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SENTENCE PROCESSING IN BILINGUALS

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ABSTRACT

Twenty students in the age range of 9 - 14 years, taken from public and private schools, served as subjects. Students from public school were taken as "balanced" bilinguals and those from the private school as "dominant" bilinguals. The subjects listened to tape recorded sentences embedded in white noise. Fifteen sentences were presented in English and fifteen in Bette. Subjects were asked to recall and write down the sentences as they heard. Results showed no difference in the recall of Bette sentences in the two groups. Recall of English sentences of "balanced" bilinguals were comparatively higher. Verb recall in Bette was much higher than subject and predicate/object categories for both samples. Recency factor was found to be predominant for Bette and primacy factor was predominant for English "Balanced" bilinguals were found to be better in every aspect of sentence recall

INTRODUCTION

A good number of studies have been conducted on sentence-processing with a view to examine different strategies the subjects make use of in comprehending and processing language (Lambert, 1972; Magiste, 1977). It is argued that the deep structure of a prose passage or sentence processing is not only resistant to forgetting but also serves the purpose of mnemonic device in restructuring the learnt material for recall (Ugal 2001; Ukpong 1999). Most of these studies have been conducted on monolinguals for sometime. However, great deal of attention has been given to processing of sentence by bilinguals. Ervin & Osgood (1965) have pointed to two different concepts in the interpretation of bilingualism: (1) The 'Compound' bilingualism and (2) 'Coordinate' bilingualism.

The 'Compound' system could be developed through experience-infused contexts as with vocabulary training in schools, or where the same family members use two languages interchangeably to refer to the same environmental events. This system would lead to the development of a "balanced" bilingual, who uses the two languages alternatively, not always with equal proficiency, but presumably in the same socio-cultural context. The 'Cordinate' system could be developed through experience in the different linguistic communities where languages are rarely inter-changed. This system would lead to the development of 'dominant' bilingual who will be more proficient in the native language. The 'balanced' bilingual shows similar responses in both native and second language and the 'dominant' bilingual, different in the two languages.

Lambert (1972) has worked with American undergraduate students majoring in France, and French people, to determine how each one processes the language. He found that the 'balanced' bilingual displays more similarity between its French and English patterns of associations than the 'dominant' bilingual. Magiste (1977) has tried to establish differences in recall of abstract and concrete sentences in

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KEY WORDS: Sentence Recall, balanced/dominant, bilinguals

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bilinguals. The results provide evidence that 'dominant' bilinguals recall, both types of sentences, significantly more in their dominant language.

Considering such findings, the present study is aimed at investigating the difference in recall responses of Bette and English sentences by 'dominant' and 'balanced' bilingual children in the age range of 9 to 14 years. Children in this age range were taken because they were still in the process of acquiring the language rules and, therefore, were likely to give more information regarding the processing of two languages.

METHOD
SAMPLE

Children coming from public School acquire a 'Coordinate' language system, where they use mainly the 'native language' at home and learn the 'other language' at the school level. There is a dominant use of the 'native language' by them in most socio-cultural contexts. They have, therefore, been called the 'dominant' bilinguals.

Children coming from Private Schools acquire a 'compound' language system using both the native and the 'other' language at home and in school, and use the two languages interchangeably in all socio-cultural situations; they have, therefore, been called 'balanced bilinguals.' Keeping in view the above material, two samples were chosen. One from the Public Schools and the other from the Private Schools.

20 children in the age range of 9 to 14 years served as subjects, 10 were from Public Schools and the other 10 from Private Schools. All subjects were native speakers of Bette, knew and used English also.

Fifteen Bette and fifteen English sentences, of every day use, varying in length of 4 to 9 words and number of transformations were selected. They were all simple sentence structures having a single subject-predicate pattern. The level of transformations was judged by linguists. They were asked to judge the sentences as being non-transformational, having one transformation only, and those having multiple transformations.

These thirty sentences were superimposed on white noise of uniform intensity and were tape-recorded in a male voice, such that the signal to noise ratio for each sentences were presented to the subjects through ear plugs.

The subjects were given the following instructions in Bette. "A number of Bette/English sentences will be presented serially against background of white noise. Listen to them very attentively. After each sentence an interval of 30 secs will follow during which you are supposed to write down what you heard."

RESULTS

Table 1 presents the results of chi-square test for the average number of complete sentences recalled in the two languages by the two groups. The recall of Bette sentences was significantly higher than that of English sentences (p < .005). The two samples did not differ in the recall of Bette sentences. The Private School children's recall of English sentences was significantly higher (p < .025) than that of the Public School children

On the basis of the recall accuracy of each sentence the Private School subjects have been found to perform consistently better than the Public School subjects in both languages. Recall accuracy of each sentence was better in Bette than in English for both the samples

Table 2 presents the recall on the syntactic constituents of a sentence. The recall of the "Subject" is higher than that of the 'Predicate' in both the languages and for both the samples. But, the percentage of recall for both 'Subject' and 'Predicate' is higher in the case of Private School children. As for the "Verb," percentage of recall was higher than either the "Subject" or !Predicate/Object" in the case of Bette for both groups and was low in the case of English in both the samples

The data were further analysed for comparative recall of each word in a sentence for all sentences average across subjects (10 in each group). The percentage of recall of each word ranged from 58 p.c. to 100p.c. in the case of Private School children for Bette, and from 53 p.c

TABLE 1

CHI SQUARE VALUES OF DIFFERENCES IN BETTE AND ENGLISH FOR PUBLIC SCHOOLS PRIVATE SCHOOLS AND PUBLIC VS. PRIVATE SCHOOLS

Sample	Language	X^2 (df-1)	P*
Public Schools	Bette vs English	15.38	< .005
Private Schools	Bette vs English	7.41	< .005
Private Schools vs Public	Bette	0.49	NS
Private vs Public	English	4.57	< .025
Private vs Public	Bette vs English	4.19	< .25

* One tailed

TABLE 2

PERCENTAGE OF RECALL OF THE "SUBJECT", "PREDICATE" AND "VERB" IN ENGLISH (E) AND BETTE FOR BOTH SAMPLES

Sample	Language	Subject	Predicate	Verb
Public Schools	E	18	8	38
Public Schools	B	64	57	72
Private Schools	E	57	36	31
Private Schools	B	73	53	84

to 90 p.c. in the case of Public School children for Bette. For English language the range was between 25 p.c. to 63p.c for the Private School children and 0 p.c to 37p.c for Public School children (see fig. 1).

DISCUSSION

The major findings clearly shows that the "balanced" bilinguals are better in recall accuracy in both languages than the dominant bilinguals. The 'balanced' bilinguals used more of 'compound' language system and therefore, were found to be doing significantly better in both the languages.

The number of correctly recalled Bette sentences is not different in both samples, but the Public School children are found to be significantly higher in recall accuracy in English which may be taken to show that 'balanced' and 'dominant' bilinguals are equally proficient in their 'native' language.

The finding that the recall of the 'Verb' is significantly higher than either the 'subject' of the 'predicate/object' in Bette and lower than the two categories in English may be taken to have an interesting syntactic implication. The verb in Bette
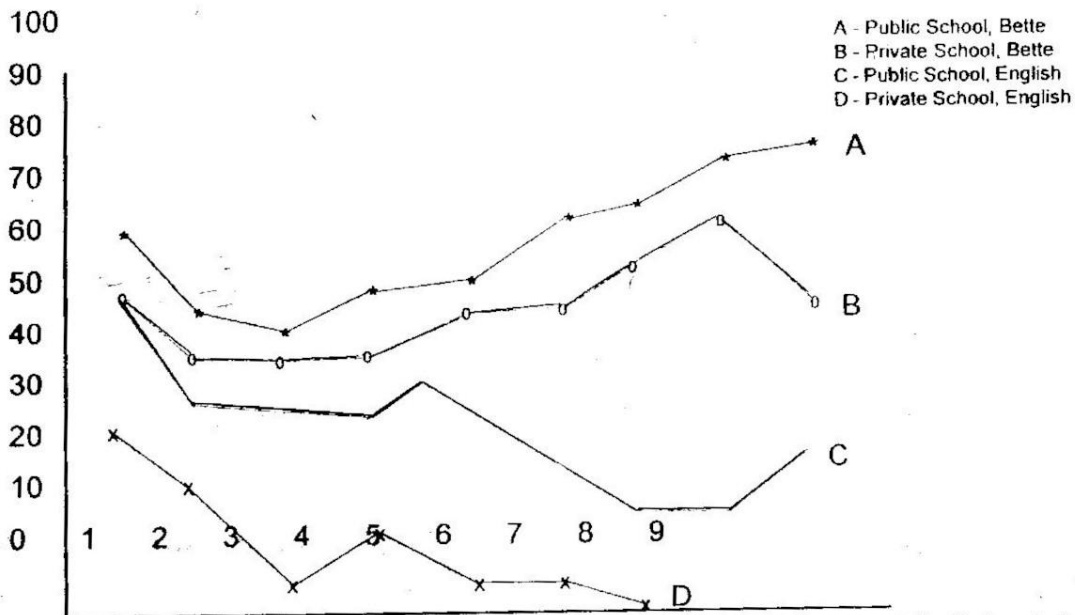
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Fig. 1 Comparison of the recall ability of each word for Private and Public Schools in both languages.

invariably always occurs at the end of the sentence and, therefore, is remembered and recalled more often than the words. In English the verb occurs either after the noun or near the object/predicate. The results indicate that due to the dominant recency effect the verb in Bette is recalled much better than syntactical categories.

It may, therefore, be concluded that the 'balanced' bilinguals are better in every aspect of sentences-processing than the 'dominant' bilinguals. But in both cases the recall of the 'native' language is significantly higher than the other language.

CONCLUSION

To meet our contemporary society's demand and for the mere fact that the world have become a global village, it is recommended that Nigeria should as matter of national policy introduce. besides English language an indigenous national language (balanced bilinguals). This national language will help alleviate suspicion and ethnicity among our nation's polity. Finally, if implemented appropriately, it will accord our younger generation a greater integration and consciousness among themselves as citizens of this country and that of the world in general.

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