

AN EMPIRICAL STUDY INTO COMPLETE-BEGINNER SIBLINGS LEARNING AURAL AND WRITTEN ENGLISH

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ABSTRACT. *This study was conducted into sibling association in children learning English as a foreign language at beginner level at primary school. The 35 participants were selected on the basis that they had no prior knowledge of English according to the pre-test and the base-line data. The fact that the participants were total beginners was useful not only in indicating clearly their progress on English tests, but also in pointing to any association with sibling help and/or knowledge of English. The children were all Spanish, and over one school year they completed a questionnaire on their backgrounds and on that of their families, and did four listening-comprehension tests of English and four tests of written English. By means of a Repeated Measures MANOVA (Multiple Analysis of Variance), data about siblings' help were analysed together with academic achievement in English. Results indicate which variable was more closely associated with academic achievement: the siblings' knowledge, the number of times the siblings helped, the listening comprehension scores or the written test scores.*

Keywords: brothers' and sisters' help, academic achievement, repeated measures MANOVA (Repeated Measures Multiple Analysis of Variance), learning English as a foreign language (EFL).

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ESTUDIO EMPÍRICO SOBRE HERMANOS APRENDIENDO INGLÉS ORAL Y ESCRITO A NIVEL DE PRINCIPIANTE

RESUMEN. *Las variables bajo investigación relativas a este estudio indagaron en el conocimiento del inglés de los hermanos y en la ayuda aportada por estos. Esta investigación conectaba al mismo tiempo las variables con las notas de inglés derivadas a partir de cuatro exámenes escritos y cuatro de comprensión oral de inglés utilizados durante un año académico. Dichas notas provenían de alumnos españoles de un colegio español de primaria con un nivel de principiante. Además, estos alumnos rellenarían un cuestionario sobre antecedentes familiares y datos personales propios. De forma sucesiva, los datos fueron sometidos a un análisis de Medidas Repetidas de MANOVA (Medidas Repetidas de Análisis de Varianza Múltiple). Aquí se relatan las variables específicas que han revelado cifras estadísticamente muy significativas.*

Palabras clave: El conocimiento del inglés de los hermanos, la ayuda de los hermanos con el inglés, aprendizaje del inglés como lengua extranjera (AILE), rendimiento académico en el inglés, Medidas Repetidas de MANOVA (Medidas Repetidas de Análisis de Varianza Múltiple).

INTRODUCTION

It is astounding that the association between brothers' and sisters' learning and children's achievement has been so sparsely researched in the area of general education. In the area of foreign languages, the possible sibling connection has been investigated to an even smaller degree. However, the author of the research recounted in this paper was only interested in the experimental or quasi-experimental type – these being similar to her study. The review of the aforementioned literature can be found below, as well as the author's original empirical study.

1. REVIEW OF THE LITERATURE

Gregory (1998) stated that little research had been carried out into siblings, and as a consequence of her own study into reading ability, she found that Bangladeshi older siblings provided support that was closely adjusted to their younger siblings' learning stages. Because of this, she discusses the necessity of progressing away from the paradigm of parental involvement. She proclaimed this within the range of linguistic minority children in the United Kingdom.

Also in the field of second language acquisition, Puchner (1997) too recognises that although most educational approaches to family literacy acknowledge the

parents as a child's most important teachers, they fail to recognize the value of siblings. In his study of language skills of Southeast Asian immigrants in the United States, he found that literacy transfer typically occurred from sibling to sibling because of the inability of English limited parents' to help their children.

There seems to be an age limit where parents become less influential in academic life. Perhaps that is where the "significant others" take over as touched on by Sewell, Haller and Portes (1969). Loosely related to this are one or two studies on older children related to what were formerly called "reference groups" and more recently "significant others' influence" or SOI. These studies related peers and interpersonal influence to effects on school achievement and socio-economic ambitions (Woelfel and Haller 1971; Sewell and Hauser 1976).

Jordan (1983) scrutinized communication samples in Hawaiian family units. From watching children both at home and at school, she concluded that the two styles of instruction most favoured by the younger children were similar to those used by brothers and sisters. These were modelling (showing another how to do something) and intervention (establishing the right behaviour in someone else).

Brother and sister involvement has traditionally been measured in one of two ways, directly, or indirectly through perception. For example, straight from the participating siblings in question or via the perception that their brothers and sisters have of their other siblings' help. Both ways are equally respected and have a long tradition of use in many research fields. Among the researchers favouring the gathering of data via children's perception are Keith, Keith, Troutman, Bickley, Trivette and Singh (1993) or Grolnick, Ryan and Deci (1991).

In the field of first language acquisition, the role of siblings has also been considered vital. Siblings can act as both a model of knowledge plus as help with first language acquisition. A case study by Montgomery (1977) discovered that through the imitation of his/her sibling, the second child is provided with a model of conversational performance suitable, not only for the circumstances in progress, but also for future situations.

Oshima-Takane, Goodz and Derevensky (1996) suggest that the overheard conversations of caregivers and older siblings are important resources for second-born children. Volk (1996) found that in L1 activity settings, older siblings supplied an assortment of casual occasions for acquisition that were set in play and other consequential communication, whereas mothers and fathers occupied themselves more with teaching rather than play. Additionally, older siblings sometimes personified a different cultural type of teaching than did parents.

According to Ward (1971) in first language acquisition of the Afro-American children in the small community of New Orleans she observed that adults do not see children as people to speak with. Therefore, the older children automatically

take on the “teacher” input-role for language. In her research carried out in New Mexico, Zucklow (1989) found that older siblings gave explicit action models when younger offspring did not obey parents’ orders.

The study by Smith and Rotman (1993) looked into the aspects that promote early knowledge of literacy among preschoolers from a low socio-economic background usually considered to be academically at-risk in learning to read. Amongst these factors, it was revealed that an effective mother, older sibling, or grandmother was directly involving the young learner in written-language activities.

Trent, Kaiser and Wolery (2005) also found it beneficial to teach brothers and sisters to initiate communication strategies in siblings with late first language development. A study by Hancock and Kaiser (1996) on special education showed that children were able to teach siblings who were slower at language learning to use target expressions. Richard (1988) carried out her study with the elder brothers and sisters of children with Down syndrome. The former were profitably coached in order to develop the latter’s communication skills. This may open up the idea of drawing on older siblings’ help in other fields such as foreign language learning.

The research into the relationship between siblings and language is still in an embryonic form even in the field of first and second language acquisition. In the field of second and foreign language learning, sibling studies appear to be non-existent as far as the author is aware, and therefore this paper cannot provide a subsection on the literature concerning foreign language learning (EFL) but it will provide the original study set out below.

THE EMPIRICAL STUDY

2. METHOD

2.1. RESEARCH QUESTIONS

In the present study, we wanted to find out more about the relationship of siblings’ knowledge and help with English and school marks in the aforesaid school subject. The research questions incorporated two variables. The first variable was the *Perceived number of times brothers and sisters helped with English*. The second variable was the *Perceived knowledge of English on the part of siblings* which took into account if the siblings knew English or not. It was anticipated that each one of these variables would show a statistically significant and systematic relationship with academic achievement as measured by the English as a Foreign Language (EFL) listening comprehension and written tests. Phrased in an explicit way the research questions were: a) Does the first variable of Perceived number of times

brothers and sisters helped with English, show a statistically significant relationship with the marks on the English tests? And, b) Does the second variable of Perceived knowledge of English on the part of the siblings, show a statistically significant relationship with the marks on the English tests? In order to establish the normality of this sample of participants, the test of g intelligence was employed (Fazio and Stevens 1994). This test was also given to the pupils but the details of its results are not the object of attention in this article. For the present article's analysis with Repeated Measures MANOVA, the alpha level was set at $\leq .05$.

2.2. PROCEDURE

The participants were Spanish and approximately eight years' old. Thirty-five children of both sexes took part, 17 girls and 18 boys. They were complete beginners of English and had never formally studied the language before. The syllabus was precisely that laid out in Abbs, Worrall and Ward (1993) and as both syllabus and test were by the same authors and from the same volume they related perfectly to each other.

The aforementioned test of English (Abbs, Ward and Worrall, 1993) comprised two parts, a written and a listening comprehension section. This test is of a type specifically written for children as it includes pictures and illustrations. The written section consisted of vocabulary items and grammar up to and including structures of imperatives and the present continuous tense. These were contained in short stretches of discourse which required the pupils to write word or sentence answers. Listening comprehension test characteristics included word identification, listening to simple sentences and listening to a simple description and writing short one-word answers. All this is in line with the age of the pupils and of starting out in English as a foreign language.

For the same test the inter-rater reliability figures were extremely acceptable, Pearson correlation coefficients (r) were .985 and .978 for the written tests and the listening comprehension tests, respectively. The English test was given on four separate instances as a means of tracking the children's progress. The first occasion also served as a pre-test and for baseline data. In this way, each of the two parts of the English test produced four sets of data, totalling eight dependent variables.

To obtain data for the independent subject variables a questionnaire was used. Amongst many other things, it collected data on the sibling variables. The questionnaire was devised by the current author, written in the Spanish mother-tongue of the children, checked and field-tested at an earlier date with similar participants. This was done in order to ensure that the pupils in the present study would have no problems in filling out the questionnaires effectively at a later

date. After the pilot session, some alterations were made to the wording of the questionnaire, to accommodate the young age of the pupils. The style and depth of the resulting questions were indicated by the pilot study as being the most adequate for this age group and the study proper. Additionally, the pupils always had the teacher on hand to help with instructions as the aim with this questionnaire was to collect data and not to test the pupils foreign language.

The exact questions were as follows:

How many of your sisters know English? _____

How many of your brothers know English? _____

How many times have your sisters and brothers helped you with (English) this school year? _____

2.3. DATA ANALYSIS

So as to properly ascertain whether the pupils who received more sibling help or knowledge were achieving significantly higher marks than those who did not, the questionnaire and test results were submitted to the following analysis:

The Repeated Measures MANOVA was applied because the same listening and written test was used repeatedly throughout the school year in order to measure the pupils' progress. In this way, the research design was a traditional Repeated Measures one. It is habitually used to examine multiple variables and can be employed with one independent variable together with more than one dependent variable, as in our situation with the four test occasions. It was especially practical in our study, therefore, precisely because the English test was administered on more than one occasion. The four dependent variables could be put into the analysis to see if the test scores were statistically significant overall with each independent sibling variable.

3. FINDINGS

3.1. INDEPENDENT VARIABLE ONE: PERCEIVED NUMBER OF TIMES BROTHERS AND SISTERS HELPED WITH ENGLISH

In the analysis with the variable of perceived number of times brothers and sisters helped with English (see Table 1) and the Repeated Measures MANOVA, the listening tests 1-4 showed a statistically significant main effect: Wilks' Lambda 0.169, Multivariate $F(27, 67) = 2.104, \leq .007$. No effect was found with the written tests.

Repeated Measures MANOVA on Listening tests + Perceived number of times brothers and sisters helped with English		
Overall/Main effect test statistic result		
Wilks' Lambda	Multivariate F	<i>p</i>
0.169	(27, 67) = 2.104	≤ .007.**

Table 1: *Perceived number of times brothers and sisters helped with English and the results for the Listening tests*

3.2. INDEPENDENT VARIABLE TWO: PERCEIVED KNOWLEDGE OF ENGLISH ON THE PART OF THE SIBLINGS

Interestingly, neither the written test statistics nor the listening comprehension tests with this Repeated Measures MANOVA analysis indicated any significant principal effect with the variable Perceived knowledge of English on the part of the siblings. Before the analysis, the prediction had been made that if the siblings knew English it would show an association with the participants' marks by giving a significant result on the Repeated Measures MANOVA. The final result was non-significant and this means that the mere fact on its own of siblings knowing English did not make any difference to the marks as the knowledge of sibling English alone was not reaching the participants. Sibling help seems to have been the necessary link to get this knowledge across according to the significant results found with the first independent variable in the section above.

4. DISCUSSION

The analyses carried out on this data with complete beginner pupils and the sibling variables, showed a meaningful principal effect with the listening comprehension tests, but not with the written tests. This was especially true of the variable for perceived number of times the brothers and sisters helped with English. However, the analyses conducted with the variable for the siblings' knowledge of English did not reveal any statistically relevant associations at all.

In EFL little or no research has been conducted into the role played by siblings. The present study has gone some way to filling in this gap by exploring a specific set of variables new to the area of learning English as a foreign language. In this field, the specific variables of sibling knowledge and number of times helped by the brothers and sisters do not appear to have been investigated previously.

As regards the first research question: “Does the variable of Perceived number of times brothers and sisters helped with English, show a statistically significant relationship with the marks on the English tests?”, we can therefore reply in the affirmative, at least as far as the listening comprehension test marks are concerned. Participants who perceived that they had received sibling help, achieved higher marks on the English listening comprehension tests. This was not just down to chance as the figures were statistically significant.

Moreover, as the pupils in this study were beginners, we are able to discern the first association clearly. It is notable that this first association was observed in the understanding of spoken English. Additionally, it is interesting to conjecture that perhaps sibling help was acting very much as natural acquisition does, that is to say, on aural comprehension first. We may speculate that this was because the brothers and sisters were speaking English and their siblings were listening. Meanwhile, brothers’ and sisters’ help had not yet shown up as being associated with the written marks. Writing in the foreign language may be a later skill to be developed through sibling help. Even in the first language, writing is obviously a skill gained subsequently to understanding it, and usually at school age.

Montgomery (1977) discovered that the elder sibling provided the second child with a model of conversational performance in first language acquisition. Jordan (1983) found that the two main teaching styles preferred by children are similar to those used by siblings and mothers. Perhaps the siblings in this study helped out with aural comprehension in a similar way, by demonstrating or speaking English.

As regards the second independent variable, “Perceived knowledge of English on the part of the siblings”, neither the listening comprehension analyses, however, nor the written test analyses rendered statistically significant findings. Therefore, with the second research question, “Does the second variable of Perceived knowledge of English on the part of the siblings, show a statistically significant relationship with the marks on the English tests?”, we have not been able to answer in the affirmative. In spite of this, these negative findings are interesting too. The mere fact that siblings knew English did not seem to be sufficient to bring about significantly higher marks. In the mother tongue, language-knowledge is effective as a source even when it does not reach the child via the form of actual help. With the foreign language and the siblings, these conditions appear to be different. There may be little or no family interaction in the foreign language as there is with the mother tongue and so the foreign language is obviously not constantly used in the family environment. Furthermore, with the foreign language it appears that intentional help must be used – knowledge of English on its own and on the part of siblings does not seem to have as strong an influence on foreign language development as it does on first language acquisition. The sibling association only

seemed to come through in our study when specific help was deliberately given. Finally, we may speculate that as the participants in the study were complete beginners, their siblings' knowledge or a high level of English was not yet too vital as knowledge showed no association with the marks. In summary, siblings' actual help in children's first steps in the foreign language seems to be more important than sibling knowledge.

Although Smith and Rotman (1993) noted that an older sibling was engaging the young learner in written-language activities, in our study involving beginners, we encountered no sibling association as regards the skill of writing. Help did not seem to be significantly linked to the written tests, nor did sibling knowledge of English. Also, Smith and Rotman reported on siblings and their influence on writing in the first language, not in the foreign language.

In summary, the present study underlines the parts played, and the pattern of results encountered, of brothers and sisters with their siblings who were beginning to learn English. Results revealed the association of the siblings' independent subject variables in the listening-test analyses involving beginner pupils but did not reveal any association with sibling knowledge of English as a foreign language. This sibling-help variable may point to the probability that our brothers and sisters are amongst our first teachers, even in learning English as a foreign language. Additionally, here it was just as interesting to find a case where no significant relationships arose as for the case of writing or knowledge.

As far as limitations of our study are concerned, one main disadvantage is the fact that we do not know for certain what the siblings' help consisted of exactly. We do not know this data due to the nature of the present study which only involved research within the classroom. Future investigations into siblings and the foreign language should include an outreach of data-collection in the home in order to discover this content and to explicitly describe the nature of sibling help. Additionally, it should be discovered if the sibling assistance with the EFL is provided via modelling or 'teaching', or merely being overheard as is common with the latter in the research from other fields.

After establishing what exactly sibling help is composed of, future research should first make sure actual sibling help – not just perceived help – is found to be statistically significant with the school marks in English as a foreign language. Future research could then go on to carry out comparisons between the effects of actual sibling help with the effects of perceived sibling help to find out which is the strongest. The former would obviously be performed by observers essentially in the home and the latter in the school, as with our study here. Further investigations could contemplate the rigorous evaluation of actual sibling knowledge in order to establish more data on brother and sister influence. It would be necessary to do

all of this so as to finally conclude which is more central, actual sibling assistance or perceived sibling assistance, actual sibling-impact or perceived sibling-impact. It should be ascertained if perceived sibling aid is more focal as a cause of motivation than real help or real knowledge.

The results of this present investigation may indicate a range of other things. The first is that, as we have seen, sibling help seems to be genuinely connected to and profitable for listening comprehension in beginners. This would seem to suggest that researchers should explore the option of consciously exploiting sibling help. Second, parents could be encouraged to promote sibling dialogue and nurture their progress in the foreign language. Mothers and fathers could make use of materials for learning English at home to encourage sibling participation. For example, home CDs/cassettes could be used as a supplement to the school foreign language course listening materials. In this way, siblings would be able to better the FL listening skills of their brothers and sisters at home. Publishers of commercial courses could include such supplementary home material in each of their course-books.

A third recommendation is that teachers could devise and record simple listening material for home use/a home CD if time were allocated within the school calendar for this purpose. Publishers could design CD-ROMs to be used specifically by parents at home for advancing writing. Particularly helpful would be interactive CD-ROMs that could be used by siblings together, especially if they included a listening comprehension module.

Our results point to a possibility that publishers could explore, that is the idea of producing EFL home materials for more than one consumer (or sibling) at a time. Specifically, they could publish resources which 'spontaneously' lead to sibling-help through the promotion of interaction among siblings in such activities as pair work, cooperative games, cooperative play and project work. In this fashion, the results of this study as well as that by Volk (1996), in which siblings helped each other through play, would be fortified and put into practical use. Finally, this would be a pleasing means of advancing not only research, but also foreign language learning in a beneficial and empirical way.

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