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Exceptional Abilities of Bilingualism on Discerning Emotions

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Abstract

The ability of discerning emotions is an important capacity in non-verbal communications, which becomes more and more popular with the development of new media such as Tiktok. Exposed to different cultural contexts, bilingual speakers are considered having better communication skills. This article aims to design a practical experiment to reveal whether the bilingual speaker behave better in discerning the emotions of foreign culture. Every possible result is carefully discussed. This essay may provide a unique perspective to promote cross-culture communication.

Keywords

Bilingualism; Emotion perception; Cognitive ability; Development psychology.

1. Introduction

Bilingualism, the ability to speak and understand two languages, is a widespread phenomenon due to the increasing globalization. Bilinguals are exposed to two different systems of emotion words and concepts. They have more words to categorize emotional expressions than monolinguals. Then, bilingual speakers may possess a better capacity to discern emotional expressions that do not exist in their native culture, which is an emotional intelligence advantage. If this effect exists, it is helpful for the government to design bilingual education to promote cross-cultural communication, which is full of non-verbal information. This research will investigate whether the bilingual speakers have the advantage in discerning the emotional expressions.

2. Background

Emotional perception can be defined as a type of ability to assume other people's emotions either earned from their past experiences or predictions based on the cognitive frameworks available in their own language. Certain past studies such as the study conducted by Alqarni and Dewaele indicated the probability of bilingual advantages [1]. It suggested that "there is a small bilingual advantage for emotional and psychological domains": the researchers found that Arabic-English bilinguals scored significantly higher in the emotion perception task than English monolinguals did, while they failed to outperform Arabic monolinguals in the Arabic task. Another related study done by Lorette and Dewaele agrees that bilingual individuals have an advantage in emotion recognition ability by getting higher scores on the relative questionnaire if it did not include English [2]. On the contrary, other study directly indicated the independence between bilingualism and emotional cognition: bilingual upbringing, including the experience of having lived abroad, fails to yield the link to cognitive empathy, an

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important ability of emotional response and psychological variables that can be analyzed statistically [3].]In addition, Alessandra S. Souza and Claudia C. von Bastian also showed no evidence for any bilingual cognitive benefit [4].

While there are limitations in these studies, the proposed study is therefore designed in present.

Take the variety of second languages as an example: the groups of individuals Lorette and Dewaele chose chose the high-proficient second or foreign language users from Slovenia, Belgium, and the Netherlands [2]. Hence, the results from the research may be impacted due to the high homogeneousness of Indo-European languages. Additionally, the study done by Alessandra S. Souza and Claudia C. von Bastian in 2016 denied the relationship between bilinguals and cognitive benefits through evaluating the abilities of Inhibition, Conflict Speed, Mixing, and Working Memory Monitoring [4]. Thus, the lack of measuring emotional recognition serves to be the second potential limitation.

3. Proposed Study

Previous studies have alluded the association between bilingualism and its potential psychological advantage. However, little research has focused on studying whether speaking more than one language will affect people perceiving emotional stimulus. To fill the void, this study will compare monolinguals and bilinguals' ability of classifying emotions which are from another linguistic background. For our purpose of using categorization as a method of measuring the relation between participants' facial emotion perception ability and numbers of language they speak, earlier research foreshadowed by proving that the color categories are hinged on language and culture conventions [5]. This concept implies that since particular vocabularies of color influence categorical structuring, categorizing information is mostly based on language and semantic theories [6]. In order to test bilinguals' acumen, this study will look into discerning specific emotion -- "cankui" & "xiuchi '' as varied degrees of shame in Chinese. We choose shame as the emotional stimulus according to perceptual similarities [7] and semantic theories which means detected emotional expressions "cankui" and "xiuchi" will be grouped separately [8]. This study will substantially further the understanding of higher-order cognitive processes on coding, discerning and interpreting emotions, enhancing the linguistic factors.

4. Methods

4.1. Participants

50 English-native monolinguals (Mage = 17, SD = 1.3; twenty-seven males) and 50 English-native bilinguals, who also spoke Spanish (Mage = 15, SD = 2.1; twenty-two males) will be recruited. Monolingual and bilingual groups are matched on age. All the participants should not know Chinese. Monolinguals are required to speak only English and have minimal exposure to other languages. For bilingual English-Spanish participants, they should be simultaneous bilingualism speakers. All participants will be administered the Language Experience and Proficiency Questionnaire [9]. All the participants should not have a cognition impairment.

4.2. Materials

This experiment will display 100 printed pictures of human emotional expressions of shame. These photos will be chosen randomly from Facial Expression Analysis (FEA) database. 100 Chinese native speakers will be introduced to categorize the 100 pictures in two groups, 50 pictures each. The first group is labeled as "cankui".The second group is labeled as "xiuchi". These two categories are two shame categories in Chinese which are hard to translate in other languages [10]. Generally speaking, "xiuchi" expresses a higher intensity of shame than cankui. The agreement of categorizing "xiuchi" and "cankui" has to exceed 80% to be used subsequently.

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4.3. Procedure

The experiment will begin with introducing the study to the participants and obtaining consent forms. The participants will be seated individually in a quiet room with an experimenter. The task will be carried out with two sample photos each representing "cankui" and "xiuchi" on the table without any cueing the meaning of these two emotion categories. For easier use, "cankui" is labeled as category "A" and "xiuchi" is labeled as "B". Participants will be asked to place the rest 98 photos to either category A or B. Each time participants put down one photo to a category, the experimenter will determine and write down a "pass" or "fail" based on whether it fits into the correct category.

5. Results and Discussion

The experiment, in general, can generate two results: "pass" and "fail" from all 50 English monolingual and 50 English-Spanish bilingual teenagers. Data from each group will be visualized in the bar graphs. By discerning the differences within the bar graphs, we can evaluate whether there is a correlation between bilingualism and differentiating emotions.

According to the hypothesis that we proposed, one of the plausible outcomes is bilingual speakers tend to have more "pass" than monolingual speakers in all performances. Generally, bilingual English-Spanish speakers will outperform in this study which implies that there is a relation between bilingualism and the ability to discriminate emotions. As one of the other possibilities, bilingual speakers have similar numbers of "pass" to monolingual speakers. By having this possibility, graphs show little or no differences between bilingual speakers and monolingual speakers. This outcome might imply other factors that can foster the ability to discern emotions including but not limited to linguistic understandings of emotion-related words, cognitive functions of interpreting emotion-related words.

Lastly, we might also consider a situation where monolingual speakers have more "pass" than bilingual speakers. Nevertheless, there is little journal or articles that interpret or illustrate this phenomenon. As one of the possibilities in our experiment, this result may imply there is no noticeable relation between bilingualism and advantages in discerning emotions. This would possibly draw implications that bilingualism would not provide significant benefits for speakers to discern emotions. By considering the relationship between bilingualism and the ability to discern subtle emotions, bilingualism might merely provide an advantage of knowing one more language.

6. Conclusion and Future Direction

The present study measures whether bilinguals have a cognitive advantage over monolinguals, but there are some limitations in the measuring process, which can be further improved in the future study. One limitation of the present study is that the two categories of emotions ("cankui" and "xiuchi") may not be very well discerned by Chinese native speakers through facial expression. Though there are semantic differences between the two words in Chinese, the difference is very subtle. It is possible that Chinese native speaker has a difficulty in recognizing and categorizing photos about the facial expression of "cankui" and "xiuchi". In addition, the study only compares English monolinguals and English-Spanish bilinguals. The results formulated from the present study cannot be generalized into a larger group of people who speak different kinds of language. Furthermore, though all the participants are simultaneous bilingualism speakers and also a questionnaire was conducted before the experiment to test their basic language fluency. There may be also potential variables that may affect the result of the study. There has been study shown that compared with male, female is especially better in the detection of emotions in low intensity [10]. Maybe female will have the better ability to

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discern the two emotions, so this kind of variable should be controlled in order to not affect the final result.

For future studies, the categories of emotion chosen should be easier to identify and categorize. There should be more research to be done to find two distinct words in a language that can definitely be discerned by native speakers but don't have a direct translation in two other languages. Also, future study can investigate not only English-Spanish bilinguals but also other combinations of language in order to apply the results in a larger group of people. Not only that, future study should eliminate the influence of other potential variables like gender in order to make the result of the study more accurate.

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