”. The reliability of ‘hireability’ comprising four items was good: $\alpha=.88$. Consequently, the mean of all four items was used to calculate the compound variable ‘degree of hireability’ which was used in the further analyses.

In addition to their evaluation with regards to the speaker, the participants were asked to indicate their age, gender, native language, whether they were an HR-student, working person or both, and their self-assessed English proficiency level. The self-assessment of English may impact the comprehensibility and intelligibility of the listeners. It is possible that listeners may not have understood a speaker because of their self-reported lower level proficiency instead of as a result of the accent used. Self-assessed English proficiency was measured using a 7-point semantic differentials (poor-excellent) regarding speaking, writing, reading, and listening based on the technique used in Krishna & Ahluwalia (2008). The reliability of ‘English proficiency’ comprising four items was good: $\alpha=.86$. Consequently, the mean of all four items was used to calculate the compound variable ‘English proficiency’. As Anisfeld & Lambert (1964) suggested that bilingual children are less influenced than monolinguals by language variety when attributing personality traits to different speakers and Levy, Konieczny, & Hanulíková (2019) suggested that the type and amount of accent experience co-determine the processing speed of accent speech of bilingual children, bilingual participants (with two mother tongues) were also excluded from the research to control for the potential influence of bilingualism on speaker’ evaluations.

Figure 3 Analytical model of the variables



Procedure

The four groups of 30 participants each received a message with a link to the questionnaire. The questionnaire took 13.9 minutes ($M=835.82s$, $SD=2585.04s$) on average to complete. After signing an informed consent form, the participant read the instruction. In the instruction text, the participant was asked to make sure their sound is turned on to be able to hear the audio fragment (see the instruction text in the appendix p. 24, figure 1.2.). Then the participant read a short cover story: a job applicant is applying for a position as Retail Manager by means of a job pitch. The cover story was based on the cover story used in Nejjari et al. (2020) and can be found in the appendix p. 24 figure 1.1. The participant was then asked to confirm (s)he is not a bilingual speaker.

The participants were asked to only listen to the job pitch once to ensure ecological validity: job applicants only pitch once and are not asked to do it twice during normal job interviews. After listening to the audio fragment, the participants filled in the questionnaire starting with the questions evaluating the understanding the message, followed by the attitudinal evaluations, the degree of hireability and lastly the questions regarding origin of the speaker and voice characteristics. To control for confounding variables such as short-term memory, the questions to assess whether the participants understood the job pitch were posed first.

Statistical Treatment

Statistical analyses were performed using SPSS software (version 27). The significance of the tests was set at the 5% level. For the pretest and the manipulation check of the main experiment, several independent samples t-tests were conducted for the type of accent and the prejudice control measure. For the dependent variables, two-way ANOVA tests were conducted for the Dutch and American accent and the prejudice control condition.

Results

Manipulation check

Before analysing the main constructs of this study, a manipulation check had been conducted to verify if the evaluations on voice characteristics (confidence, naturalness and pleasantness) and indication of the origin of the speaker given by the sample of the population used in the pretest did not confound with the results of the main experiment. An independent samples t-test with “Confidence” as dependent variable and “type of accent” as independent variable showed a significant difference between the Dutch and American accent with regards to confidence ($t(99.72)=7.93, p<.001$). The American accent ($M=6.00, SD=.69$) was evaluated to sound more confident than the Dutch accent ($M=4.51, SD=1.41$). An independent samples t-test with “Naturalness” as dependent variable and “Type of accent” as independent variable also showed a significant difference between the Dutch and American accent with regards to naturalness ($t(140)=8.98, p<.001$). The American accent ($M=5.11, SD=1.44$) was evaluated to sound more natural than the Dutch accent ($M=2.99, SD=1.34$). Lastly, an independent samples t-test with “Pleasantness” as dependent variable and “Type of accent” as independent variable also showed a significant difference between the two accents ($t(140)=6.42, p<.001$). The American accent ($M=4.71, SD=1.55$) was evaluated to sound more pleasant than the Dutch accent ($M=3.07, SD=1.49$). As opposed to our findings in the pretest, the results of the main experiment suggested that the accents differed significantly on voice characteristics.

To assess whether the participants were able to correctly identify the country of origin (COO) of the speakers, a Chi-Square test had been conducted. The test showed a significant relation between country of origin of the speaker and type of accent ($\chi^2(16)=119.94, p<.001$). Almost all participants who had listened to a fragment in a Dutch English accent were able to

correctly identify The Netherlands as the COO of the speaker (97.1%). However, the participants who had listened to a fragment in an American English accent had more trouble identifying the United States of America as the COO (59.7% correct identifications).

Moreover, the participants had been asked to indicate whether they thought the speaker sounded like a native speaker of English, to what extent the accent sounded foreign and to what extent the accent sounded American English. An independent samples t-test showed a significant difference between the American and Dutch accent with regards to degree of nativeness ($t(136.25)=20.57, p<.001$). The American accented speaker ($M=5.54, SD=.90$) was perceived to sound more like a native speaker of American English than the Dutch accented speaker ($M=2.71, SD=.74$).

Self-assessed level of English (background variable)

To control for potential influence of the level of English of the participants on the evaluations of the accents, two independent samples t-tests have been conducted to verify if the participants were well distributed over the experimental conditions. The first test was conducted to assess whether there was a significant difference between the self-assessed English proficiency of the participants and the type of accent. The test showed no significant difference between the two variables ($t(140)=.39, p=.689$). An independent samples t-test with “English proficiency” as dependent variable and “prejudice control” with the values ‘prejudice control’ and ‘no prejudice control’ as independent variable also showed a non-significant difference ($t(140)=.15, p=.882$). These results suggested that the participants were indeed well distributed over the experimental conditions with regards to English proficiency.

Understandability

Perceived comprehensibility and intelligibility

A two-way analysis of variance with type of accent and presence of a prejudice control text as factors showed a significant main effect of type of accent on perceived comprehensibility ($F(1, 138)=44.14, p<.001$). For an overview of the means and standard deviations per condition, see table 1 on the following page. The American English accent ($M=5.48, SD=0.88$) was perceived to be significantly more comprehensible than the Dutch English accent ($M=4.39, SD=1.12$). There was no significant main effect of presence of a prejudice control text ($F(1, 138)=2.70, p=.103$) on perceived comprehensibility. This suggested that the accent was not perceived to

be more or less comprehensible in the presence of the prejudice control text. The interaction effect between type of accent and presence of a prejudice control text was not significant ($F(1, 138) < 1, p = .448$).

A two-way analysis of variance with type of accent and presence of a prejudice control text as factors showed a significant main effect of type of accent on perceived intelligibility ($F(1, 138) = 4.87, p = .029$). The American English accent ($M = 4.60, SD = 1.29$) was judged as significantly more intelligible than the Dutch English accent ($M = 4.15, SD = 1.38$). There was no significant main effect of presence of a prejudice control text ($F(1, 138) = 1.55, p = .215$) on perceived intelligibility. This suggested that the accent was not perceived to be more or less intelligible in the presence of the prejudice control text. There was no interaction effect between the two independent variables type of accent and prejudice control text ($F(1, 138) = 1.70, p = .194$).

Table 1. Means and standard deviations (between brackets) for the understandability of the message (perceived comprehensibility and perceived intelligibility) in function of presence of a prejudice control (PC) text and type of accent

	PC Measure			No PC Measure			Total		
	<i>M</i>	<i>SD</i>	n	<i>M</i>	<i>SD</i>	n	<i>M</i>	<i>SD</i>	n
<i>Comprehensibility</i>									
Dutch	4.45	1.16	40	4.30	1.09	30	4.39	1.12	70
American	5.71	.79	31	5.30	.91	41	5.48	.88	72
Total	5.00	1.19	71	4.88	1.10	71	4.94	1.14	142
<i>Intelligibility</i>									
Dutch	4.14	1.24	40	4.15	1.57	30	4.15	1.38	70
American	4.93	1.08	31	4.36	1.39	41	4.60	1.29	72
Total	4.48	1.23	71	4.27	1.46	71	4.38	1.35	142

Attitudinal evaluations

Likeability, status and competence

A two-way analysis of variance with type of accent and presence of prejudice measure as independent variables showed a significant main effect of type of accent on likeability of the speaker ($F(1, 138) = 13.49, p < .001$). For an overview of the means and standard deviations per condition, see table 2 on the following page. The American English accent ($M = 4.84, SD = .91$) was judged significantly more likeable than the Dutch English accent ($M = 4.33, SD = .77$). There was no main effect of presence of prejudice control on the likeability of the speaker

($F(1,138)=1.06, p=.306$), meaning that the accent was not perceived to be more or less likeable in the presence of the prejudice control text. The interaction effect between the two independent variables was also not significant ($F(1, 138)<1, p=.873$).

A two-way analysis of variance with type of accent and presence of prejudice control measure as independent variables showed a significant main effect of type of accent on status of the speaker ($F(1, 138)=109.09, p<.001$). The American English accent ($M=5.05, SD=.79$) was judged to have significantly more status than the Dutch English accent ($M=3.63, SD=.80$). There was no main effect of presence of prejudice control on the status of the speaker ($F(1, 138)<1, p=.988$), which suggested that the presence of a prejudice control text did not influence the evaluations on status. The interaction effect between the two independent variables was also not significant ($F(1, 138)<1, p=.342$).

A two-way analysis of variance with type of accent and presence of prejudice measure as independent variables showed a significant main effect of type of accent on competence of the speaker ($F(1, 138)=107.89, p<.001$). The American English accent ($M=5.76, SD=.69$) was judged to have significantly more competence than the Dutch English accent ($M=4.21, SD=1.04$). There was no main effect of presence of prejudice control on the competence of the speaker ($F(1, 138)<1, p=.643$). The interaction effect between the two independent variables was not significant ($F(1, 138)<1, p=.887$).

Table 2. Means and standard deviations (between brackets) for the attitudinal evaluations (likeability, status and competence) in function of presence of a prejudice control (PC) text and type of accent

		PC Measure			No PC Measure			Total		
		<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>
<i>Likeability</i>										
	Dutch	4.39	.78	40	4.26	.77	30	4.33	.77	70
	American	4.94	1.00	31	4.77	.85	41	4.84	.91	72
	Total	4.63	.92	71	4.55	.85	71	4.59	.88	142
<i>Status</i>										
	Dutch	3.58	.86	40	3.70	.73	30	3.63	.80	70
	American	5.12	.64	31	5.00	.89	41	5.05	.79	72
	Total	4.25	1.10	71	4.45	1.04	71	4.35	1.07	142
<i>Competence</i>										
	Dutch	4.24	.99	40	4.19	1.12	30	4.21	1.04	70
	American	5.81	.69	31	5.72	.69	41	5.76	.69	72
	Total	4.92	1.17	71	5.07	1.17	71	5.00	1.17	142

Hireability

A two-way analysis of variance with presence of a prejudice control text (yes or no) and type of accent (American or Dutch) as factors showed a significant main effect of type of accent on degree of hireability ($F(1, 138)=29.60, p<.001$). For an overview of the means and standard deviations per condition, see the table on the following page. The findings suggested that moderate Dutch-accented speakers ($M=3.78, SD=.34$) are less likely to be hired than American-accented speakers ($M=4.14, SD=.42$). Prejudice control was not found to have a significant main effect on degree of hireability ($F(1, 138)<1, p=.998$). This result suggested that the prejudice control text did not have effect on the degree of hireability. The interaction effect between prejudice control and type of accent was not statistically significant ($F(1, 138)<1, p=.664$).

Table 3. Means and standard deviations (between brackets) for the degree of hireability in function of presence of a prejudice control (PC) text and type of accent

	PC measure			No PC measure			Total		
	<i>M</i>	<i>SD</i>	n	<i>M</i>	<i>SD</i>	n	<i>M</i>	<i>SD</i>	n
Dutch	3.80	.37	40	3.77	.29	30	3.78	.34	70
American	4.12	.35	31	4.15	.47	41	4.14	.42	72
Total	3.94	.40	71	3.99	.45	71	3.96	.42	142

Conclusion

To be able to answer the first research question, which was to what extent are non-native speakers of English evaluated differently than native English speakers in job application contexts, three main constructs had been measured namely ‘Understanding of the message’ (perceived comprehensibility and perceived intelligibility), ‘Attitudinal Evaluations’ (likeability, competence and status) and ‘Degree of hireability’. For ‘understanding the message’, it was found that the American accented English job pitch was perceived to be more intelligible and comprehensible than the Dutch accented English job pitch. For attitudinal evaluations, it was found that the American English accented job accented job pitch was thought to be more likeable, competent and higher in status than the Dutch English accented job pitch. With regards to ‘Degree of Hireability, the American English accented speaker was

also evaluated to be more hireable than the Dutch English accented speaker. Results on attitudinal evaluations, understandability and hireability suggest that the American accented speaker was evaluated more positively than the Dutch accented speaker.

To answer the second research question, which was to what extent possible effects of accentedness on hiring success can be reduced by raising awareness of such effects among non-native Human Resource students and working people, the speaker evaluations of the groups that had been exposed to the prejudice control text were compared to the speaker evaluations of the groups who were not exposed to the prejudice control text for both English accented job pitches. It was found that the American English accented speaker was always more likely to be hired than the Dutch accented speaker regardless of the prejudice control text being present or not. This means that the prejudice control text did not have any effect on speaker evaluations.

Discussion

In this study it was found that Dutch listeners tend to evaluate the nonnative Dutch accented English speaker less positively than the native American accented English speaker with regards to attitudinal evaluations, confirming H1. This is in line with the results of Hendriks et al. (2018) who also found that the non-native Dutch accented speaker was evaluated as less likeable and competent than the native English speaker. With regards to status, it was found that Dutch listeners perceive the moderate Dutch accent to have less status than the American accent, which is in line with Nejjari et al. (2012) who compared a nonnative moderate Dutch accent to a nonnative slight Dutch and a native RP accent. These findings could be explained by the expectation mentioned in the introduction that Dutch listeners may experience ‘vicarious shame’ when hearing their own accent (Hendriks et al., 2018) and is supported by the finding that 97% of all respondents correctly identified the Dutch accent.

With regards to understandability, support was found for H3 but not for H2. Results showed the American accented speaker was evaluated to be more intelligible than the moderately Dutch accented speaker which is contradictory to the findings of Hendriks et al. (2018) who found that the Dutch accent and the native English accent were equally intelligible. For comprehensibility it was found that the nonnative moderate Dutch accent was evaluated to be less comprehensible than the native American accent which is in line with Hendriks et al. (2016) and supporting H3. It should be noted here that Hendriks et al. (2016) and Hendriks et

al. (2018) compared the nonnative Dutch accent to the native RP accent. The finding that the American accented job pitch was perceived to be more intelligible and comprehensible than the Dutch accented job pitch could be explained by the 'native speaker intelligibility benefit' as mentioned in Hendriks et al. (2016), meaning native accents would be easier to understand than non-native accents for native as well as non-native listeners.

Most strikingly and in contradiction with the findings of Roessel et al. (2019) is that the prejudice control text did not affect speaker evaluations, lending no support for H4. This result could be explained by the implicitness of our prejudice control text, which did mention accentedness as a factor not to judge participants on, but did not emphasise not to base judgments on accent. Roessel et al. (2019) had a more explicit prejudice control text instructing participants to recognise that most candidates were not speaking their native language because the hiring process was conducted in English. They also informed the participants that research had found accented speech to bias people's perception and explicitly told the participants not to base their evaluations on feelings or stereotypes that might be evoked (Roessel et al., 2019). For future research it is recommended to use a more explicit prejudice control text or to use a different medium for the experimental group to prevent discriminatory tendencies, like Hansen et al. (2014) who used an intervention technique. In their study, participants in the experimental condition received treatment in the form of a conversation in a foreign language with a confederate before the experiment. The treatment turned out to be effective in reducing discrimination against Turkish-accented job candidates.

Another explanation of the finding that the prejudice control text had not affected speaker's evaluations and at the same time a limitation of the present study was the duration of the experiment. It was found that the average questionnaire took 13 minutes to complete, with a standard deviation of 2585.04 seconds (approximately 43 minutes). The long duration of the experiment might have affected the recall of the prejudice control text: some participants may have forgotten about it when answering the questions. A suggestion for future research would therefore be to set a time limit on the questionnaire to rule out the possibility of forgetting about the prejudice treatment.

The most significant limitation of our study is that participants in the main experiment were found to evaluate the accents on voice characteristics very differently than in the pretest. The results on voice naturalness, confidence and pleasantness of the two accents were all strikingly different, meaning the accents used in this study were not comparable with regards

to voice characteristics. Another limitation is that not all participants were able to correctly identify the American accent (only 59.7%). There were participants who thought the accent originated from the United Kingdom (12.5%) and the Netherlands (8.3%), other answers were Canada (2.8%) and Hong Kong (2.8%). The incorrect identification of the United States of America as the COO of the American accented speaker might have influenced the results. The responses of the participants whether they thought the American speech sample sounded like a native speaker of American English were also not extreme: $M=5.54$ on a scale of 7. For future research, one can suggest finding several matched-guised speakers instead of verbal-guise speakers to ensure receiving comparable voice characteristics evaluations for the two accents in the pretest and in the main experiment. Another suggestion would be to ask experts to evaluate the speech samples on authenticity in the pretest as Hendriks et al. (2018) did to ensure finding extreme responses on 'degree of nativeness' for the two speakers in the main experiment. Furthermore, it is suggested to use an editing program to create speech samples similar in speech rate and to eliminate distracting sounds like Hendriks et al. (2016) and Hendriks et al. (2018) did for their speech samples.

In this study, a nonnative moderate Dutch accent and a native American accent in the context of an English job pitch were evaluated by Dutch listeners based on understandability and attitudinal evaluations. The American accent was evaluated more positively on attitudinal evaluations and also found to be more intelligible and comprehensible than the Dutch accent. Furthermore, an attempt was made into reducing discriminatory tendencies based on accent by using a prejudice control text. It was found that the implicit prejudice control text did not work and thus was not able to reduce these tendencies. A more explicit prejudice control text or another method to reduce accent-based discrimination might be more effective. The ineffectiveness of the written prejudice intervention technique could be an interesting insight for enterprises wishing to instruct their recruitment team to avoid bias based on accent. Explicit attention should be paid to the subject in order for job recruiters not to unconsciously base their evaluations on the accent of the participant. Furthermore, in an educational context, it could be of interest to devote more attention to the topic of accent-based discrimination. There are many forms of discrimination, one of which is discrimination based on one's accent. Future studies should aim at finding more insight into reducing all discriminatory tendencies, not only accent-based, contributing to a world with equal opportunities.

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Appendix

1.1. Cover story

You will be listening to an audio recording of a job applicant, who is applying for a retail manager position at a multinational with its headquarters located in the Netherlands. For reasons of internationalization, the process was conducted in English.

1.2. Instruction

We are interested in the evaluation of Human Resource students of job pitches. It is important that you turn on the sound of your device to make sure you are able to hear the audio fragment. Furthermore, it is advised to wear headphones. Please listen to the audio fragment once and then continue filling in the questionnaire.

1.3. Job pitch text

I am a seasoned Retail Manager with lots of experience in the development of employee training programs and loss prevention techniques which have resulted in savings of over 3 Million during the past decade of my career. The greatest strengths I possess are my endurance and willpower. I never give up. In the many years I have worked in this industry, I found that my work is most successful when I am involved in every step of the product cycle, from the initial contact, to the closing speech and congratulatory handshakes at the end of a project. In my previous positions, I have always tried to be as involved with the project as I am with the employees that contribute to it. However, one could say that a weakness of mine is that I have the tendency to overanalyze a situation or product. Sometimes, I take too much time trying to find the right strategy for a sale, and in the end, find that my initial plan was the one to go for. I am rather enthusiastic about your company and the position that has become vacant, as I think I could learn a lot as well as add a lot to your company.

1.4. Questionnaire

Understanding of the message

Intelligibility (7-point semantic differentials)

‘I think this speaker is...’

- | | | |
|----------------------------|---------------|--------------------------|
| 1. Very easy to recall | 1 2 3 4 5 6 7 | Very difficult to recall |
| 2. Hard to recall | 1 2 3 4 5 6 7 | Effortless to recall |
| 3. Uncomplicated to recall | 1 2 3 4 5 6 7 | Complicated to recall |
| 4. Rather simple to recall | 1 2 3 4 5 6 7 | Rather tough to recall |
| 5. Demanding to recall | 1 2 3 4 5 6 7 | Undemanding to recall |

Comprehensibility (7-point Likert scales)

Completely disagree, Disagree, Somewhat disagree, Neutral, Somewhat agree, agree, Completely agree

1. 'I have to listen very carefully to the speaker.'
2. 'The speaker speaks clearly.'
3. 'The speaker is barely understandable.'
4. 'The speaker is difficult to comprehend.'
5. 'I have problems understanding what the speaker is talking about.'
6. 'I do not understand what the speaker means.'

Attitudinal evaluations (7-point Likert scales)

Likeability

Completely disagree, Disagree, Somewhat disagree, Neutral, Somewhat agree, Agree, Completely agree

'In my opinion, the speaker sounds...'

1. Credible
2. Sympathetic
3. Warm
4. Humoristic
5. Tactful
6. Polite
7. Irritating

8. Unfriendly

Status

Completely disagree, Disagree, Somewhat disagree, Neutral, Somewhat agree, Agree, Completely agree

‘In my opinion, the speaker sounds...’

1. Authoritative
2. Trustworthy
3. Self-confident
4. Influential
5. Like they have a powerful voice

Competence

Completely disagree, Mostly, Somewhat, Neutral, Somewhat, Mostly, Completely agree

‘In my opinion, the speaker sounds...’

1. Reliable
2. Intelligent
3. Competent
4. Hardworking
5. Educated

Hireability (7-point Likert scales)

Completely disagree, Mostly, Somewhat, Neutral, Somewhat, Mostly, Completely agree

1. ‘I would recommend employing this job applicant.’
2. ‘I have a very positive impression of the job applicant.’
3. ‘I have a very negative impression of the job applicant’

4. 'The job applicant is professionally qualified.'
5. 'The job applicant is not professionally qualified.'

Origin/Voice characteristics questions (7-point Likert scales and drop down menu)

Completely disagree, Disagree, Somewhat disagree, Neutral, Somewhat agree, Agree, Completely agree

1. This speaker sounds like a native speaker of English
2. This speaker has a strong foreign accent in English
3. This speaker sounds like a native speaker of American English
4. This speaker sounds confident
5. This speaker sounds natural
6. This speaker sounds pleasant

Please indicate which country you think the speaker is from (1357 options in total)

Background variables (open questions and multiple choice)

1. Please indicate your age
2. Please indicate your gender (**4 options: male, female, non-binary/third gender, prefer not to say**)
3. Please indicate your native language
4. Please select your highest level of education (**5 options: High school, MBO, HBO Bachelor, WO Bachelor, WO Master**)
5. Please select the category most fitting to your current situation (**4 options: Human Resource student, Working a job, Human Resource student and working a job, Currently not employed but I have previously applied for job(s)**)

//If "Human Resource student" or "Human Resource student and working a job" was selected://

1. Please select what year of Human Resource study you are in (**8 options: First year bachelor, Second year bachelor, Third year**)

**bachelor, Fourth year Bachelor, More than fourth year Bachelor,
First year master, Second year master, More than second year
Master**

2. Please select whether you have done/are doing an internship (2
options: yes, no)

//If “yes” was selected for “Please select whether you have done/are doing an
internship”:// **Open questions**

1. Please indicate how many months you have done or have been
doing an internship for
2. Please indicate how many years you have been working

//If “Working person” or “Human Resource student and working a job” was selected:// **Open
question**

1. Please indicate your current position (e.g. store manager, secretary, data
analyst, etc.)

English proficiency (7-point semantic differential scales)

Poor – Excellent

1. Please indicate how proficient you are in reading English
2. Please indicate how proficient you are in writing English
3. Please indicate how proficient you are in speaking English
4. Please indicate how proficient you are in listening to English

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, number 4** → 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.