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How cognates and slogan length influence the comprehension of foreign language slogans and purchase intention.

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Abstract

This quantitative study explored the effects of slogan length and cognate use in Spanish slogans on the perceived and actual comprehension of said slogans when used in Dutch advertisements and the purchase intention of Dutch consumers. In a between-subjects experiment, 180 Dutch participants completed a questionnaire in which they were assigned to one of the four conditions containing ads with : (1) a slogan of 4 words, with a cognate; (2) a slogan of 8 words, with a cognate; (3) a slogan of 4 words, without a cognate; or (4) a slogan of 8 words, without a cognate. Each participant evaluated three advertisements for different food products. Firstly, it was found that short slogans led to higher perceived comprehension, but not to higher actual comprehension. Secondly, the use of cognates results in both higher perceived and actual comprehension. No effect of either slogan length or cognate presence on purchase intention was found. Furthermore, a relationship was found between the perceived and actual comprehension. Lastly, it was found that a higher perceived and actual comprehension led to higher purchase intention.

Introduction

Slogans are everywhere in advertising. To give an example, 'Because you're worth it' from L'Oréal and 'I'm Lovin' it' from McDonald's are both well-known by consumers from all over the world. These slogans express the identity of the product or brand and strengthen the brand's logo and brand name (Dass, Kohli, Kumar, & Thomas, 2014). Furthermore, they facilitate consumers in recognizing and remembering a brand (Kohli, Leuthesser, & Suri, 2007).

The English slogan of McDonald's is used in foreign countries, without adjusting it to every local language. In fact, from the previous century on, an increasing interest has been noticed in the use of foreign languages in advertising. A corpus study showed that 81% of the advertisements in Dutch women's magazines contained English (Gerritsen et al., 2007). This growing interest has come from the belief that using foreign languages in advertising is more effective in raising attention than solely using the native language. Furthermore, the increasing use of foreign languages in advertising can be linked to the concept of globalization. Foreign markets are now easily accessible, and consumers are increasingly aware of other cultures and languages. In fact, 86.4% of the Dutch population aged between 25 and 64 is able to speak more than one foreign language (Eurostat, 2016). This raises the question for advertisers whether to standardize or localize their global campaigns (Mueller, 1991). On the one hand, using standardized advertising campaigns can reduce costs, as organizations do not have to create multiple campaigns. Moreover, it can be practical to use one language, as certain words are difficult to translate (Gerritsen et al., 2007). Besides, a global campaign provides control for companies, as each advertisement in every location is the same. Lastly, standardizing advertising helps organizations to develop one corporate brand image (Hornikx, Van Meurs, & De Boer, 2010). On the other hand, consumers may perceive the advertisements differently due to cultural differences. To give an example, British consumers prefer humoristic or straightforward advertising styles, whereas French consumers prefer dreamlike styles (Whitelock and Rey, 1998). Additionally, consumers are less able to understand an advertisement in a foreign language than advertisers currently believe (Gerritsen et al., 2010).

This difficulty in understanding is a considerable problem, as it implies that the message of the advertisement will not be conveyed to the consumer as intended. According to the Revised Hierarchical Model, messages in a consumer's first language are easier to comprehend than messages in a foreign language (Luna & Peracchio, 2003). However, previous studies also suggest that it is not always necessary for consumers to comprehend a

message in a foreign language advertisement. Different languages can evoke different impressions of the advertisement due to country stereotypes (Hornikx, Van Meurs, & Starren, 2007). Furthermore, the comprehension of foreign language elements in advertisements can be improved by reducing the message's complexity. Linguistic complexity can cause difficulties in the interpretation of a message (Pallotti, 2014), which can lead to unfavourable results regarding advertisement effectiveness. To give an example, in a study on the use of English in Dutch advertisements for chocolate, easy slogans were appreciated more and resulted in a higher purchase intention than difficult slogans (Hendriks, Van Meurs & Poos, 2017).

However, since prior studies have operationalized complexity by means of subjective judgments rather than the manipulation of objective linguistic elements, the unanswered question remains how the complexity of a foreign language slogan can be adjusted by linguistic factors to make it easier to understand and improve the effectiveness of the message. Therefore, this research aims to study how the complexity of a foreign language slogan affects the perceived and actual comprehension of the said slogan. Furthermore, its effect on the consumers' purchase intention with respect to the portrayed product will be studied. These results provide useful guidelines on how to assess language complexity when using foreign languages in advertising. In addition, this research can give insight into the area of second language acquisition (SLA), because the aim is to study how linguistic complexity affects the comprehension of a foreign language message. Depending on the outcomes, foreign language teachers and learners could incorporate cognates into the learning process or adjust the length of the foreign language sentences. Furthermore, the results of this research can contribute to computational linguistics. The linguistic factors that make a message less complex can be implemented by computer systems. For example, speech recognition systems could make use of cognates or adapt the length of sentences to facilitate comprehension. Moreover, with the help of the outcomes of this research, foreign language slogans can be designed to make them more effective in order for organizations to persuade consumers more efficiently. Before turning to the research questions and hypotheses of the current study, first the existing literature on foreign language slogans in advertisements, linguistic complexity and advertisement effectiveness will be reviewed.

Literature review

Foreign language slogans in advertisements

Foreign language slogans are often used in advertising to attract attention and to demonstrate an organization's foreignness (Hornikx & Van Meurs, 2020). This foreignness can highlight country stereotypes. To give an example, consumers connect Spain to wine (Usunier & Cestre, 2007), so when using a Spanish slogan for wine, the country stereotype will be activated in the minds of consumers and they will experience the advertisement more positively.

Globalization can also be an important reason for organizations to adopt foreign language slogans because it provides the possibility to implement a standardized advertising strategy. This advertising standardization can be described as the means of using the same advertisements in multiple locations, without adjusting the content. From the previous century on, there has been considerable academic interest in this topic (Hornikx & Van Meurs, 2020). However, the findings of previous studies are often contradictory. For example, according to Levitt (1983) it is fundamental to standardize, as organizations who do not are likely to miss out on profits. Through standardizing, organizations can reach a larger audience and can reduce costs. On the other hand, participants from different countries appreciate different aspects of the same advertisement (Green et al., 1975). This implies that each country has different preferences, leading to the conclusion that organizations should not standardize their global advertising. Furthermore, advertisements could be more efficient when targeted at specific audiences. Another reason for organizations not to standardize is that consumers are not always able to comprehend an advertisement in a foreign language (Gerritsen et al., 2010; Hornikx & Van Meurs, 2020).

Linguistic complexity

Linguistic complexity can be described as the components of language that contribute to the difficulty of interpreting communication (Pallotti, 2014). In other words, various elements of language can make communication more complicated to understand, such as slogan length. According to Pallotti (2014), linguistic complexity is especially important in the field of second language acquisition, as this deals with the components making communication more comprehensible. These components can occur in various linguistic areas and can occur in both spoken and written language. In slogans, syntactic and semantic aspects are likely to have a part in influencing linguistic complexity (Miller & Toman, 2015). This is because those areas

are dealing with the structure and meaning of words and sentences. These two concepts will be further explained in the following paragraphs.

In linguistics, the field of semantics is concerned with the meaning of the words. When considering semantic complexity, cognates may help consumers understand the meaning of a foreign language slogan and make a slogan less complicated. Cognates are words that are similar in at least two languages (Fasold & Connor-Linton, 2014). The similarity of these words includes the use of similar sounds, related spelling and comparable translations (Otwinowska, 2015). These cognates facilitate individuals in recognizing the meaning of words in a foreign language, due to their comparable appearance and meaning. To give an example, *comunicación* and *communicatie* are cognates in Spanish and Dutch. Using similar words contributes to a more successful interpretation of a foreign language (Caroll, 1992). Cognates contribute to a faster and easier translation of words in a foreign language compared to non-cognates (Otwinowska, 2015). In addition, it is argued by Caroll (1992) that cognates can only exist in ‘genetically’ similar languages. This explains why there are many cognates in the Romance languages of Spanish, French, and Italian. However, cognates also exist in languages that are not directly related. Dutch is a Germanic language and Spanish is a Romance language, but still cognates can be found between these two languages. This is because both Romance and Germanic languages originate from the same proto-language family, namely the Indo-European language family (Fasold & Connor-Linton, 2014).

In addition, the area of syntactic complexity is concerned with the structure of words and sentences. Miller and Toman (2015) defined a simple slogan as a slogan without syntactic transformations. That is, adjusting a sentence or word order by using different grammar approaches. These transformations are often used in slogans, such as adjusting the type of voice from passive to active or leaving out certain words, because slogans tend to be more condensed in contrast to regular sentences. With regard to slogan complexity, Miller and Toman (2015) identified 79.3% simple slogans. That is, a slogan without any syntactic transformations. The service company brand slogans were in the native language of English. Moreover, through a content analysis, they investigated how slogans differed in length. It was found that 91% of the slogans contained less than six words. Although Miller and Toman (2015) argued that complex slogans should lead to higher recall of the slogans, it was found that the majority of the organizations use simple slogans. The frequencies of other syntactic complexity elements were studied as well, such as the type of voice, mood, use of negation, clause complexity, and amount of transformations.

Advertisement effectiveness

In order to measure the effect of the use of a foreign language in an advertisement, researchers often study advertisement effectiveness. This can be measured by studying the attitudes toward the advertisement, the degree to which the respondent is able to recall the advertisement, or the intention to purchase the product (Mehta, 2000). These measures help indicate whether the advertisement contributes to persuasion and success.

Dass et al. (2014) studied which components aided in the appreciation of a slogan and focused on L1 corporate slogans in English. One of these components was the length of the slogan. In this study, the length was considered to be related to the complexity of the slogan. This relation was based on the Cognitive Cost Model (Todd & Benbasat, 1992), in which it is argued that consumers have restricted cognitive capacity. This would indicate that consumers do not prefer to process much information, implying that shorter slogans would be preferred (Dass et al., 2014). The length of the slogan was determined by counting the number of words. It was found that even though shorter slogans were not better liked, shorter slogans were easier for individuals to recall. This was explained by mentioning that the likeability of a slogan does not have to indicate success.

In fact, slogan recall is believed to be an adequate method of measuring the success of a slogan because slogan recall will lead consumers to purchase a product (Essays, 2018). Kohli, Thomas & Suri (2013) studied which factors had a significant effect on the recall of corporate L1 slogans in English of English consumers. One of these factors was again the length of the slogan. For the length of the slogan, the researchers counted the number of words of every slogan. In contrast to the study by Dass et al. (2014), Kohli et al. (2013) imply that the complexity and slogan length are two separate elements because a long slogan can be simple to understand as well. Thus, slogan complexity is measured separately in this study. The researchers rated, based on their perception, how complex each slogan was. A slogan had either a low or high level of complexity, but this was not supported by additional information explaining what made the slogan more or less complex. A significant effect was found for slogan length, showing that shorter slogans are easier to recall. Moreover, shorter slogans were perceived as less complex.

Additionally, the difficulty of a slogan can be an important indicator for the effectiveness of a foreign language advertisement. Hornikx et al. (2010) found that Dutch consumers appreciated English advertisements more than advertisements in their native language when these were simple to understand. When the English advertisements were complicated, they were equally appreciated. This indicates that the complexity of a foreign

language advertisement has a significant effect on the effectiveness of the advertisement. The effectiveness of the advertisement was measured with regard to appreciation. However, the researchers mentioned in their discussion that future studies could include the attitude towards the advertisement and purchase intention as well. A similar study was carried out by Hornikx and Starren (2006). In their research, participants rated French and Dutch advertisements and evaluated these advertisements by determining their appreciation and comprehension of the foreign language slogans. The comprehension of the slogans was studied because this was perceived as an important measure to demonstrate the effectiveness of a foreign language advertisement. The results of this study were similar to the study by Hornikx et al. (2010), where easy slogans were appreciated more in contrast to difficult slogans. However, when the French slogan was understood, the participants appreciated the French slogan more than the Dutch one (Hornikx and Starren, 2006). Consequently, it was argued that this implies that the appreciation of foreign language advertisements can be influenced by both the comprehension and the symbolic meaning.

Because the literature suggested that it is not necessarily important for consumers to comprehend a foreign language advertisement due to symbolic meaning and country stereotypes, Hendriks et al. (2017) investigated whether comprehension affects the effectiveness of foreign language advertisements in English for Dutch consumers. The effectiveness was measured with respect to the purchase intention and attitude towards the product and advertisement. Firstly, a significant relationship was found between the complexity of a foreign language slogan and appreciation. It was found that easy slogans were appreciated more than difficult slogans. Furthermore, it was discovered that easy slogans resulted in a higher purchase intention. These findings indicate that complexity and comprehension do play an important role in the effectiveness of foreign language advertisements, as it is stated that it is fundamental for consumers to understand the message (Hendriks et al., 2017). However, in this study, the researchers solely measured the perceived comprehension of the slogan, rather than the participants' actual comprehension.

Furthermore, Raeds, Roozen, Peeters, Dupré and Ceuppens (2016) studied the differences between perceived and actual comprehension of English slogans and their effect on the success of the advertisement for Belgian, Dutch, German and Italian consumers. It was found that individuals who believed they understood the foreign language advertisement, valued the advertisement more positively than individuals who believed they did not understand it. The intention to buy was also higher when the individual believed to understand the slogan. This was similar to the results of the participants' actual

understanding. These results could indicate that actual language comprehension is not necessary for individuals to be persuaded by a foreign language slogan, but that the perception of understanding a foreign language slogan is sufficient.

Even though many studies have focused on complexity in foreign language advertising, the majority did not focus on the concepts underlying linguistic complexity but operationalized complexity through subjective judgments. These studies mainly looked into the complexity without studying the objective linguistic elements that influence complexity. Moreover, they focused on the effect of complexity on the appreciation of the advertisement but did not investigate how to improve linguistic complexity. To continue, the use of cognates has never been studied in the field of foreign language advertising, despite the fact that several literature articles have mentioned the positive effect on foreign language comprehension.

Research questions and hypotheses

It can be concluded that the linguistic elements contributing to the complexity of foreign language slogans and their effect on comprehension and purchase intention are still underexplored. Numerous researchers have studied complexity and its effects on foreign language slogans. However, none of the studies focused on what affects the linguistic complexity of a foreign language slogan and how this complexity can be reduced. This study aims to investigate the influences of cognates and the length of slogans on the perceived and actual comprehension and purchase intention of foreign language slogans. Thus, the following research questions have been formulated:

- *Q1: What is the effect of cognates and slogan length on the perceived comprehension, actual comprehension and the purchase intention of a product advertised with a foreign language slogan?*
- *Q2: Is there a correlation between perceived comprehension, actual comprehension, and purchase intention in the context of advertisements containing foreign language slogans?*

Based on the previous literature, six hypotheses have been formulated. The first hypothesis has been based on the research by both Kohli et al. (2013) and Dass et al. (2014). They found that shorter L1 slogans are easier to remember and understand. This leads to the following hypothesis:

- *H1: The use of a short foreign language slogan will result in a higher actual and perceived comprehension than a long foreign language slogan.*

Furthermore, following the article by Carroll (1992), who explained that cognates help to interpret a foreign language more successfully, the second hypothesis was formulated:

- *H2: The use of cognates in a foreign language slogan will result in higher perceived and actual comprehension of that slogan in a Dutch advertisement.*

Simple slogans are appreciated more by consumers (Hornikx et al., 2010). Furthermore, Hendriks et al. (2017) demonstrated that simple slogans resulted in both a higher appreciation and higher purchase intention. As cognates and slogan length are believed to make foreign language slogans simpler, the following hypotheses were formulated:

- *H3: The use of cognates in foreign language slogans will result in a higher purchase intention compared to slogans without a cognate.*
- *H4: The use of a short foreign language slogan will result in a higher purchase intention compared to using a long slogan.*

Raeds et al. (2016) found that both a higher perceived and actual comprehension lead to higher purchase intention. Besides, it was found that the intention to purchase a product was the same for both consumers who reportedly comprehended the foreign language advertisement and the ones who actually understood the message. Furthermore, Hornikx et al. (2010) stated that there exists a relationship between perceived comprehension and actual comprehension. When consumers have a higher perceived understanding of a foreign language slogan, they also tend to have a higher actual comprehension. This leads us to formulate the last hypotheses:

- *H5: There is a positive relationship between actual and perceived comprehension and purchase intention, such that when the actual and perceived comprehension are higher, purchase intention will also be higher.*
- *H6: There is a relationship between perceived comprehension and actual comprehension, such that when the actual comprehension is higher, the perceived comprehension will also be higher.*

Methodology

Materials

Participants evaluated three advertisements containing a foreign language slogan in Spanish. They were asked to either evaluate advertisements containing: (1) a slogan of 4 words, with a cognate; (2) a slogan of 8 words, with a cognate; (3) a slogan of 4 words, without a cognate; or (4) a slogan of 8 words, without a cognate. Because every participant only saw the advertisements of the condition to which they were assigned, 12 advertisements have been used in total. As there was no previous literature defining short and long slogans, the slogan length has been based on the results of the studies by Miller et al. (2015) and Anwar (2015). In these studies, the average word count for the slogans was 4 or 5 per slogan. By doubling this amount, the slogan length could be considered long. Additionally, cognates were chosen during the process of creating the slogans. A word was considered a cognate when both the spelling, meaning, and appearance were similar. Furthermore, it was made sure that the cognate was not a cognate in French or English as well, as many Dutch people are able to understand these languages. In order to keep consistency in the slogans, the same structure and elements were used for each advertisement. To give an example, for the Barritas advertisement, the word ‘fiësta’ was used in every slogan. Furthermore, synonyms of cognates or similar wording were used for the non-cognate conditions, for example ‘*Una fiësta de frutas*’ (= a party of fruit) was ‘*Una fiësta de sabores*’ (= a party of flavours) for the condition without cognate. Even though the words ‘fruit’ and ‘flavours’ are not synonyms, they both have to do with taste. Two examples of the advertisements can be found below in figure 1.

Figure 1: Example advertisements of a short slogan with cognate and a long slogan without cognate.



The advertisements contained products that are affordable and interesting for the participants. In particular, advertisements for a fruit bar, cookies, and iced coffee have been chosen (*see Appendix A*). These low-involvement products have been chosen because it was expected that these products would be appealing to students, who were expected to occupy the majority of the sample. Generally, this target group does not have a high income. Therefore, using affordable and appealing snacks, respondents were more likely to relate to the product. This contributed to a realistic setting, which is essential as participants had to indicate whether they would like to buy the product. Additionally, the products were also sufficiently interesting for other respondents who did not fall into the age range and were not students. Thus, the products could be attractive for every respondent. Moreover, it was important to take the congruence of foreign language and the product into account, as advertisements in a foreign language are more successful for congruent products (Hornikx, Van Meurs & Hof, 2013). Therefore, it was important to use products that were not associated with a Spanish stereotype because this made the results of this research more neutral.

Moreover, the advertisements that were used have been copied from existing products, which were not yet introduced in the Netherlands. This had the advantage that the participants did not already have brand awareness and particular attitudes towards the products. Another reason to implement existing advertisements was that previous studies made use of either self-made advertisements or advertisements of known brands, which could affect the attitude of the participants negatively (e.g. Gerritsen et al., 2010; Hornikx et al., 2013). These advertisements could be considered by the participants as less attractive and persuasive, leading to a lower appreciation of the advertisement and lower purchase intention. However, when using existing products and advertisements that were not yet known in the Netherlands, it was possible to investigate the participants' purchase intention in a more realistic environment.

The advertisements were chosen based on various aspects. Firstly, the product had to be clearly visible in the advertisement, such that Dutch consumers also were able to understand the product. Furthermore, the slogan had to be clearly visible and easy to photoshop. That is, an advertisement with a clear background and good image quality. In this study, the researchers adjusted the slogan of the advertisement and added the word 'nieuw' (new), to make the advertisements consistent and appealing to the Dutch respondents. Furthermore, the advertisements were adjusted to a square size to ensure that each advertisement had the same size.

The foreign language used in the slogans for this research was Spanish. Spanish is the fourth most spoken language in the world with 538 million speakers (Statista, 2020). However, most foreign language advertisements contain English, French, or Italian as the foreign language (Nederstigt & Hilberink-Schulpen, 2017). This makes Spanish an interesting and underexplored language in advertising. Furthermore, according to the EF English Proficiency Index (2019), the Netherlands occupies the number one position of English proficiency in the world. This indicates that the Dutch population has an exceptionally high understanding of English, suggesting that Dutch individuals should have fewer difficulties understanding English slogans when comparing this to Spanish slogans. Therefore, when using English as a foreign language, the results could be more similar to results using slogans in the native language. Hence, using Spanish was more desirable, as the majority of the Dutch population does not master the Spanish language, which implies that variance between the experimental conditions is more likely to be visible using this foreign language.

Subjects

A total of 308 Dutch-speaking respondents started the questionnaire. However, due to respondents abandoning the questionnaire and filtering out the respondents who did not meet the requirements, the answers of a total of 180 respondents were analysed. Of them, 73.3% ($n = 132$) were female and 26.7% ($n = 48$) were male. The respondents' ages ranged from 15 to 75, with a mean age of 32.43 ($SD = 15.23$) years old. The majority of the respondents within this age range fell into the range of 20 to 25 years old (53.8%). Furthermore, the majority of the respondents indicated higher education as their current or highest completed education. 78.3% ($n = 141$) of the respondents indicated a bachelor's degree, master's degree, or PhD as their level of education. The remaining 11.7% ($n = 21$) indicated high school as their level of education and 10.0% ($n = 18$) secondary education. Consequently, the distribution of the respondents over the four conditions differed significantly with regards to their education level ($\chi^2(8) = 17.06, p = .030$). Of the participants with a bachelor's degree in applied sciences, a greater number was assigned to the long slogan with a cognate ($n = 22$) compared to the short slogan with cognate ($n = 7$). Furthermore, of the participants with a master's degree in science, more respondents were assigned to a short slogan with cognate ($n = 13$) compared to the long slogan with cognate ($n = 6$). However, the distribution of the respondents did not significantly differ in the mean age ($F(1, 176) = 1.16, p = .284$) and gender distribution ($\chi^2(1) = 1.07, p = .301$).

Design

The effect of cognates and slogan length on the perceived and actual comprehension and purchase intention of foreign language slogans has been assessed with a 2x2 between-subjects design: The independent variables are cognate presence (yes or no) and slogan length (4 or 8 words). The following variables have been identified as dependent variables: perceived comprehensibility, actual comprehensibility, and purchase intention.

Instrumentation

Perceived comprehension was measured by ordinal scale using a 7-point Likert scale. This was measured following the research of Raedts, Roozen and De Weerd (2019). The statement they used was focusing on the complete advertisement message, whereas the statement of this study was only focusing on the slogan. Thus, the statement used to measure the perceived comprehension was adapted to: 'I have understood the Spanish slogan in the advertisement ("Ik heb de Spaanse slogan in de advertentie begrepen")': strongly agree-strongly disagree'.

Furthermore, actual comprehension was measured by ratio scale by means of an open-ended question. Participants were asked to write down a translation of the foreign language slogan to which they were exposed. This method was based on previous research (e.g., Gerritsen et al., 2000; Hornikx et al., 2010). However, the measure to score the translations was based on a combination of measures as described by Felker, Ernestus and Broersma (2019). The actual comprehension of the respondents was measured by giving each translation a score: the error rate. The error rate was graded based on a hybrid version of the lexical and semantic error rate. The lexical error rate is focused on counting the proportion of correct words in the target phrase (Felker et al., 2019). When 2 words out of 4 are correct, the participant receives a score of 0.5. To give an example, '*una fiësta de frutas*' receives a score of 0.25 when the participant writes down 'de feest', because the target words are *een, feest, van, fruit*. In this case, only *feest* is correct, because the article does not match the target word. As can be seen in the example, this measure relies heavily on correct spelling and accuracy. However, the semantic error rate focuses on the broader meaning of a sentence (Felker et al., 2019). This measure counts the target words that are missing and also incorporates synonyms. However, a score of 0.5 does not necessarily imply that the respondent captured half the meaning. For example, the translation of '*la bebida más rica*' with target words *het, drankje, meest, lekker* will receive a score of 0.5 if the participant writes down *het* and *lekker*. Even if the participant writes down 'het weer is lekker' (= the weather is nice). This can be an

important limitation, as participants can still receive a high score without understanding the sentence. Because both measures have their limitations, a combination of the lexical and semantic error rate has been chosen. This allowed the researchers to incorporate synonyms and word combinations into the codebook while having a clear distinction between correct and incorrect translations. To give an example, ‘een feestje van fruit’ and ‘een fruitfeestje’ were both rated as correct as they both captured the intended meaning, even though the word combination was not exactly the same. The correct and incorrect translations were assembled in the codebook (*see appendix B*), which comprises multiple target words and phrases per slogan. When a translation was entirely correct, the error rate was 0% and when the translation was completely wrong, the error rate was 100%. Verbs and nouns (1.5 points) weighed heavier than articles and adjectives (0.5 points) because these words were more important for the understanding of the foreign language slogan. Following the research of Gerritsen et al. (2000), spelling errors were ignored, as it was intended to study the meaning of the slogans. Every translation was checked word by word by two coders. To ensure consistency in the coding, afterwards intercoder reliability was tested by calculating Cohen’s Kappa: The interrater reliability of the variable ‘actual comprehension’ was moderate: $\kappa = .56$, $p < .001$ (Landis and Koch, 1977; Altman, 1991). The statistical analyses have been carried out with the output of coder one, because this allows future researchers to replicate this study with the possibility of generating the same error rates instead of a mean score that is unattainable for one sole rater.

Lastly, purchase intention was measured on ordinal level using a 7-point semantic differential scale. This was derived from the study by Hendriks et al. (2017) and Hornikx and Hof (2008). Because the Cronbach’s alpha for three statements measuring purchase intention was high in both studies ($\alpha = .94$ / $\alpha = .79$), one statement was chosen to make the questionnaire as simple and short as possible. The following statement was used: ‘This product..’: ‘I never want to buy-I certainly want to buy’. This statement was the most accurate to measure purchase intention and was ought to be easy to understand for the respondents. The complete questionnaire can be found in Appendix C.

Procedure

To be able to answer the research questions, an online questionnaire was constructed using Qualtrics software, Version 04/2020 (Qualtrics, Provo, UT). The participants were approached by the researchers and were then randomly assigned to one of the four conditions by Qualtrics. The respondents did not receive any incentives but were motivated by

explaining that the questionnaire would take less than 10 minutes. At the beginning of the questionnaire, respondents were told that they were going to see advertisements of organizations that were potentially going to introduce their products to the Dutch market. They were not briefed about the real intention of the study. Furthermore, the participants' consent was not explicitly asked, but the participants were told that the data would be retrieved anonymously and treated with care. Additionally, contact details were given to allow respondents to contact the researchers if needed. The participants completed the questionnaire anonymously and on an individual basis.

Firstly, the respondents were asked to answer demographical questions. Based on the answer to these questions, participants were filtered out when either (1) they did not speak Dutch as their native language; (2) they had followed Spanish classes; or (3) spoke Spanish. Participants who were not filtered out saw a total of 3 advertisements containing a Spanish slogan. After being exposed to the advertisement, the participants were asked to answer the questions from the questionnaire. This procedure was the same for all participants. At the end of the questionnaire, the respondents were debriefed about the experiment. On average, it took respondents 6.01 minutes ($SD = 11.57$) to complete the questionnaire.

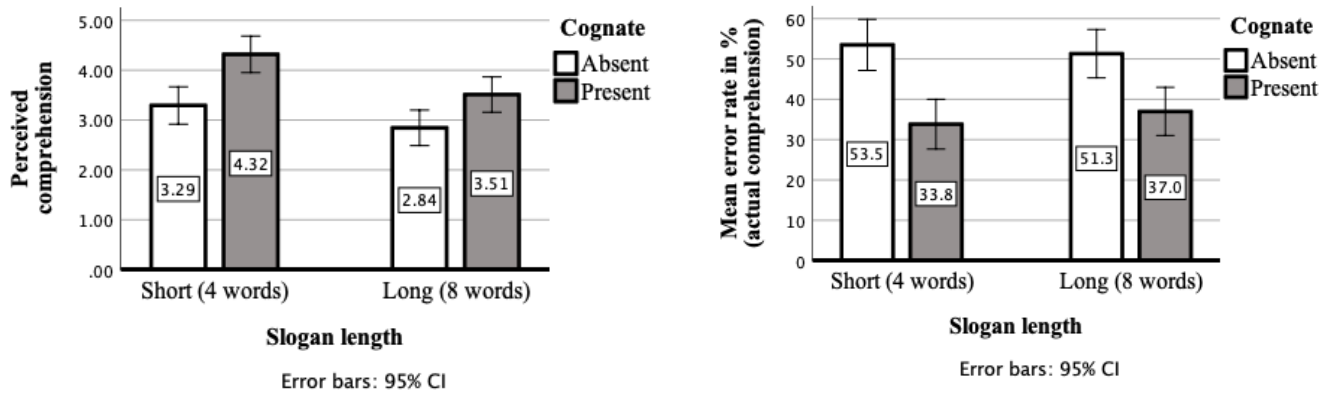
After each respondent had completed the questionnaire, two coders independently scored the actual comprehension of the respondents by evaluating their translations of the slogan. This was done using a codebook (*see appendix B*).

Statistical analyses

The effects of cognates and slogan length on perceived and actual comprehension and purchase intention were measured using a multivariate analysis of variance (MANOVA). The correlation between the perceived comprehension, actual comprehension and purchase intention was measured by conducting a Spearman's ρ analysis. All statistical data analyses were performed using SPSS version 26.0 (IBM Corp, 2019).

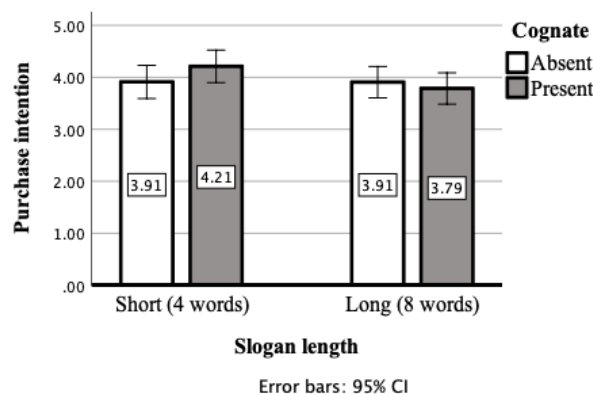
Results

Figure 2: Means of perceived (1 = low comprehension, 7 = high comprehension) and actual comprehension (0% = completely correct translation, 100% = completely incorrect translation) in function of slogan length and cognate use.



RQ1 addressed the effect of cognate use and slogan length on the perceived and actual comprehension and purchase intention. Firstly, a two-way MANOVA for perceived comprehension, actual comprehension and purchase intention, with slogan length and cognate use as factors, did not demonstrate a significant interaction between cognate use and slogan length ($F(3, 176) = .926, p = .43$). However, a significant multivariate effect was found for slogan length ($F(3, 176) = 5.48, p = .001$) and cognate use ($F(3, 176) = 10.94, p < .001$). The univariate analysis showed an effect of slogan length on the perceived comprehension ($F(3, 176) = 11.70, p = .001$). Short slogans led to a higher perceived comprehension ($M = 3.82, SD = 1.34$) compared to long slogans ($M = 3.18, SD = 1.26$). The analysis did not demonstrate a significant effect of slogan length on the actual comprehension ($F(3, 176) = .026, p = .225$) and purchase intention ($F(3, 176) = 1.48, p = .23$).

Figure 3: Means for purchase intention in function of slogan length and cognate use (1 = no purchase intention, 7 = high purchase intention).



Furthermore, the univariate analysis showed an effect of cognate use on the perceived comprehension ($F(3, 176) = 21.17, p < .001$) and on the actual comprehension ($F(3, 176) = 30.08, p < .001$). Slogans containing a cognate had a higher perceived comprehension ($M = 3.90, SD = 1.28$) than slogans without a cognate ($M = 3.06, SD = 1.26$). Slogans containing a cognate had a lower error rate, and thus a higher actual comprehension ($M = 35.45\%, SD = 0.18$) than slogans without a cognate ($M = 52.33\%, SD = 0.23$). No significant effect was found for cognate use and purchase intention ($F(3, 176) = .51, p = .48$).

Additionally, RQ2 examined the relation between perceived comprehension, actual comprehension and purchase intention. A significant negative one-tailed correlation was found between perceived comprehension and actual comprehension ($r_{sp}(180) = -.61, p < .001$). The perceived comprehension of the participants decreased when the error rate increased. This implies that the perceived comprehension was higher when the actual comprehension was higher. Furthermore, a significant negative correlation was found between the actual comprehension and the purchase intention ($r_{sp}(180) = -.15, p = .025$). The purchase increased when the error rate decreased. Thus, the purchase intention was higher when the actual comprehension was higher. Lastly, a significant positive correlation was found between perceived comprehension and purchase intention ($r_{sp}(180) = .38, p < .001$). The purchase intention increased with the perceived comprehension.

Conclusion and discussion

The purpose of this study was to investigate the effect of cognates and slogan length in foreign language slogans on the perceived and actual comprehension and purchase intention. Firstly, it was found that the use of short slogans results in a higher perceived comprehension, but not in a higher actual comprehension. Thus, these results partially support H1. Secondly, the results of this study demonstrated that the use of cognates has a positive effect on both the perceived and actual comprehension of foreign language slogans, confirming H2. Slogans containing a cognate resulted in a higher perceived and actual comprehension compared to slogans without a cognate. Furthermore, slogan length and the use of cognates did not have a significant effect on the purchase intention of consumers. Thus, H3 and H4 are not confirmed. However, a positive relationship was found between the perceived and actual comprehension and purchase intention. This relationship indicated that the purchase intention was higher when the perceived and actual comprehension was higher, which is in agreement with H5. Furthermore, a relationship was found between perceived and actual comprehension,

confirming H6. The perceived comprehension decreased when the error rate increased. This implies that the actual comprehension is higher when the perceived comprehension is higher.

A possible explanation for the outcome that short slogans only led to higher perceived comprehension and not to a higher actual comprehension (H1) cannot be found in previous literature, as both Kohli et al. (2013) and Dass et al. (2014) did not study complexity with respect to perceived and actual comprehension. In the study by Kohli et al. (2013), the researchers determined the level of complexity by rating the slogan as either having a low level of complexity or a high level of complexity. Furthermore, in the study by Dass et al. (2014), the respondents had to answer three questions about how complex they perceived the slogan. However, the fact that short slogans have an effect on comprehension is in line with the findings of both studies. Notwithstanding, it can be interesting to further discover the difference in the effect of slogan length on the perceived and actual comprehension. Moreover, the findings that the use of cognates affect the perceived and actual comprehension (H2) are similar to the conclusions by Carroll (1992), in which it was explained that cognates facilitate foreign language interpretation. It seems that cognates have a noticeable positive influence on comprehension. The outcome that no effect was found for slogan length and the use of cognates on the purchase intention (H3 and H4) contradicts the study by Hendriks et al. (2017), which demonstrated that simple slogans result in a higher purchase intention. This could be due to the differences in measuring the complexity. In their study, Hendriks et al. (2017) indicated easy and complex slogans by conducting a pre-test, in which participants had to rate the complexity and translate the English slogan. The easiest and most difficult slogans were used for the main experiment. This complexity was not based on linguistic elements. In our study, the complexity was based on slogan length and cognate use. Furthermore, our study focused on Spanish slogans, instead of English. Another factor that could have influenced the outcomes of purchase intention in the study by Hendriks et al. (2017) could be that they only investigated the same product type, whereas in this study the purchase intention of multiple products was measured. Furthermore, the relationship between perceived and actual comprehension (H5) is similar to previous research by Hornikx et al. (2010), in which it was found that when the perceived comprehension was higher, the actual comprehension was also higher. Lastly, a relationship was found between the perceived and actual comprehension and purchase intention (H6). This finding was also reported by Raeds et al. (2016), who found that respondents who had a higher perceived or actual comprehension also had a higher purchase intention. It can thus be suggested that comprehension has a noticeable effect on purchase intention.

Several limitations should be taken into account. Firstly, the respondents were not randomly sampled, which might have had an effect on the homogeneity of the sample. Due to this, the sample of this study mainly represents a society consisting of students rather than the public society. This could have had an impact on the results, as students are often exposed to different languages and cultures. Secondly, during the experiment it was found that ‘rico/a’ (= ‘rijk’) could also be considered a cognate, which was not encountered for. This had as an effect that the slogans with cognate contained two cognates and the slogans designed without cognate also contained a cognate. This could have made the slogans easier to understand, compared to containing only one or no cognate. Future studies should make sure that there is a clear distinction between cognates and non-cognates.

Furthermore, despite the findings of this research, little is yet known about the effect of cognate use in foreign language advertising. Future studies could address the use of cognates in advertising more extensively by focusing on body copy as well. There is no literature on the use of cognates in larger texts, but there might be effects for the use of cognates on the comprehension of body copy. If cognates in fact play a role in the effectiveness of the slogan, they can also be of help for the effectiveness of the complete advertisement or text. In this study, a maximum of one cognate was incorporated into the slogan, though using more cognates might provide different results. Also, a possibility exists that the advantages of using a foreign language in advertising will decrease when more cognates are incorporated. Hence, future research could explore this more in detail. Lastly, it can be interesting to focus on other aspects of advertisement effectiveness as well, by studying for example advertisement recall and attitude towards the product or brand. This will provide a clearer and more complete picture of the effect of slogan length and cognate use on the effectiveness of the slogan or advertisement.

In conclusion, this research has provided insights into how objective linguistic elements can make complex texts easier to understand. In this study, slogan length and cognate use were identified as linguistic elements and were found to have a positive effect on both perceived and actual comprehension. Thus, this study expands the findings of previous research studying linguistic complexity by means of objective linguistic devices and the use of foreign languages in advertising. Particularly the use of cognates has not yet been incorporated in this field of investigation, which was shown to contribute significantly to both the perceived and actual comprehension of consumers. These findings can contribute to the field of communication and linguistics in multilingual settings. Lastly, the outcomes can also

help in the area of second language acquisition, as it was found that cognates are helpful in the process of comprehension.

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Appendices

A) Advertisements

Short slogan (4 words), with cognate



Short slogan (4 words), without cognate



Long slogan (8 words), with cognate



Long slogan (8 words) without cognate



B) Questionnaire

Thesis survey

Start of Block: Intro

Intro Beste deelnemer,

Fijn dat je deze enquête voor ons wilt invullen!

Wij zijn Mieke, Marieke, Diana, Toos en Aniek, en zitten momenteel in het derde jaar van de bachelor International Business Communication aan de Radboud Universiteit in Nijmegen. Dit onderzoek voeren wij uit als onderdeel van onze bachelorscriptie.

Gedurende deze enquête laten we je advertenties zien van verschillende bedrijven uit Spaanstalige landen die hun producten in de toekomst willen verkopen op de Nederlandse markt. Onze vraag aan jou is om deze advertenties te beoordelen. Eerst zullen we je een aantal persoonlijke vragen stellen.

Het invullen van deze enquête zal niet langer duren dan 5 minuten. Al je gegevens blijven anoniem, en er zal zorgvuldig en verantwoord met je antwoorden worden omgegaan. De informatie die wij verzamelen door middel van deze enquête zal uitsluitend gebruikt worden voor onze bachelorscriptie. Mocht je vragen of opmerkingen hebben over deze enquête, dan kan je per e-mail contact opnemen met Marieke van Wel (M.C.vanWel@student.ru.nl).

Alvast bedankt namens het onderzoeksteam!

End of Block: Intro

Start of Block: Demographics

Q1 Wat is je geslacht?

- ☐ Man (1)
 - ☐ Vrouw (2)
 - ☐ Anders (3)
-

Q2 Wat is je leeftijd?

Q3 Wat is je huidige of hoogst afgeronde opleiding?

▼ Basisonderwijs (1) ... PhD (10)

Q4 Is Nederlands je moedertaal? (Is Dutch your native language?)

☐ Ja (4)

☐ Nee (5)

Q5 Welke vreemde talen spreek je en/of heb je geleerd? Vink alles aan wat van toepassing is.

☐

Engels (113)

☐

Frans (114)

☐

Duits (115)

☐

Spaans (116)

☐

Italiaans (117)

☐

Portugees (118)

☐

Anders, namelijk.. (119)

Q6 Heb je weleens Spaanse les gehad?

☐ Ja (1)

☐ Nee (2)

End of Block: Demographics

Start of Block: End demographics

Overgang1 Dit was het eerste deel van de enquête. In het tweede deel zullen we je drie advertenties laten zien, waarover we je een aantal vragen zullen stellen. Bekijk de advertenties alsjeblieft goed voordat je de vragen invult. Het is de bedoeling dat je de antwoorden zelfstandig invult. Tevens verzoeken we je om geen woordenboek of andere hulpmiddelen te gebruiken.

End of Block: End demographics

Start of Block: Barritas: With cognate / 4 words

Barritas_ad_C1

Q7 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q8 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q9 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Barritas: With cognate / 4 words

Start of Block: Pozuelo: With cognate / 4 words

Pozuelo_ad_C1

Q10 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q11 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q12 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Pozuelo: With cognate / 4 words

Start of Block: Cafe Ole: With cognate / 4 words

Olé_ad_C1

Q13 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q14 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q15 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Cafe Ole: With cognate / 4 words

Start of Block: Barritas: Without cognate / 4 words

Barritas_ad_C2

Q16 Geef aan of je het eens bent met de volgende stelling:

[illegible]

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

Start of Block: Pozuelo: Without cognate / 4 words

[illegible]

Q20 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q21 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Pozuelo: Without cognate / 4 words

Start of Block: Cafe Ole: Without cognate / 4 words

Olé_ad_C2

Q22 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse woorden en uitdrukkingen in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q23 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q24 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Cafe Ole: Without cognate / 4 words

Start of Block: Barritas: With cognate / 8 words

Barritas_ad_C3

Q25 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q26 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q27 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Barritas: With cognate / 8 words

Start of Block: Pozuelo: With cognate / 8 words

Pozuelo_ad_C3

Q28 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q29 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q30 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Pozuelo: With cognate / 8 words

Start of Block: Cafe Ole: With cognate / 8 words

Olé_ad_C3

Q31 Geef aan of je het eens bent met de volgende stelling:

[illegible]

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

Start of Block: Barritas: Without cognate / 8 words

[illegible]

Q35 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q36 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Barritas: Without cognate / 8 words

Start of Block: Pozuelo: Without cognate / 8 words

Pozuelo_ad_C4

Q37 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q38 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q39 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Pozuelo: Without cognate / 8 words

Start of Block: Cafe Ole: Without cognate / 8 words

Olé_ad_C4

Q40 Geef aan of je het eens bent met de volgende stelling:

"Ik heb de Spaanse slogan in de advertentie begrepen."

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Geheel oneens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Geheel eens

Q41 Vertaal de slogan alsjeblieft zo correct mogelijk naar het Nederlands. Gebruik geen woordenboek of andere hulpmiddelen.

Q42 Dit product..

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
Zou ik nooit willen kopen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Zou ik zeker willen kopen

End of Block: Cafe Ole: Without cognate / 8 words

C) Code book for actual comprehension

- Allow diminutives
- Relative importance of words is reflected in the scoring:
 - Verbs + nouns (1.5) weigh more than articles (0.5)
- Word order does not affect scoring > grammaticality is not important for understanding

“Al onze koekjes zijn zoet en perfect”

→ Counted as 100% comprehension because they have included the “al” already in the first bit.

“Voor iedereen een lekkere biscuit”

→ When a word is supposed to be written plural (galletas = koekjes = 1.5p), there are no points subtracted because that is rating for ungrammaticality.

A disadvantage of this system is that the sentences that had words right, but for the wrong purpose, also received words for those point. An example is:

“voor het beste moment van de dag” (het, van, de)

“het lekkerste drankje van de hele wereld” (het, van, de)

0,5 + 0,5 + 0,5 were counted = 1,5 correct = 5,5 / 7 error rate = 0,7857

Product	Condition	Slogan	Translation	Rating
Barritas	Cognate present / 4 words	una fiesta de frutas	een / het / de feest(je) / festijn van / aan vruchten / fruit Alternatives fruitfeest(je) vruchtenfeest(je) fruitig feest(je) fruitfestijn feestelijke Exclude festiviteit festival viering fuif genot met voor	0.5 1.5 0.5 1.5 Total = 4 3.5 3.5 3.5 3.5 1.5
	Cognate absent / 4 words	una fiesta de sabores	een feest / feestje van / aan smaken / smaak / smaakpapillen Alternatives smakenfeest(je)	0.5 1.5 0.5 1.5 Total = 4 3.5

			smaaksensatie	1.5
	Cognate present / 8 words	la barra que es una fiesta de frutas	de / het / een reep / bar / reepkoek die / welke / dat is / bevat een feest / feestje van / aan fruit / vruchten Alternatives fruitfeest(je) vruchtenfeest(je) fruitig feest(je) fruitfestijn feestelijke	0.5 1.5 0.5 1.5 0.5 1.5 0.5 1.5 Total = 8 3.5 3.5 3.5 3.5 1.5
	Cognate absent / 8 words	la barra que es una fiesta de sabores	de / het / een reep / bar / reepkoek die / welke is / bevat een feest / feestje van / aan smaken / smaak Alternatives smaakfeest(je) smaakpapillen smaaksensatie	0.5 1.5 0.5 1.5 0.5 1.5 0.5 1.5 Total = 8 3.5 1.5 1.5
Pozuelo	Cognate present / 4 words	todas dulces, todas perfectas	allemaal / allen zoet(ig) / zoetigheid allemaal perfect(ie) / uitmuntend / uitstekend Alternatives Zoetste Exclude <i>Todas</i> Heel / helemaal / alles / altijd / enorm / totaal <i>Dulces</i> Zacht / lekker <i>Perfectas</i>	0.5 1.5 0.5 1.5 Total = 4 1

			Lekker / smakelijk / heerlijk / appetijtelijk / verrukkelijk	
	Cognate absent / 4 words	todas dulces, todas bonitas	<p>allemaal / allen zoet(ig) / zoetigheid allemaal mooi / prachtig / aantrekkelijk</p> <p>Alternatives Zoetste</p> <p>Exclude <i>Todas</i> Heel / helemaal / alles / altijd /enorm / totaal</p> <p><i>Dulces</i> Zacht / lekker</p> <p><i>Bonitas</i> Lekker / smakelijk / heerlijk / appetijtelijk / verrukkelijk (refers to taste > bonitas generally refers to beauty)</p> <p>Goed</p>	<p>0.5 1.5 0.5 1.5 Total = 4</p> <p>1</p>
	Cognate present / 8 words	<p>todas nuestras galletas</p> <p>son dulces y todas perfectas</p>	<p>al onze koekjes / koeken / biscuits zijn zoet(ig) / zoetigheid en allemaal perfect(ie) / uitmuntend / uitstekend</p> <p>Alternatives Zoetste</p> <p>Exclude <i>Todas</i> Heel / helemaal / alles / altijd / enorm / totaal</p> <p><i>Dulces</i> Zacht / lekker</p> <p><i>Perfectas</i></p>	<p>0.5 0.5 1.5 1.5 1.5 0.5 0.5 1.5 Total = 8</p> <p>1</p>

			Lekker / smakelijk / heerlijk / appetijtelijk / verrukkelijk	
	Cognate absent / 8 words	todas nuestras galletas son dulces y todas bonitas	al onze koekjes / koeken / biscuits zijn zoet(ig) / zoetigheid en allemaal mooi / prachtig / aantrekkelijk / perfect Alternatives Zoetste Exclude <i>Todas</i> Heel / helemaal / alles / altijd / enorm / totaal <i>Dulces</i> Zacht / lekker <i>Bonitas</i> Lekker / smakelijk / heerlijk / appetijtelijk / verrukkelijk Goed	0.5 0.5 1.5 1.5 1.5 0.5 0.5 1.5 Total = 8 1
Café Olé	cognate present / 4 words	el café más rico	de / een / het koffie / koffiesmaak meest lekkere / smakelijke / heerlijke / rijke(re) / appetijtelijk / verrukkelijk Alternatives lekkerste /smakelijkste / heerlijkste / rijkste / appetijtelijkste / verrukkelijkste Exclude Intense	0.5 1.5 0.5 1.5 Total = 4 2
	cognate absent / 4 words	la bebida más rica	de / het / een drankje / drinken / drank meest lekkere / smakelijke / heerlijke / rijke Alternatives lekkerste / smakelijkste / heerlijkste / rijkste	0.5 1.5 0.5 1.5 Total = 4 2

	cognate present / 8 words	El café más rico en todo el mundo	De / het / een koffie / koffiesmaak meest lekkere / smakelijke / heerlijke / rijke Alternatives lekkerste / smakelijkste / heerlijkste / rijkste van / in hele / heel / gehele / heel de wereld / planeet / aardbol / aarde / universum / heelal Alternatives Ter Wereldse koffie Wereldsmaak Exclude: over complete intense verrijkt	0.5 1.5 0.5 1.5 2 0.5 0.5 0.5 1.5 Total = 7 1 3 1
	cognate absent / 8 words	la bebida más rica en todo el mundo	de / het / een drankje / drinken / drank meest lekkere / smakelijke / heerlijke / rijke Alternatives lekkerste / smakelijkste / heerlijkste / rijkste van / in hele / heel / gehele / heel de wereld / planeet / aardbol / aarde Alternatives Ter Wereldse koffie Wereldsmaak Exclude: over complete verrijkt	0.5 1.5 0.5 1.5 2 0.5 0.5 0.5 1.5 Total = 7 1 3 1

Our measurement scale is a combination of lexical and semantic error rate. We calculate the proportion of words in the target phrase that are absent in the participant's translation, but there is not only one correct translation: we do take into account synonyms and word combinations (fruit/vruchten, meest lekkere = lekkerste).