

The Measurement of Bilingualism of Students of English Language Education Study Program in a Public University

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Abstract

This research aims to measure the bilingualism of the fourth semester students of English Language Education Study Program of Universitas Negeri Makassar and examine the effect of bilingualism on their academic studies. The research utilized mixed-method approach. questionnaire and interviews were used as the instruments to collect the data from the total of ten respondents. the findings revealed that the students have different language preferences for different context, with Indonesian being the more preferred language for doing activities such as watching TV/videos/DVDs, practicing sports, and religion. meanwhile, English and Indonesian were used equally when reading books. The result of the research also indicated that being bilingual had an advantage in academic studies, including better communication with people from different backgrounds. Being bilingual also helped the respondents in their English Studies, making it easier to understand English, communicate with international friends, and able to access information from various sources. The results of the research suggest that being bilingual is beneficial in both academic and social contexts.

Keywords: bilingualism measurement, bilingualism effect, academic studies

Introduction

Mastering more than one language is not a foreign thing in Indonesia. Apart from Indonesian which is a language used by almost all people in Indonesia, Indonesia has 718 regional languages. Other than that, English is also taught as a subject to children in schools since the fourth grade of elementary, which is 9 years of education. Therefore, many people in Indonesia master more than one language, Indonesian and regional languages or maybe Indonesian and English. People who master two languages are called bilinguals.

Bilinguals master their second language in different ways. There are those who have been exposed to two languages since childhood so that they master the first and second languages almost simultaneously. And there are also those who learn it through courses, lessons at school, or independently at home after they acquired their first language. Some bilinguals are fluent in their second language and some are not and that doesn't mean those who have exposed to two languages from a young age are better speakers than those who learned the language independently. Some bilinguals were born into families where they speak two languages in daily life, but they are not very fluent in their second language. And there are also those who were born in monolingual families but their second language skills are almost similar to native speakers. So, to be fluent in a language, you have to study for it and practice a lot.

Mastering a language requires the process of acquiring words to assembling these words into meaningful sentences to communicate. Therefore, a bilingual is believed to have a more complex way of working of the brain than a monolingual because their brain can carry out this process not only in one language but in two languages. The level of a person's bilingualism is important to study considering that mastering two languages has an influence on individual development. The development in question is in the field of cognitive, which is cognitive performance and academic performance (Wahyudin, 2012). Trautner (2019) stated that bilinguals can be very focus on one thing and change their response, that's because of their cognitive flexibility. When bilinguals want to communicate, they can switch and choose the language in their brain and it requires focus and the flexibility of the brain. Kapa & Colombo (2013) also found that bilinguals have a better focus than monolinguals. Because their brains often switch from one language to another, it makes them more able to concentrate and remember important information during class learning. And that is why bilingualism is said to be able to influence a person's brain development, including in terms of cognitive and academic development.

Based on the explanation above, the researchers wanted to examine the measurement of the level of bilingualism and its effect on a person's academic performance. Therefore, we use students in the 4th semester of the English department, considering that they have studied English for almost two years.

Literature Review

Defining bilingualism measurement

Bilingual in general is viewed as the ability of someone with equal mastery of two languages they spoke (Wei, 2000). Bilingual individuals can differ in numerous ways (Kaushanskaya & Prior, 2014; Luk & Bialstok, 2013), including their primary or strongest language, the language they learned first, their competence in each language, their age when they began speaking for each language (Age of Acquisition or AoA), the circumstances in which they learned each language (at home, school, daycare), and the frequency with which they use each language (Beatty & Titone, 2021; Marian, et al., 2007; Martin, et al., 2020). Therefore, it is crucial to have a complete understanding of bilingual participants' language fluency. In practical settings, it is essential to have an understanding to what extent of an individual is bilingual. To do so, a bilingual measurement is needed.

Measuring bilinguals refers to the process of categorizing and assessing an individual's level of proficiency and their language background in two or more languages (Baker, 2011). Several studies have shown ongoing discussion and debate about how to accurately measure bilingualism. The results of these studies have often been inconsistent, and influenced by several factors, including the age at which the language was learned, how it was learned, the person's history of using the language, and their level of proficiency and dominance in the language. (Marian, et al., 2007). The lack of unified assessment tools in bilingualism research has further compounded these inconsistencies. Therefore, there is a need for a comprehensive, valid, and reliable language self-assessment tool that can be used consistently across different bilingual populations and settings.

However, the majority of them focus specifically on three major categories of concepts, including: language proficiency, language background, and language dominance. (Martin, et al., 2020). Peña, Bedore, and Torres (2021) summed up various methods for assessing bilinguals, including language proficiency tests, self-reporting, language background or language experience, and language dominance tests.

Bilingualism measurement: self-reports and standardized tests

A number of measurement methodologies have been proposed in previous studies that will be described as follows. Firstly, Marian et al. (2007) developed the Language Experience and Proficiency Questionnaire (LEAP-Q) to address the need for bilingualism measurement tools. The LEAP-Q is a self-report assessment available in both paper-and-pencil and electronic formats that measures language proficiency, Age of Acquisition (AoA), language exposure, and other aspects. Their study revealed that the questionnaire is valid and reliable to be applied for assessing bilingual's language profiles.

In the other hands, Sabourin et al. (2016) proposed an alternative choice to assess several variables including AoA, self-rated proficiency, language dominance, and language manners using the Language Background Questionnaire (LBQ). They also offer a shorter version of this questionnaire, providing researchers with the flexibility to use measures that match the depth and scope of their study population and subject.

Anderson, et al. (2018) developed and validated the Language and Social Background Questionnaire (LSBQ), which assesses the degree of bilingualism from different linguistic backgrounds, including English-dominant monolinguals, bilinguals, and multilinguals. They suggested that evaluating multiple aspects of language experience, proficiency, and use can determine whether an individual is bilingual or not. The LSBQ assessment tool, like other available tools, utilizes self-report and self-assessment. However, it overcomes the limitations of self-report by providing multiple questions that contains specific and detailed inquiries about language usage in specific contexts with specific individuals. However, it cannot be applied for assessing language use in cases where individuals speak more than two languages, i.e., multilingualism.

Since there is currently no standardized approach for measuring language dominance, another study by Solís-Barroso & Stefanich (2019) explores the degree of language dominance in young individuals who are bilingual in Spanish and English, by using four different types of assessments for language dominance. However, the findings show that particular instrument was not correlated with the others. It implies that the using of certain language dominance assessments cannot be compared with each other because they are not measuring the same variable.

In addition to self-rating assessment, some researcher also investigates the language background and/or language history which possibly depicts bilingual's language dominance. Li, et al. (2006) examined language history of bilinguals through a web-based questionnaire named Language History Questionnaire. It suggested that the bilingual's Age of Acquisition (AoA), length

of language-learning, and self-reported proficiency are contributed to influence bilingual's language dominance. This is the same with Birdsong (2014) and Martin et al. (2020) that any aspect related to bilinguals' language history is associated with bilingual's L2 acquisition. However, Lim et al. (2008) found different result. Their analysis of English-Mandarin bilinguals' self-report in the variable of language experience, including age of initial exposure, duration of formal education, and duration of exposure, only had a minor impact.

In the most recent study, Marian & Hayakawa (2021) proposed a new framework for measuring bilingualism, which includes three key dimensions: language proficiency, language use, and cognitive control. They developed the Bilingualism Quotient (BQ), which aims to provide a more holistic and valid measure of bilingualism. The BQ combines measures of language proficiency, language use, and cognitive control, and uses a scoring system to generate a single score that represents an individual's level of bilingualism. It gives several potential benefits, such as providing a more comprehensive and accurate assessment of bilingualism, promoting bilingualism as a valuable asset, and informing language policy and planning.

Based on these reviews, self-ratings is the most frequently used in bilingual measurement, including Language Experience and Proficiency Questionnaire (LEAP-Q) (Marian et al. 2007); Language Background Questionnaire (LBQ) (Saborin, et al., 2016); and Language History Questionnaire (Li, et al., 2006). Although these tools differ slightly in the components they measure, they all aim to assess bilingual's language background and language proficiency between the two languages. Self-ratings are considered the most common way to assess bilingual's language dominance as well, since they allow for the assessment of multiple components of language dominance, such as frequency of use and language attitudes, which may not be adequately assessed through objective measurement (Gertken et al., 2014). However, one limitation of self-ratings is that they rely on subjective judgments, which may introduce bias.

Even with various helpful resources for characterizing and measuring bilingualism, researchers in the current study still wonder how they can acquire a single score that encapsulates the extent of bilingualism in English language learners and its influence on their academic performance.

Method

Research design

The chosen research design for achieving the research question was qualitative method, which applied descriptive qualitative. The concept of qualitative research, as explained by Ary (2010), is based on the analysis of data in the form of words or pictures, rather than statistical information. Through this method, researchers can obtain a more descriptive and analytical understanding of human behavior in specific situations, while also exploring the subjective perspectives of those involved. The aim is not only to explain, but to deeply understand the meaning behind interactions and behaviors. By utilizing this method, researchers are able to gain a richer and more nuanced understanding of the complex phenomena that make up human experiences.

Time of the study

The research was conducted on May 3rd and 4th, 2023, on fourth-semester students in the English Language Education Study Program at Universitas Negeri Makassar.

Research subjects

The subjects involved English Language Education students on fourth-semester, Universitas Negeri Makassar. In this research, total samples are 10 students of all students fourth

semester of degree students English Language Education Study Program at Universitas Negeri Makassar. In order to get sample, the researchers used simple random sampling technique. Simple random sampling from population is carried out randomly regardless of the strata in that population (Sugiyono, 2017).

Research instruments

In order to collect the data, the researchers use two instruments. They are questionnaire and interview. This instrument used to obtain the depth and rational data and the answer to the research questions in the problem statement.

Questionnaire

To collect data, the researchers used questionnaire. A questionnaire is a written set of questions given to a specific group of people to collect information. It's an effective tool to gather data that's difficult to measure directly, such as subjective experiences. Researchers used questionnaires to obtain valuable information that helps them make informed conclusions. In this research, researchers used a questionnaire based on the students' measurement about bilingualism developed by Baker (2001) from his existing materials based on the book "Foundations of Bilingual Education and Bilingualism 3rd Edition". The questionnaire contains of statements about students' measurement about using bilingual language in their daily life.

Interview

To get more specific data, researchers use interview as an additional instrument to complete data that cannot be obtained from the questionnaire and want to be achieved by the researcher.

The researchers made the interview questions by generating four questions from existing materials based on the book "Foundations of Bilingual Education and Bilingualism 3rd Edition" by Baker (2001).

Data analysis

After collecting the data, the researcher analyzed the data using the following steps:

Questionnaire

- 1) Classifying all the collected data based on statement of the problems.
- 2) Analyzing the result of the questionnaire and interview.
- 3) Describing the student' measurement about using bilingual language in their daily life by interpreting the data and making conclusion.

Interview

The data from the interview were analyzed as follows:

- 1) Collecting the raw data;
- 2) Transcribing the recording;
- 3) Drawing conclusion.

Finding and Discussion

Measurement of bilingualism

To measure the level of Bilingualism of the respondents, the researcher used questionnaire as one of the instrument. The result of the questionnaire can be seen at the following table:

Table 1. Result of the questionnaire
Which language do YOU use with the following?

	S1	S2	S3	S4	S5
Watching TV/Videos/DVDs		10%	30%	60%	
Religion			10%	40%	50%
Newspapers/Comics		10%	30%	50%	10%
Records/Cassettes/CDs			40%	30%	30%
Listening to Radio/music	10 %	10 %	60%	10 %	10 %
Shopping			20%	10%	70%
Playing Sport		30%	20%		50%
On the Telephone			20%	30%	50%
Reading books			40%	60%	
Earning money			20%	20%	60%
Club/societies			10%	40%	50%
Other leisure activities			20%	50%	30%

S1: Always in English

S2: In English more often than Indonesian

S3: In English and Indonesian equally

S4: In Indonesian more often than English

S5: Always in Indonesian

A total of ten (10) students of the fourth semester on the English Language Education Study Program of Universitas Negeri Makassar were taken as respondents in this research. The results of this study shed light on the complex nature of bilingualism among young people, highlighting the nuanced ways in which language use can vary depending on the activity. The findings indicate that there is no single "correct" way to be bilingual, as individuals may have different preferences for which language they use in different situations.

For example, when it came to watching TV/videos/DVDs, the majority of respondents reported using Indonesian more often than English. This suggests that respondents may have felt more comfortable and familiar with using Indonesian when engaging in this type of media consumption. Similarly, when it came to religion, the majority of respondents reported using Indonesian all the time. This may reflect the fact that religion is often closely tied to cultural and linguistic traditions, and may thus be more commonly associated with the use of Indonesian in this context.

On the other hand, when it came to reading books, a higher percentage of respondents reported using English and Indonesian equally. This could suggest that respondents may have found it easier to access and understand books written in English, or may have simply preferred the content of English-language books over those written in Indonesian. Similarly, when it came to playing sports, a higher percentage of respondents reported using Indonesian more often than English. This may reflect the fact that sports are often highly localized and may involve terminology and language specific to a particular culture or region.

The findings of this study align with Gertken et al.'s (2014) assertion that self-ratings are the most common way to assess bilingual language dominance, as self-ratings allow for the assessment of multiple components of language dominance that may not be adequately assessed through objective measurement. In this study, the language dominance of the ten respondents was assessed through self-report measures of language use in various contexts, such as watching

TV/videos/DVDs, practicing sports, religion, and reading books, which is highly related on the multiple components of language dominance, in this case, frequency of use of both Indonesian and English Language on those activities.

Overall, these result of the study highlight the importance of understanding the diverse ways in which individuals use language in their daily lives. The study's results indicate that respondents felt more comfortable using Indonesian when engaging in media consumption, reflecting their familiarity with the language. On the other hand, respondents reported using English and Indonesian equally when reading books, suggesting that they found it easier to access and understand English language books.

Effect of bilingualism on academic studies

For the next instrument, specifically interview which used to get more specific data about the effect of bilingualism on the respondents' academic studies. The findings of the study were derived from interviews conducted with ten respondents, who were asked various questions relating to their proficiency in using English in different situations, their experience in learning other languages, the advantages of being bilingual in their academic studies, and whether being bilingual helped them in their English language studies.

The respondents' responses to the first question showed that their comfort level in using English varied depending on the situation. While some felt comfortable using English in academic settings, others were less comfortable due to their perceived lack of skills.

For example, respondent 8 stated that "I'm much comfortable using English in academic situations because I'm learning and practice with the other learners, it's a fun thing". Meanwhile, respondent 10 stated that "I feel uncomfortable, because I feel that my English skills are still lacking and that makes me feel less confident in speaking English." This result suggests that there is a need for more support to help students who struggle with using English in academic settings, particularly those who are bilingual.

In terms of the respondents' experience in learning other languages, only a few of them had studied other languages besides Indonesian and English, such as respondent 1 who learned about Korean language on the beginner level. While this finding is not surprising given the limited foreign language education in Indonesia, it highlights the need for more opportunities for students to learn additional languages.

The majority of the respondents believed that being bilingual had provided advantages in their academic studies, such as better academic studies, stronger cultural connections, and improved communication with people from different backgrounds. such as respondent 4 who stated "multitasking and memory improvements, stronger academic studies, and deeper cultural connections". These advantages suggest that being bilingual can be beneficial for students in terms of their academic and social development. Interestingly, one respondent did not think being bilingual provided any advantage in their academic studies, indicating that bilingualism may not be universally advantageous for all students.

Finally, most respondents believed that being bilingual had helped them in their English language studies, allowing them to understand English more easily, communicate with international friends, and access information from various sources. for example, respondent 7 stated that "Of course, apart from the fact that I majored in English. English helps me to expand my knowledge through books or journals that I study because most of them are in English". However, some respondents did not think being bilingual had helped them in their English language studies, indicating that the benefits of bilingualism may not be consistent across all students.

In summary, the findings from this study suggest that being bilingual can provide advantages in academic studies, such as better academic studies, stronger cultural connections, and easier language learning. However, students' comfort level in using English in academic settings and their individual experiences with bilingualism may vary. The results of this study may have implications for educators and policymakers in developing strategies to support bilingual students and promote language learning.

Conclusion

Based on the findings and discussion of the previous chapter, the researchers concluded that: there is no one correct way to be bilingual, as individuals may have different preferences for which language they use in different situations. Respondents reported using Indonesian more often than English when watching TV/videos/DVDs and practicing sports. They used Indonesian all the time when it came to religion. In contrast, they reported using English and Indonesian equally when reading books. The study also explored the effect of bilingualism on academic studies through interviews with the respondents. The majority of respondents believed that being bilingual had provided advantages in their academic studies, such as better academic studies, stronger cultural connections, and improved communication with people from different backgrounds. Most respondents believed that being bilingual had helped them in their English language studies, allowing them to understand English more easily, communicate with international friends, and access information from various sources.

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