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Monolinguals, Multilinguals and Size of Receptive Vocabulary

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ABSTRACT [ENGLISH/ANGLAIS]

It is said that 70% of the world's population is thought to be bilingual or multilingual. Thus, this paper responds to the need for research on linguality. The aim of this study is two-folds: first, to determine the difference between receptive vocabulary size of mono and multilingual undergraduate students in India. Second, it was also intended to find out the effect of gender on the size of vocabulary. The results of the two-way Analysis of variance (ANOVA) at the $p < .001$ reiterated that multilingual participants had a vocabulary size advantage. Likewise, the size of vocabulary of females was higher in comparison to their males' counterparts.

Keywords: Receptive vocabulary, vocabulary size, onolinguals, ultilinguals

RÉSUMÉ [FRANÇAIS/FRENCH]

Il est dit que 70% de la population mondiale est pensé pour être bilingues ou multilingues. Ainsi, ce document répond à la nécessité pour la recherche sur linguality. L'objectif de cette étude est de deux ordres: d'abord, de déterminer la différence entre la taille du vocabulaire passif des mono-et multilingues étudiants de premier cycle en Inde. Deuxièmement, il était également destiné à savoir l'effet du sexe sur la taille du vocabulaire. Les résultats de l'analyse les deux sens de la variance (ANOVA) à $p <.001$ rappelé que les participants multilingue avait un avantage de taille du vocabulaire. De même, la taille du vocabulaire des femmes était plus élevé en comparaison à leurs homologues mâles.

Mots-clés: Vocabulaire passif, la taille du vocabulaire, onolinguals, ultilinguals

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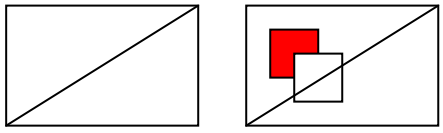
INTRODUCTION

It is said that 70% of the world's population is thought to be bilingual or multilingual [1]. This means that it is a norm and a large percentage of people in the world are acquiring at least another language aside from their first language, points to the importance of the topic and the need for doing research in this area.

Despite the importance of the topic, still there is not a straightforward definition for the terms bi/multilingualism and the definition varies from situation to situation. The two terms of bilingualism and multilingualism have interchangeably been used to refer to knowledge or use of more than one language by either an individual or a community [2] More specifically, bilingualism can be defined differently based on diverse purposes. For some group of researchers the maximal definition is proposed, it is the ideal of equal knowledge in the two languages. May be the word ambilingualism can better define those group [3] The opposing idea is based on the idea of use. For example if a tourist can get successfully a cup of tea in Germany by saying Ein Kaffee is a bilingual [3]. In other words, it can be said that bilingualism can be ranged from acquiring "native-like" control of both languages to reproducing meaningful utterances in another language.

The following two diagrams regarding the degree of bilingualism adapted from Hakuta and Diaz [4] clears the point. The first rectangle is an ideal situation where a balance line is drawn between L1 and L2, where the vertical line from left represents L1 ability and the bottom horizontal line is L2 ability. The next triangle with the two rectangles in between shows the two hypothetical samples, colored and colorless, where the colorless sample represents a group of individual that is more balanced i.e. they have nearly equal commands in both languages. Still one can locate individuals within the sample spaces and observe different degree of bilingualism.



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As a result, as stated in [3] to avoid this dichotomized use of bilingualism, the neutral multi-competence has been introduced to refer to knowledge of a second language. Putting aside the issue of social and individual bilingualism, the most common classification of bilinguals is as follows [5]:

1) Simultaneous bilinguals: are those bilinguals who are exposed to two languages from birth since they are born into a community that is bilingual. As a result they learn two languages as first languages.
2) Receptive bilinguals: understand two languages but express themselves in one language only.
3) Sequential bilinguals: refers to learning one language after establishing another one. For instance, when the child is exposed to one language in the home and another one at school. This type of bilingualism is also referred to as second language acquisition.

Another important issue regarding linguality to be considered is distinguishing between societal and individual bilingualism, since whether or not a country is officially bilingual has little to do with whether an individual is bilingual or whether that country has many bilingual individuals. And this situation is met well in India where individuals are bilingual because they live in bilingual regions i.e. either their home language is not the same as their school or business language or they grow up in homes with two languages. According to the Census of India (1961) there are more than 18 official languages used in India and more than 1652 mother tongue spoken there. Bayer [6] described India in this way:

Diverse and united India is complex with many cultures and faiths, way of life, dress and food habits, tradition and rituals. The different religions of Hindu, Buddhist, Jain, Sikh, Muslim, Christian, with a variety of sects, and varying tribal religious beliefs are like petals of one flower. This diversity extends over to Indian languages as well.

Literature is full of works done in the area of lingualism with great deal of fragmentation and inconclusive results and a lot of riddles in this field. Some studies suggested that bilingualism was associated with negative consequences for bilingual groups compared to monolingual counterparts such as academic retardation, lower IQ, being socially maladjusted [7].

Some more studies concluded that bilingualism enhance the cognitive and social growth of children [8, 9]. According to McCarthy [10] bilinguals have advantage in cognition and emotion since they deal with problems using systems of two languages and views of two cultures. Learning two languages helps mental flexibility, concept formation and more diverse set of mental abilities. Further, [8] hypothesized that in comparison to monolingual children, bilingual children have an advantage in the control of linguistic processing needed for metalingusitic problems.

Amid these controversies regarding lingualism measuring size of vocabulary of monolinguals and bilinguals is a question of interest. Though, it is another vexed issue indeed. The work of Doyle et al. [11] on bilinguals showed that on test of vocabulary bilinguals frequently seemed to perform at lower levels in comparison to monolinguals. Allman [12] justified that since bilingual children have to learn two different labels for everything this reduces the frequency of a particular word in either languages. Even in another experiment with college students it was revealed that the bilinguals had lower receptive and expressive English vocabularies than their monolingual peers [13]. The pattern was consistent with that found by other researches such as Ben Zeev [14] to name but a few.

In contrast, other researchers like Allman [12] and Bialystok [15] expressed that when vocabulary scores of tests in both languages are combined the vocabulary of bilinguals equals or exceeds that of monolingual children. In an experiment done by [12] with preschool children it was illustrated that when only the English receptive and productive size of vocabulary was measured, the English monolingual group performed better than bilingual group. The researcher then concluded that "young bilinguals lag behind their monolingual peers in the size of their English receptive vocabulary ". As a result, the researcher concluded that a smaller English productive vocabulary size for bilingual makes sense since productive vocabulary development closely follows receptive vocabulary development. While considering the size of vocabulary the researcher concluded that bilinguals have a vocabulary size advantage revealing the benefits of bilingualism even during preschool years [12].

Gender as a variable in individual differences has received little attention in vocabulary research [16] and "there is a gap concerning studies that focus on the relationship between receptive vocabulary knowledge and individual differences such as sex variables" (ibid). In different studies conducted by researchers there is no consensus regarding the superiority of each gender. Different researchers provided evidence of difference in diverse areas of vocabulary strategy use, choice of word,

productive vocabulary in written compositions and productive vocabulary in lex30, word recognition and recalling task and word knowledge in favor of girls [16] then brought some counter example where boys in the 8th grade of Dutch primary education outperformed girls in English word knowledge. Hence, another central purpose of this article is to determine whether this trend will also appear in receptive vocabulary of monolingual and multilingual males and females.

With these considerations in mind, the presents study deals to reject or accept the following null hypotheses.

Null hypotheses

1) Monolingual and multilingual students do not differ significantly in the size of receptive vocabulary.
2) Male and female students do not differ significantly in the size of receptive vocabulary.
3) There is no significant interaction between linguality and gender in the size of receptive vocabulary.

MATERIALS AND METHODS

Participants

The participants recruited in this study were 133 undergraduate college students from a randomly selected English medium college (Mahajana's college) in Mysore Karnataka state, India. Their age ranged from 18-29 with the mean of 20.77 and the SD of 2.46. The learners attended intact class of General English 2 at the beginning of the Fall semester of the academic year of 2010-2011 from different fields of study, such as Computer Science, Psychology and Biotechnology. All had passed General English I in the previous semester. The general English textbooks were prepared by a committee of teachers and approved and published by the University of Mysore. All colleges utilize those books; therefore, the sample was homogeneous in respect of the medium of instruction and type of instruction.

Furthermore, they were asked to write the name of home language or languages. There was an approximately equal representation of males and females in each group. In all the there were two groups in the study as follows:

Monolingual (34 male, 32 female): This group contains those participants for whom English was not their native/first language, and also ratted themselves as monolingual

Multilingual (36 male, 31 female): This group contains those for whom English was not their native/first language, and also ratted themselves as monolingual.

For both groups English, the associate official language, was not considered as an additional language.

Instruments

Biodata questionnaire

To elicit information about the participants, a background questionnaire was developed by the researcher. It consists of some questions such as the participants' name, age, gender, linguality status as well as the name of the languages they know and field of study.

Receptive vocabulary level test

To measure the size of receptive vocabulary of the participants vocabulary level test (VLT) was used in this study. The employed VLT was one of the equivalent forms of the original one revised and validated by Schmitt et al. [17].This test has been used in different studies, such as those by Laufer,[18]; Schmitt and Meara, [19] ; Cobb,[20].

The test embodies five parts, representing five levels of word frequency in English namely, 2,000, 3,000, 5,000, Academic and 10,000. According to Nation [21], the 2000- and 3000-word levels contain the high frequency words that all learners need to know in order to function effectively in English. The 5000-word level represents the upper limit of general high-frequency vocabulary that is worth spending time on in class. In other words, it is in the boundary of high and low frequency words [21] Words at the Academic level should help students in reading their textbooks and other academic reading material and finally the 10,000-word level covers the more common lower-frequency words in the language (This level was not used in the study simply because it was far beyond the vocabulary level of many learners).

There were 10 groups of words with 6 in each and the subjects were required to pick out three from the 6 words given in each group to match relevant explanations on the right respectively.

Procedure

First the students' biodata questionnaire , then the VLT were distributed in the same sitting among the students of each intact class during the class time. The class teachers were invited to help carry out the investigation and test during the classroom teaching time to avoid the participants' casual answering. Clear instructions were given both orally and in written form at the beginning of

the class. The students were given enough time to finish the test.

Then, all the questions were marked by hand and the participants were divided into monolingual and multilingual groups carefully based on their answers to linguality question. Appropriate statistical tools, i.e. two-way ANOVA were used in the analyses of date the results of which are shown in the ensuing part.

RESULTS

Table 1: This Table shows the mean scores of vocabulary size of males and females in monolingual and multilingual groups

Linguality	Gender	Mean	S.D.	N
Monolingual	Male	74.00	20.79	34
	Female	84.43	24.49	32
	Total	79.06	23.09	66
Multilingual	Male	84.05	26.99	36
	Female	102.93	8.50	31
	Total	92.79	22.56	67
Total	Male	79.17	24.53	70
	Female	93.53	20.53	63
	Total	85.97	23.76	133

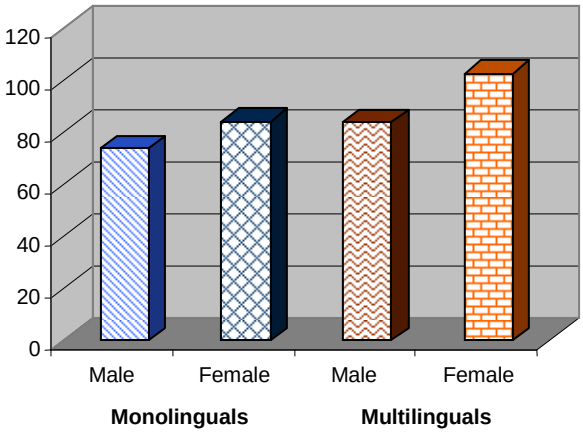
Table 2: This table shows the results of two-way ANOVA for mean score of vocabulary size

Parameters	Source of variation	F value	D.f.	*p*
Linguality/ gender	Between linguality (A)	14.39	1, 129	.000
	Between gender (B)	15.17	1, 129	.000
	Interaction (A x B)	1.25	1, 129	.264

As indicated in the above table mono- and multilingual students differ significantly in the size of vocabulary since the observed F Value of 14.39 was found to be highly significant at the p <.001 level. From the mean values it is clear that multilingual students had significantly higher scores than monolingual students (92.79 versus 79.6). Thus, the first null hypothesis regarding the size of vocabulary and linguality is not accepted, and we conclude that the vocabulary size of multilingual students is higher than that of monolingual students..

Similarly, the result of two-way ANOVA showed that there was a highly significant difference between male and female students (F= 15.14, p < .000). As illustrated in the mean table the mean score of females was higher than that of males (93.53 versus 79.17). Hence, the second null hypothesis concerning gender and size of vocabulary is rejected in favor of females. The same conclusions are shown graphically in the following figure.

Figure 1: This figure shows mean scores of vocabulary size of monolingual and multilingual males and females



Generally and irrespective of being mono or multilingual, the mean score of females was higher at p <.001 than that of males in both groups (79.17 vs. 93.53). It can be seen from the above figure that the mean score of mono/multilingual females was higher than the mean score of mono/multilingual males (84.43 vs. 74 and 102.93 vs. 84.05). Furthermore, by comparing the total mean scores of the monolingual and multilingual groups, it was clear that size of receptive vocabulary of multilingual participants was higher than their monolingual counterparts (92.79 vs. 79.06) at the p <.001. Likewise, multilingual females enjoyed higher receptive vocabulary than monolingual females (102.93 vs. 84.43) and in the same vein, though lower than females; multilingual males had higher score in comparison to monolingual males (74.00 vs. 84.05) with the p <.001.

The third hypothesis sought to determine the interaction of the lingulaity and gender. The result of the two-way ANOVA depicted that the interaction effect between linguality and gender was not significant (F= 1.25, p = .264). This implied that the size of receptive vocabulary of male and female students was the same irrespective of the lingual background they had.

DISCUSSION

The results of the two-way ANOVA reiterated that the size of multilingual participants was higher than that of monolinguals. Knowing two or more languages brings advantage of being familiar with two different cultures, thinking and communicating with a wider variety of people. The results correspond to other researches that showed linugality has positive effects on different aspect of language viz, third language [7], metalingusitc ability [8], cognitive growth and social development [9], general English proficiency and grammatical judgment [2[. Hence, the findings can match the conclusion of Allman [12] and Bialystok's [22] suggestion that bilinguals have a greater total vocabulary than monolinguals. This result that multilinguals have a vocabulary size advantage seems reasonable because they have access to and participate in communication events in two communities as opposed to their monolingual counterparts.

The findings have wide pedagogical implications since a positive correlation can be reveled between this greater vocabulary size and essay quality, reading comprehension [23] and strategy choice such as using dictionary for word learning and noting down usage [24]. Therefore, it might be a good idea to teach practice and test vocabulary consistently and systematically.

With respect to the second null hypothesis i.e. gender and size of receptive vocabulary it was found that the size of receptive vocabulary of females was higher than that of males. This is compatible with Jimenez and Gallego [16] who proved gender differences in size of vocabulary in favor of females.

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CONFLICT OF INTEREST

No conflict of interest was declared by the authors.

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