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Heritage Language Maintenance and Its Influence on Second Language Vocabulary Acquisition — A Research among Polish Children Living in England

1. Introduction

Issues concerning bilingualism have been broadly discussed throughout the past few decades. The term itself is quite controversial, as there is no strict definition of bilingualism. Among the many dimensions bilingualism involves, the age of language acquisition is seen as one of the most important factors. On this basis a distinction between *childhood*, *adolescent* and *adult bilingualism* has been made. The first term covers two types of child bilingualism: *bilingual first language acquisition* (BFLA) — when the child simultaneously acquires two languages from birth, and *consecutive bilingualism* — the phenomenon of children who acquire two languages successively, i.e. before the age of 11 but after having mastered the basic knowledge of the mother tongue (Hamers and Blanc 2000). Much attention has also been paid to the degree of proficiency in both languages. Here, researchers differentiate between *balanced bilinguals* (who are equally competent in two languages) and *dominant bilinguals* (who have a preference for one of the languages, although not necessarily for the same one in all fields of life) (Chin and Wigglesworth 2007). Moreover, the context in which the language is acquired (family, school, work, travel, residence in a foreign country) is also seen as crucial in defining diverse forms of bilingualism.

The process of becoming bilingual in some cases may appear problematic, especially when the acquisition of the two languages is not simultaneous but sequential. The language that had been acquired first is prone to undergo *attrition*, which means parts of the language may be forgotten or the whole language system may

be completely erased (Ecke 2004; Pallier 2007). This phenomenon is often referred to as *subtractive bilingualism* (Schmid and De Bot 2005). Subtractive bilingualism can be observed among many children who emigrated to a foreign country before the age of puberty. What usually happens in such circumstances is that children fairly quickly assimilate with the foreign culture and start acquiring the new language, but at the same time begin to lose fluency in their heritage language (HL) (Janik 1996; Nykos 2004; Ronowicz 1990). Thus, many parents decide to engage their young ones in the process of *Heritage Language Maintenance* (HLM).

Pauwels describes HLM as "a situation in which a speaker, a group of speakers, or a speech community continue to use their language in some or all spheres of life, despite competition with the dominant or majority language to become the main/sole language in these spheres" (2005: 719). HLM in the case of children is mostly dependent on the parents, as they decide whether to involve their offspring in actions that will help sustain and further develop their mother tongue. This can be done in many ways. Parents may choose to use only the L1 at home, they may send the child to a Saturday school where classes are held in the HL, or for example enable him/her to make friends among peers who also speak the L1. They can also involve the child in activities that will help identify more strongly with the mother tongue culture.

Unfortunately, bilingual initiatives do not always gain support in multicultural countries (Little and McCarty 2006; Wright 2007; Schwartz 2008). This may be due to various reasons (political, ideological, and economical). There seems to be a popular belief that HLM prevents the newcomers from acquiring the L2 at a satisfactory level and hinders school achievement. Studies, however, do not support this view.

Wright (2007) reports the results of a bilingual school programme carried out for Cambodian immigrants in the U.S. The programme lasted for six years (from kindergarten to grade five). For the first two years, the children were given instructions in their HL and were taught how to read and write in their HL. Each day, at least 30 minutes were devoted to teaching English and the amount of instruction in the L2 gradually increased. In 4th grade the children were placed in regular English classes, however, they had the assistance of a Cambodian-American teacher, if needed. The results of the study revealed positive effects of the bilingual programme. By the end of grade three, the children's competence in L2 reading was at or above grade level and the children were found to perform equally well or better in their L2 oral performance than their peers who had been educated only in English.

The research conducted by Leseman and Tuijl (2001) concerning home support for bilingual children of Turkish immigrants in the Netherlands, did not aim directly at improving the L2. No positive influence of the programme on the development of the L2 was found. However, "doing the program in Turkish yielded an additional effect on Turkish language development without decreasing

the program's effects on the development of general cognitive and pre-mathematic skills, which appeared to carry over to situations of Dutch language use" (Leseman and Tuijl 2001: 13).

Little and McCarty (2006) report on four HLM programmes carried out in North America. According to the results of their study, acquiring the HL does not hinder the acquisition of the L2, neither does it negatively affect academic achievement. Participants of the bilingual programmes were found to perform equally well or better than their peers from English-only classes in various subjects (including English writing). Little and McCarty argue that "time spent learning a heritage/community language is *not* time lost in developing English, while the absence of sustained heritage-language instruction contributes significantly to heritage-language loss" (3). They also point out that reading and writing skills which are first acquired in the HL can easily be transmitted into the L2. Moreover, research shows that developing one's HL has a positive influence on family relations (especially child–adult interaction) and strengthens ethnic identity (Chinen and Tucker 2005; Lotherington 2005; Little and McCarty 2006; Yildiz 2008).

It appears that HLM has a number of personal, social and cultural benefits. Linguists argue that supporting the development of both languages not only brings educational and linguistic profit, but also enables the individual to establish a stronger connectedness with the ethnic group and gain "greater understanding and knowledge of cultural values, ethics, and manners" (Yildiz 2008: 10).

2. Objectives of the study

The issue of HLM is still a relatively young field of study, which has been investigated only in general. These investigations usually concerned the influence of participation in bilingual immersion programmes on general L2 school achievement (Leseman and Tuijl 2001; Little and McCarty 2006; Wright 2007). Most studies support the idea of launching bilingual programmes for children, and provide evidence that maintaining and developing the child's HL does not hinder SLA. However, there is still a demand for further research. Although in many multicultural countries governments and minority communities provide HL education, these schooling systems have a number of drawbacks. One of the most important is the lack of a proper curriculum and teaching methods which would satisfy the needs of learners in such specific circumstances. Unfortunately, still little is known about the process of HLM and HL acquisition, though linguists point out it is different to second language acquisition and foreign language learning in many aspects (Lynch 2003). More detailed studies into the process of HLM are needed.

The aim of this research is to investigate the relationship between HLM and second language vocabulary acquisition. The study concerns children of Polish origin who immigrated to England. Thus, the HL in this case is Polish and the L2 is English. It will try to answer the following research questions:

Q1: Is there any visible influence of Polish on the use of English vocabulary in the children's oral performance?

Q2: Does the English vocabulary used by children involved in HLM (HLM subjects) differ from that used by children not involved in HLM (non-HLM subjects)? If yes, in what aspects?

The study will thus verify the following hypotheses:

H0: There is no significant relationship between HLM and L2 vocabulary acquisition.

H1: There is a significant relationship between HLM and L2 vocabulary acquisition.

H2: There is a significant negative relationship between HLM and L2 vocabulary acquisition (the HLM subjects are significantly less proficient in the use of L2 vocabulary).

3. Research type and methodology

The study is a qualitative type, as it describes a certain *status-quo* and the subjects do not undergo any treatment which could change their situation. However, it also involves elements of quantitative research, as it verifies hypotheses concerning the relationship between two variables (HLM and L2 vocabulary acquisition). The research is cross-sectional, it analyses the language of children at a very specific age and time.

The chosen methodology was focused description. The researcher analysed the oral performance of subjects who were divided into two groups:

G1: consisted of children involved in HLM (HLM subjects);

G2: consisted of children not involved in HLM (non-HLM subjects).

4. Variables and scales

As mentioned before, the thesis aims at investigating the relationship between HLM and L2 vocabulary acquisition. This relationship constitutes the *intervening variable*. The *dependent variable*, in this case, is L2 vocabulary acquisition, which was measured by means of an English productive vocabulary oral test and described with the use of an interval scale. The *independent variable* — involvement in HLM (or the lack of it) was measured by means of a questionnaire

distributed among the parents. For this variable, a nominal scale was used. Of great importance to the study were the age of the subjects at which SLA had began and their length of residence in England during which they were exposed to the L2 (this usually meant the period of time from the onset of education in England). These two elements are the *control variables* of the research, both described on nominal scales.

5. Subjects of the study

The participants of the study were children of Polish emigrants living in England (Manchester, Bradford and Harrogate). All the subjects were born in Poland and left the country between five and seven years of age, which is before the termination of the sensitive period for SLA and during the sensitive period for L1 attrition. At the time of the research the children had been living in England and had been exposed to the L2 for an average of 2 years and 7 months. The participants were divided into groups by means of a questionnaire. Group one consisted of HLM subjects. These children were involved in various types of HLM activities. These included: attending a Polish Saturday school, talking only in Polish at home and with Polish peers, reading books in Polish, watching Polish TV and movies, attending a Polish church, working on the Polish school curriculum at home, spending summer holidays in Poland. The second group was composed of non-HLM subjects. The children in this group were free to decide on the language they spoke at home, did not attend a Polish Saturday school or work on the Polish school curriculum at home, and rarely had contact with Polish pupils. Table 1 provides exact data concerning participants of the study.

Table 1. Data concerning participants of the study [years; months]

	HLM subjects			Non-HML subjects		
Name	Adrian	Grzegorz	Jakub	Klaudia	Gosia	Mateusz
Age of SLA onset	5;8	6;6	5;6	5;7	7;4	6;2
Length of SLA	2;8	2;2	2;10	2;7	2;10	2;10
Age at the time of the study	8;4	8;8	8;4	8;2	10;2	9;0

Unfortunately, the study involves only six participants. Although the vocabulary test was administered among a larger number of children, many of them could not be taken into account in this research, as they did not pass the control variables (age of SLA onset or length of SLA). It was very difficult to find children at such a specific age and with a suitable length of residence.

6. Instruments

The instruments used in this research included a questionnaire and an English productive vocabulary oral test. Both were designed by the researcher. The questionnaire was addressed to the parents and aimed at eliciting the most optimal candidates for the research as well as assigning the child to one of the two research groups. It contained questions concerning the age of the children, time of residence and exposure to the L2, language habits at home, the child's reading and TV habits, connections with other Polish peers, Polish Saturday school attendance, and provided space for the parents to add information about any other HLM activities the child might be involved in.

The oral test was addressed to the children. It consisted of two parts. Part one was intended as a "warm-up" for the subjects and aimed at getting them accustomed with the researcher and helping them to start speaking in English. It involved a picture recognition task (the children were presented with a picture of a house where various rooms, objects and family members were presented, and were asked to point to elements mentioned by the researcher and then name elements the researcher indicated) and an interview during which the researcher talked with the child about his/her interests, likes/dislikes, pets, holidays, etc. Part two constituted the actual test. It was composed of three elements: picture description, an interview concerning the child's school and a role play. First, the children were presented with a sequence of pictures illustrating a short story of a cat and some mice and were asked to tell the story. Next, they were asked to tell the researcher all the important information about their school (breaks, teachers, playground, canteen, library, etc.) Finally, the subjects took part in a role play in which they had to act customers buying things for a holiday by the beach.

7. Procedures

In the beginning, the children were assigned to one of the two groups (HLM or non-HLM) on the basis of the questionnaire addressed to the parents. Once this was done, the subjects took part in the oral test described above. The complete oral performances of the children were recorded and the second part of the test (after the "warm-up") was transcribed. Each transcription was then analysed by the researcher and the analysis was also proofread by a native speaker. Firstly, the number of words in each discourse was counted. As one word, apart from single lexical items, the researcher considered collocations, phrasal verbs, an article with a noun and idioms. Secondly, the vocabulary mistakes committed by each subject were counted. To the category of mistakes the researcher included:

— incorrect usage of words in a given context;
— lack of knowledge of a given word;
— coinage of new words;
— use of paraphrasing.

According to Ellis (1985), *word coinage* is a type of communication strategy used by the learner in order to compensate for the lack of knowledge of a given word. It involves the replacement of the unknown item by different L2 forms (e.g. "gallery" → "picture place").

Another communication strategy found in the analysed transcripts, was *paraphrasing*. By using this strategy, the learner also tries to make up for not knowing a lexical item, but this time by describing it or providing an example (e.g. He cleaned the house with a… → it sucks in air). In this research, words which made up the paraphrases were not counted as mistakes and data concerning this strategy is provided separately. However, the fact that the subjects had to use this strategy means they lacked knowledge of a certain word. Thus, each use of paraphrasing was considered as one mistake.

After having counted the words and mistakes, the researcher analysed what percentage of the whole discourse the mistakes constituted. Further on, the mistakes we interpreted in terms of interference. Errors which were the cause of interference were elected and it was counted what percentage they constitute of the whole discourse and of mistakes in general. This was done for each subject individually, as well as for each group.

In addition to that, an analysis of vocabulary variety was done. The different words used by each participant were counted and so was the mean for each group (showing the average number of different words per person). Moreover, data concerning the use of communication strategies was gathered and presented separately for each individual (showing how many times the subject used a communication strategy), as well as for each group (showing what percentage of words used in the group the strategies constitute). Apart from that, a detailed interpretation of the role play has been provided. The vocabulary used by the children has been listed, counted and compared. By this, the researcher hoped to contrast the richness and variety of vocabulary used by the participants.

8. Research results and analysis

The first step in the analysis was to study the questionnaires completed by the parents. Table 2 provides an overview of the questions and answers describing HLM (or the lack of it) of each child.

Table 2. Results of the questionnaires distributed among parents

Name	HLM subjects			Non-HML subjects		
	Adrian	Grzegorz	Jakub	Klaudia	Gosia	Mateusz
Everyday attendance at an English school	yes	yes	yes	yes	yes	yes
Attendance at a Polish Saturday school	yes	yes	yes	no	no	no
Working on the Polish school curriculum at home	no	no	yes	no	no	no
Talking only in Polish at home	yes	yes	yes	no	no	no
Talking only in Polish with Polish peers	yes	yes	yes	yes	No contact with Polish peers	No contact with Polish peers
Watching TV	in Polish & English	in Polish & English	in Polish & English	in Polish & English	in English	in English
Other	Reads books in Polish	Parents read to the child in Polish	Spends 7–8 weeks in Poland each year	—	—	—

The main objectives in deciding on which group the participants should be assigned to were Polish Saturday school attendance and the rule of speaking only Polish at home, as they are of crucial importance in the process of HLM. Although Klaudia shares a few characteristics with the HLM group, she was considered as a non-HLM subject, as these similarities resulted from her individual preferences rather than rules established by parents. In such cases, it is difficult to talk about conscious HLM. In general, the HLM children were obliged to use Polish as often as possible, whereas the non-HLM had the freedom to choose the language.

The next step was to test the children orally and record their performances. The researcher transcribed the crucial part of the test and thoroughly analysed each word. The analysis of the role play task is presented in detail. Table 3 provides a comparison of the vocabulary items listed by the subjects in the role play task. Together the children enumerated 79 items, which gives an average of approximately 13 items per person. In general, the HLM group enumerated fewer items than the non-HLM group (HLM — 36, non-HLM — 43). It is worth noticing, however, that the performances of two subjects in the non-HLM group stand on two ends of the continuum. These are: Klaudia, who enumerated 8 items below the average, and Gosia, who enumerated 12 items above the average (Figure 1 illustrates this contrast).

Table 3. Comparison of vocabulary used in the role play

Subject (no. of items) Intended word	HLM subjects				Non-HML subjects	
	Adrian (11)	Grzegorz (13)	Jakub (12)	Klaudia (5)	Gosia (25)	Mateusz (13)
Swimming costume	swimming shorts	—	—	does not know	swimming costume	swimming costume
Towel	towel	—	does not know	"ręcznik" (CS)	towel	towel
Tinned fruit	—	fruit in tins (P)	—	—	—	—
Pineapple	—	ananas (F)	—	—	—	—
Bucket and spade	bucket and spade	—	a spade	—	bucket and spade	bucket and spade
Inflatable ring	"a circle what you can float" (P)	—	"toys to play in the water" (P)	—	—	"a circle to go on, on the water" (P)
Armbands	—	—	—	—	armbands	armbands
Sun cream	sun cream	that cream (A)	sun cream	sun cream	sun cream	sun cream
Hat	hat	hat	—	hat	hat	hat
Sunglasses	sunglasses	—	—	sunglasses	glasses (A)	—
Swimming goggles	swimming goggles	—	—	—	—	—
Deck chairs	—	lying chairs (C)	chair for the beach (P)	—	—	stretchers (A)
Blanket	—	—	—	—	—	blanket
Tent	—	"thing to sleep outside" (P)	—	—	—	—
Umbrella	—	"that thing what hides you from the sun" (P)	umbrella	—	umbrella	—

Table 3. cont.

Subject (no. of items) / Intended word	HLM subjects			Non-HML subjects		
	Adrian (11)	Grzegorz (13)	Jakub (12)	Klaudia (5)	Gosia (25)	Mateusz (13)
Boat	—	—	—	—	—	"a thing, you might pull it out of the van and … drive in the sea with it" (P)
Shoes	—	—	—	shoes	shoes	—
Sandals	—	—	—	does not know	sandals	—
Flip-flops	—	—	—	—	flip-flops	—
High-heels	—	—	—	—	high-heels	—
Food	food, doughnuts, a sandwich with chocolate	food, drink, Coca-cola, apple drink (A), fruit	food, bread, ham, cheese, fruit	ice-cream	food, vegetables, carrots, potatoes, fruit, apples, bananas, bread, butter	biscuits, sandwich, water
Clothes	—	—	T-shirt, shorts	—	dress, skirt, top, shorts	—
Bicycle	—	bike	—	—	—	—

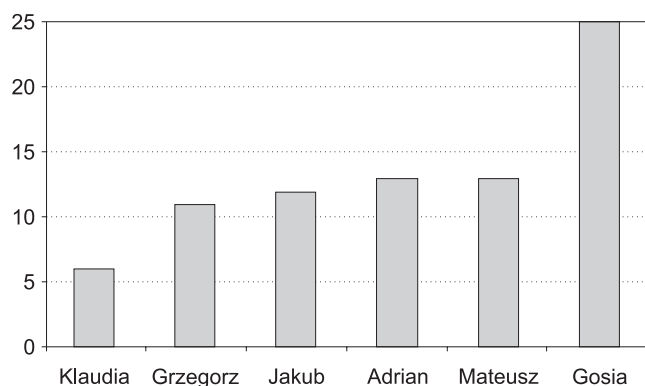P — paraphrasing; C — coinage; A — approximation; F — foreignizing; CS — code-switching

Figure 1. A number of listed items in the role play

The researcher also analysed the performance in search for the use of communication strategies. The majority of the strategies found were L2-based, namely: paraphrasing, word coinage, substitution and use of all-purpose words. However, L1-based strategies were also noted. These were: code-switching and foreignizing. Table 3 shows a detailed analysis of the role play, which illustrates some examples. The necessary calculations concerning the overall performance of the subjects were made. These outcomes constitute results of the research and are presented below in Table 4, which shows the performance of particular subjects, and Table 5, which illustrates the performance of the two groups.

Table 4. Results of the study for each participant

	HLM subjects			Non-HML subjects		
Name	Adrian	Grzegorz	Jakub	Klaudia	Gosia	Mateusz
Words in the discourse	233	244	125	105	269	435
Variety of vocabulary	105	107	80	54	132	126
Vocabulary mistakes	3	9	8	7	1	4
Vocabulary mistakes %	1.28%	3.68%	7.2%	6.66%	0.37%	0.91%
Vocabulary interference mistakes	0	1	0	0	0	0
The use of L2-based com. strategies	2	7	5	0	6	4
The use of L1-based com. strategies	0	1	0	6	0	0

Table 5. Results of the study for the two groups

	HLM subjects	Non-HLM subjects
Words used	602	797
Vocabulary mistakes	3.32%	1.5%
Interference % of mistakes	5%	0%
Interference % of the whole discourse	0.16%	0%
Variety of vocabulary (average number of words per person)	97.33	104
Use of L2-based communication strategies (% of words in the whole discourse)	7.8%	1.22%
Use of L1-based communication strategies (% of words in the whole discourse)	0.16%	2.56%

Table 5 shows that the non-HLM subjects performed better (committed fewer mistakes) than the HLM subjects. This difference constitutes 0.82%. Only one vocabulary mistake which was due to interference was found. This was a case of *foreignizing* ("the learner uses a non-L2 form but adapts it to make it appear like an L2 form) (Ellis 1985: 184). It was observed in the performance of an HLM subject (Grzegorz) who used the word "ananas" (pronouncing it with an English accent) when referring to pineapple. The error comprises 5% of all the mistakes committed in this group and 0.16% of the whole discourse. In order to check whether the difference in group performance is statistically significant the Chi-square (χ^2) was calculated. The result $\chi^2 = 2$ was below the critical value. This suggests the negative influence of the mother tongue is not statistically important.

A comparison of the variety of vocabulary has also been made and presented in Figure 2. Once again, the two non-HLM subjects (Klaudia and Gosia) stand on two ends of the continuum, with Klaudia using 50 words below the average and Gosia using 28 words above the average. As to account for the difference
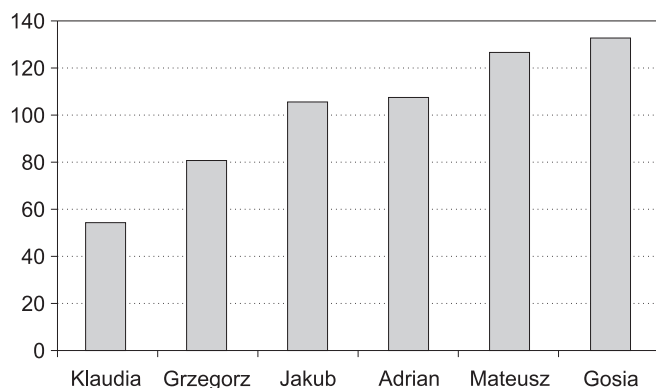

Figure 2. Comparison of vocabulary variety

in group performance in terms of vocabulary variety, χ^2 was calculated once more. The result $\chi^2 = 4$ is below the critical value and shows that this difference cannot be counted statistically.

Data concerning communication strategies (Tables 4 and 5) shows, that both groups used the strategies with almost equal frequency (HLM — 15 times; non-HLM — 16 times). However, the L2-based communication strategies were used more often by the subjects of the HLM group, whereas the L1-based strategies were more frequent in the non-HLM group. It is worth noticing that this statistical result is due to the performance of one non-HLM subject (Klaudia) who code-switched 6 times. Code-switching was not noted in the performance of any other participants of the research. In the HLM group, the L1-based strategy observed was foreignizing, which was used once.

On the basis of the data presented above, it is possible to conclude that there is no significant relationship between HLM and L2 vocabulary acquisition. Accordingly, the null hypothesis has been accepted and the remaining two rejected.

The results of this study suggest the following answers to the research questions:

Q1: There is no visible influence of Polish on the use of English L2 vocabulary. This influence was neither found in the HLM group, nor the non-HLM group. The one interference mistake noted constitutes only 5% of vocabulary mistakes in this group and cannot be counted statistically.

Q2: It appears the vocabulary used by HLM and non-HLM subjects does differ, although not significantly. In general the non-HLM subjects made fewer lexical mistakes, used more words and had richer vocabulary. However, once again the differences are not statistically important.

9. Conclusions

The process of learning a second language is very complex and influenced by a number of factors. The context in which the learning takes place is of great importance, for this reason a distinction can be made between Second Language Acquisition and Foreign Language Learning. Age is yet another factor which seems to play a crucial role in this process. The purpose of this study was to analyse the L2 vocabulary of children at a specific age who are learning the L2 abroad in a naturalistic setting. The research aimed at verifying whether there is a correlation between the maintenance of the children's heritage language and their use of L2 vocabulary. It was hoped that this would contribute to the establishment of the most optimal methods for HLM and SLA of children growing up in such circumstances.

The correlation between HLM and L2 lexis use was not found. No significant number of interference mistakes was noted, nor was there a vital difference in the performance of the two groups. Rather, differences were noted among individual

participants of the study. Within one group there was a large divergence between two subjects (where one scored significantly below the average and the other significantly above average). These differences are noted in both the amount and the quality of vocabulary used. This could suggest successful SLA is more dependent on individual learner aptitude than on the lack of contact with the L1.

Unfortunately, this study carries a number of drawbacks and topics for further research which should be accounted for. Firstly, the number of participants is very small, which makes it difficult to draw any important conclusions. Secondly, the study takes into consideration only productive vocabulary. It would be interesting to check also the receptive vocabulary of the children, as it may be hypothesised that the HLM subjects possess a larger range of receptive knowledge. This, however, requires a very specific test which would account for the children's age, L2 language environment and L1 background. Moreover, the research concentrates only on negative transfer. The degree to which L1 facilitates learning has not been analysed. Although this role of the mother tongue is very difficult to verify, its analysis may provide us with a broader view on the issue or even change it significantly. Finally, this analysis concerns only lexis. Investigation into all other language subsystems (especially syntax and morphology) would be desired.

The general outcomes of this thesis are in agreement with previous studies concerning HLM. No negative influence of L1 maintenance on L2 performance has been found and no significant difference between the performances of the two groups has been noted. In such circumstances, it seems highly advisable to involve children in the process of HLM, as this provides them with the opportunity of becoming balanced bilinguals. It has been rightly said, that "time spent learning a heritage/community language is *not* time lost in developing English, while the absence of sustained heritage-language instruction contributes significantly to heritage-language loss" (Little and McCarty 2006: 3).

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