PROGRESSION IN LEARNING

Edited by Martin Hughes

(School of Education, University of Exeter)

This book is about progression in learning; about the short-term and long-term changes in children's knowledge and understanding, which take place as they progress through various domains of learning. The areas covered include progression in early literacy and numeracy, progression in scientific and mathematical understanding and progression in understanding the nature of history. It will be of interest to researchers, postgraduate students and professionals interested in educational research, philosophy and theory of education, and curriculum planning and development.

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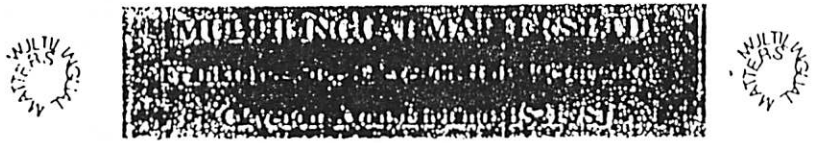
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CHILD LANGUAGE BROKERING IN LINGUISTIC MINORITY COMMUNITIES: EFFECTS ON CULTURAL INTERACTION, COGNITION, AND LITERACY

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Abstract Socio-cultural views of learning suggest that the acquisition and display of knowledge is context dependent. This study examines the contexts of cultural interaction and the development of cognition and language among linguistic minority (LM) children who 'brokered' for their limited English speaking parents. Unlike formal translators, language brokers mediate rather than merely transmit information among the parties involved. Nine subjects who brokered for their parents as children were interviewed to determine the effects of brokering. Brokers reported increased first and second language acquisition, comprehension of L2 texts far above their grade level, and assumption of parental duties in regards to their schooling and other functions. The results are discussed in terms of current theories of learning as well as possible implications for the schooling of LM students.

Little research has been done on the phenomenon of language brokering, where a third party provides communication among different linguistic and/or cultural agents (Downing & Dwyer, 1981; Geutemann, 1983; Schieffelin & Cochran-Smith, 1984; Shannon, 1990). Language brokers are distinct from formal translators and interpreters in two important respects: first, brokers are usually involved in informal negotiation for one or both of the parties for which they serve as a liaison, mediating communication rather than merely transmitting it; and second, there exists an unequal power relationship between the broker and the agents, usually one in which the broker (a child) is normally under the authority or supervision of one of the beneficiaries. The purpose of this study is to describe brokering in linguistic minority (LM) communities and to examine its effects on a group of nine bilingual adults who brokered as children. Their recounting of their experiences as LM students allows us to consider the long term effects of brokering and how it impacts the development of language, cognition, and socio-cultural knowledge, as well as the communication dynamics among home, student, and school. The study examines the issue from three perspectives: (1) culture and affect, (2) cognition, and (3) language and literacy. We will first provide brief reviews of the literature in all three areas, which while related (see Gee, 1992), have distinct enough viewpoints to warrant separate analysis. We will then present our results, discuss the findings, consider the

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pedagogical and policy implications of brokering, and suggest areas for future research.

Cultural and Affective Perspectives

The little research on language brokering to date suggests that brokers perform a far broader role than interpreter and translator, producing affective consequences. Downing & Dwyer (1981) examined the English language interactions in a Hmong immigrant family in Minnesota. They found that the 15 year old son, Tus Tub, the most English proficient member of the family, served not only as language interpreter and conveyer of cultural information for his family in a variety of settings, including school, but often functioned as primary decision maker. A study by Schieffelin & Cochran-Smith (1984) examining the home and school interactions of a 9-year-old Sino-Vietnamese student, found that the subject, V., both translated and mediated communication for the family. In addition, the researchers noted that V. acted as a socialising agent for the family by transmitting important cultural information to them. Harris & Sherwood (1978) provide an example of how brokers influence and to a great extent determine the interactions between the parties. While interpreting for her father in a business interaction, their Italian-Canadian subject, BS, judges the culturally and linguistically appropriate versions of her father's words to convey the message in such a way as to increase the chances for a successful outcome. In one interaction, she does this at the risk of drawing some of her father's anger on herself:

Father to BS: Digli che e un imbecille! (Tell him he's a nitwit).
BS to 3rd party: My father won't accept your offer.
Father angrily in Italian: Why didn't you tell him what I told you? (p. 157)

In mediating this way, BS greatly impacts the success and failure of the interactions beyond what any mere literal translator might do.

The added responsibilities of this mediating and decision making appear to result in increased confidence for brokers. Shannon (1990), who examined the brokering experiences of Spanish speaking Adan and his younger sister Leti, suggests that as brokers' efficacy increases, their level of confidence increases. A certain status was accorded to the child brokers in the family, and their effectiveness as brokers in a variety of circumstances meant increased prestige among siblings, parents, and the extended family. Shannon notes that the broker she examined most closely, Adan, was in fact able to adapt to needs of the situation quite well, learning 'how to address a professional, how to behave during professional interactions, and how to be an advocate for his relatives while preserving their dignity and assuring respect for himself' (p. 264). Additional support for this increased confidence due to brokering comes from Downing & Dwyer, who pointed out V.'s enthusiastic offers to help peers, family members, teachers and others, illustrating his confidence in handling various linguistically and socially demanding tasks.

Literacy and Language

Translation and bilingualism

A few investigators have looked at language brokering from the points of view of translation and bilingualism. Harris & Sherwood (1978) claim that translation is an innate skill of all bilinguals, citing evidence from children as young as three years old (Harris, 1980). This 'natural translation' — that is, translation done in everyday circumstances by those who have had no special training — is thought by Harris (1977) to be a 'third dimension' of bilinguals, in addition to their competencies in their two languages. He notes that translation is not a simple cognitive or linguistic task of decoding; rather, it requires the application of other knowledge in order to extract meaning from the words and context, with comprehension of the oral or written text. Harris' three-year-old subject, Michael, is quite sophisticated in his pragmatic and linguistic competencies, translating subtleties. One exchange is particularly illustrative of the level of sophistication involved in 'simple' translating (Harris, 1980):

I[nterviewer]
(in English): Phone my dad, and ask him to come repair the door.
S[ubject]
(in French): Hullo. Good day. Are you going to come and fix the door? Yes, this afternoon. Come and repair it right away. I say, right away. (p. 389)

Harris states that there is also evidence that all bilinguals can translate isolated words and phrases as well as larger units of discourse, given adequate knowledge of the first (L1) and second (L2) languages.

Malakoff & Hakuta (1991) found that bilingual children not only can translate, but do so quite accurately. Their two studies, involving a total of 68 Spanish/English child translators, found that they made few errors in either language when translating. Using a slightly more sophisticated theoretical model than Harris, they state that although all bilinguals have the ability to translate, there seems to be two additional factors: metalinguistic awareness, defined as 'an awareness of the underlying linguistic nature of language use', and translation strategies (p. 147). Translation of a text (either oral or written) is comprised of a four stage process:

(1) Comprehension of the vocabulary of the original source-language text.
(2) Comprehension of the meaning of the original text.
(3) Reformulation of the message of the target language.
(4) Judgement of the adequacy of the target language text.

The importance of Malakoff & Hakuta's analysis is that it emphasises that translation, even that done by a child, is not a simple, surface-level decoding process, but a rather complex series of linguistic manipulations. Indeed, the researchers call translation a metalinguistic skill, *par excellence*, given the translinguistic (across languages) nature of the operations involved (p. 150).

Language acquisition

Second Language Acquisition Theory (SLA) (Krashen, 1985) states that language is acquired when the learner comprehends messages ('comprehensible input') that contain new information ('i + 1', where 'i' is the learner's current level of acquisition). While there is disagreement over the possible importance of other elements in the SLA model (Larson-Freeman & Long, 1991), most researchers acknowledge that the reception of new input is the primary factor in language acquisition. While Harris (1980) finds that natural translation by bilinguals itself neither inhibits nor aids acquisition in either language, the scattering of language brokering studies indicates that it does result in increased acquisition by the child translators. Shannon (1990) found that while no formal measurement of acquisition was possible, the demands of brokering would very likely result in increased vocabulary in both languages. Her subjects translated for their parents in a number of previously unfamiliar contexts, including legal, medical, and financial areas. It seems clear that her subject Leti would manage to translate not only unfamiliar terms, but would do so in increasingly sophisticated and appropriate manner according to the accepted sociolingustic norms of the situation.

Schieffelin & Cochran-Smith (1984) also provide evidence of likely language acquisition by their child broker, V. V. brokered in a variety of situations for his parents, displaying a high level of 'sophistication in literacy skills' (p. 17). It seems probable that with such wide contact with otherwise unfamiliar, adult-level language, there was acquisition taking place. Several studies on brokering in French-English schools in Canada (Heller, 1984, 1987, 1989; Heller & Barker, 1988) show that bilinguals in those settings must develop a wide array of vocabulary to deal with both social and academic language demands, the results of which, as in the case of V., are likely to result in further acquisition (Tomlinson, 1989).

Literacy

Gee (1992) reviews the large body of literature that has developed on a socio-cultural approach to literacy, much of which provides a useful frame of analytical reference for understanding the dynamics of language minority brokers and their interactions with text both in and outside of school. Gee argues that literacy is a complex interaction of many related practices which extend beyond traditional boundaries of reading and writing. Theoretically, comprehension of text is itself a result of 'multiple abilities to "read" text of certain types in certain ways or to certain levels'. One does not, Gee continues, 'learn to read texts of type X in way Y unless one has had experience in settings where texts of type X are read in way Y' (p. 32). The implication is that readers will perform differentially on reading tasks dependent upon their setting. This performance is conditioned upon their socialisation into specific practices of literacy (Rogoff, 1984). Further, people tend to do better at literacy and problem solving tasks which relate in some way to their experiences than those tasks which do not, even if the texts/tasks are 'logically' identical (Manktelow & Over, 1990). This finding

is predicted by both cognitive schema theory (Just & Carpenter, 1987) and Vygotsky's socio-cultural framework (see below).

There is extensive research on differential performance in discourse applying the socio-cultural model of literacy to oral texts. Cazden (1988) notes that cultural and linguistic minority children who are able to express themselves vividly and with great detail in their home discourse style may seem to be unimaginative and even 'illogical' in the unfamiliar school and/or dominant culture style. Shultz, Florio & Erickson (1982) found similar differences between home and school discourses, and noted that the inability to perform well in one did not signify a lack of general communicative competence. There have also been more general studies on language minority student failure (Sue & Padilla, 1986; Trueba, 1983; Tharp & Gallimore, 1988; Ogbu, 1992) which have, by implication, a similar explanation of differential or situational performance in written forms of literacy. Tharp & Gallimore (1988), for example, describe the successful KEEP (Kamehameha Early Education Program) programme in Hawaii, where culturally sensitive instruction was used to improve school performance of language minorities, giving empirical support to the notion of situational literacy performance.

Along similar theoretical lines, Smith (1988) speaks of 'club membership' to describe a set of socio-cultural conditions in which a learner engages in certain behaviors, including literacy. Students who see themselves as members of certain groups or 'clubs' will choose to do an activity; those who feel excluded will not. Myers (1992) used Smith's idea of literacy clubs to examine school and personal practices of literacy in a junior high school setting. He found that there were several different literacy clubs that students chose to join or not join based on a variety of factors, and that their performance in one area may be markedly different than another, depending on their perception of club membership. As in Gee's formulation, literacy was situation-dependent, not an individual skill which was applied uniformly across contexts.

It should be noted that the connection between how we read and write and how we think are so close that some researchers claim that separating them, as we have done here, is an artificial exercise. Gee (1992) makes such an argument, pointing to Scribner & Cole's study (1981) of the Vai of Liberia. Literacy among the Vai falls into three categories: those who learn English in the formal schools and Vai script outside of school; those who learn only the Vai script in the community; and those who learn neither. Scribner and Cole found that in performance on what Westerners believe to be 'higher order thinking' tasks, essentially those which require a person to give expository talk about a problem (e.g. explanations of grammar rules, sorting, and formal logic), those schooled in English performed better than those who were not. Outside of these limited areas of verbal explanation, there was no difference in cognitive performance. The researchers concluded that formal schooling and literacy did not affect actual performance on logical tasks, but rather the ability to talk about them. Schooled literacy and the display of certain cognitive skills valued by traditional measures of intelligence are linked, but this does not mean literacy produces 'higher' levels of cognitive behavior.

Cognition

Several theories of cognition are present in the literature from which one might examine the phenomenon of brokering. The most encompassing of these in terms of explaining the differential performance of the brokers is the social-cultural perspective, based on Vygotsky's view of human cognition that defines learning as the internalisation of social interactions. These interactions take place between learners and more capable others who guide and assist them onto the next level of competency. Vygotsky defines the difference between what the learner can do with and without this more capable other's assistance as the Zone of Proximal Development (ZPD). Learning takes place, then, when learners interact with a task with the assistance of others, provided that the task falls within their ZPD. This relationship is based on both parties negotiating the context in which interaction takes place and the content around which meaning is created (Vygotsky, 1987).

Tharp & Gallimore (1988) provides an example of how learners' understanding of activities are gradually built through this assisted performance. A child who attempts to assemble a jigsaw puzzle but cannot do so alone may accomplish the task with a more capable peer or adult who suggests possible connections as they proceed. Eventually, the child will be able to perform the task without adult assistance, signifying that learning has taken place.

Other researchers have incorporated the socio-cultural perspective using slightly different terminology. Greeno (1989) refers to 'situated cognition', whereas Rogoff (1984) has analysed 'everyday cognition'. Both frameworks look at thinking as interaction between individuals and their physical and social environments, rather than involving solely the individual's mind. According to Greeno, cognitive operations occur when one directly interacts with a situation, and are not necessarily mediated by separate mental processes. Greeno describes research done by Scribner (1984) who found people who were able to perform complex mathematic calculations without having had formal training when they performed in 'real-life' situations. Similarly, Saxe (1988) examined the math skills of child street vendors in Brazil and found that although they were not familiar with the orthographic numbering system, they had developed sophisticated counting systems that used complex computations. In addition, unschooled child vendors far out-performed their schooled non-vendor counterparts in such real life tasks, despite the former's lack of formal instruction or inability to demonstrate their knowledge through pencil and paper assessments. Lave, Murtaugh & de la Rocha (1984) came to similar conclusions for adults, finding that many consumers were able to perform mathematical calculations while shopping, but were unable to perform the same calculations on a written, school-like test.

The few studies which have examined child language brokers and the related theoretical literature reviewed here raise several questions on brokering's effect on cultural interaction, cognition, and language development. The present study will look at these effects in each area, discussing the impact on broker's affective reactions, relationships in the school and family, language acquisition, literacy, and problem solving abilities.

The Study

Purpose

After a review of the available research on language brokering, three primary areas of interest in terms of brokering and schooling for LM students emerged: effects on culture and affect, language and literacy, and cognition. This particular taxonomy was based both upon the types of interaction noted by previous researchers on child brokers (Harris & Sherwood, 1978; Downing & Dwyer, 1981; Schieffelin & Cochran-Smith, 1984; Shannon, 1990) as well as the hypothesised variables that would be effected by brokering as related to school performance. The following initial research questions were formulated:

(a) What were the effects of language brokering on the brokers' view of their home and dominant school cultures?
(b) What were the brokers's attitudes toward their task, and how were those attitudes reflected in school performance and social interactions with their peers and family?
(c) How did brokering affect the informants' acquisition of both their first and second languages?
(d) How did brokering relate to in-and out-of-school literacy, both in terms of the types of texts read and the ways those texts were comprehended?
(e) What were the perceived cognitive demands made upon brokers as compared to their non-brokering peers, and how did these relate to the tasks brokers performed at school?
(f) What effect, if any, did the differences in home language/culture and age of arrival have on the factors involved in the primary research issues stated above? Given the paucity of research in this area, the focus of the study was deliberately left broad and exploratory in order to provide a more general description of the phenomenon and its possible consequences (Spradley, 1979).

Subjects

Nine bilingual adult subjects who brokered as children were chosen for the study in order to provide for a maximum variation sampling as regards to first language, current age (18 to 29), and age of arrival (from 3 to 14 years) (McMillan & Schumacher, 1989). The biographical and language profiles of the subjects are summarised in Table 1. In addition to English, the subjects speak one or more of the following languages: Cambodian, Cantonese, Korean, Spanish, and Vietnamese. All but one US-born subject immigrated to the United States before the age of 14. All had native or near-native levels of English language proficiency and their self-reported levels of L1 oral and literacy skills range from none to high.

Since the informants were asked to discuss their perceptions on issues dealing with not only educational but also social and emotional factors, care was taken in selecting subjects with whom the researchers had already established some degree of trust and rapport (Spradley, 1979). Former students and associates of the researchers who are members of a LM community and who were likely to

Table 1 Subject profiles

Name	*Sex*	*Age*	*Language Group*	*Age of Arrival*	*Age Brokering Began*	*Level of L1 Oral (Self reported)***	*Level of L1 Literacy (Self reported)***
Anita****	F	24	Cantonese/Spanish	12	12	I-CA, H-SP	N-CA, H-SP
Gina*****	F	27	Korean/Spanish	9, 14	9, 14	H-KO, H-SP	H-KO, H-SP
Jennifer	F	23	Cambodian	11	12	H	I
Kim	F	18	Vietnamese	3	6	L	N
Maria	F	24	Spanish	-	7	H	I
Rebecca	F	29	Cantonese	12	12	H	L
Robert	M	21	Cantonese	4	5	L	N
Roxanne	F	22	Cambodian	11	12	H	N
Sandra	F	26	Cambodian	14	17	H	L

** N: None, L: Low, I: Intermediate, H: High.
**** Anita was born in Mexico of Chinese parents and immigrated to the US at age 12.
***** Gina was born in Korea, moved to Argentina at age 9, and immigrated to US at age 14.

have brokered as children were contacted and asked to participate in the study. The general aims of the present study were explained to each informant before he or she agreed to take part. All nine potential informants agreed to be interviewed.

Data collection and analysis

An initial interview question guide was constructed based upon the primary research questions of the study (see Appendix). We selected two subjects at random (Sandra and Maria) and interviewed them using this initial guide, with the intention of discovering related themes and issues that were not present in previous broker research. Based on their responses, the question guide was expanded slightly to include more detailed questions regarding the affective consequences of brokering as well as questions relating to the development of the informants' L1 and L2 literacy. While these additions did not substantially change the primary foci of the study, it was thought that this revised set of questions would elicit more in-depth information from the informants.

Tape recorded interviews were conducted in English with all nine subjects by one or both researchers over a period of two months. Each interview lasted approximately 45 minutes. Extensive notes were taken from each recorded session. Based upon a thorough review of corpus of notes from all nine interviews, the researchers coded the responses according to the three primary areas of inquiry (culture/affect, language/literacy, and cognition) plus an additional category which included settings, participants in the broker transaction, and types of brokering. Notes from each category were then examined to detect emerging common themes and possible contrasts in responses, resulting in the creation of subcategories within each area (e.g. View of Brokering as Burden, Brokering Aiding L1 Acquisition, etc.).

Limitations

There were several limitations to the study which should be noted. First, the possible relationship between gender and language brokering was not examined in this study. Eight of the nine subjects were female, due primarily to the necessity of selecting subjects from a variety of linguistic backgrounds who additionally met the criterion of having established a trusting relationship with one of the researchers. Second, no attempt was made to measure the impact of brokering on the informants' parents, nor were the parents contacted or interviewed. Although brokering's effects on parents are important to consider, the researchers chose to concentrate on the experiences and perceptions of the brokers themselves in this initial examination.

Results

We will present the results under four general categories: (1) settings, participants, and types of brokering; (2) cultural and affective effects; (3) cognitive effects; and (4) language and literacy effects. A summary of the major findings is found in Table 2. Language background, age of arrival, and current age of the informants were found not to be differentiating factors in any of these categories.

Table 2 Summary of major findings

Settings, Participants and Types of Brokering
- Settings: school, banks, government offices, stores, restaurants, doctors' offices
- Participants: parents, siblings, other relatives, peers, teachers, administrators
- Types: oral and written communications

Cultural and Affective
- Increased independence and maturity
- Broadened knowledge about the world and first and second cultures
- Established trusting relationship between broker and parents
- Added stress and burden
- Spurred broker acculturation, mixed effects on parents' acculturation

Literacy
- Increased L1 and L2 language acquisition
- Prevented L1 attrition
- Comprehended adult-level texts

Cognition
- Engaged in adult-level problem solving and decision making
- No apparent effect on academic success

Settings, participants and types of brokering

The subjects reported performing many types of brokering in various situations in and out of school. In school, the informants recalled serving as interpreters and orally translating texts for their parents and brokering orally in

parent–teacher conferences. In addition, several of them reported answering phone calls from teachers and school officials for both academic and disciplinary reasons. Perhaps the most common occasions for brokering involved written communication from the schools in the form of notes, announcements, and permissions slips. Outside of school, the subjects reported brokering in settings that include banks, government offices, stores, restaurants, and doctors' offices. Several commented that they could not imagine a setting in which they had *not* brokered.

The primary agents involved in brokering were a parent and another adult, such as a teacher, clerk, or other institutional officials. Subjects also reported brokering for their siblings, aunts and uncles, cousins, peers in schools, neighborhood children, and parents' friends and acquaintances.

The types of brokering done by the subjects were usually oral in the native language and in English, and occasionally written in English. In cases where brokers were unable to decipher a difficult text, they attempted to comprehend it by consulting English or bilingual dictionaries. Other times, they sought the assistance of older siblings, teachers, neighbours, and peers. In some instances, they went through the written text with their parent, having the parent explain certain concepts to them in their native language or explaining the meaning of dictionary words which eventually led them to a greater comprehension of the text. Eventually, the brokers developed an understanding of certain topics (e.g. the transactions that were needed to receive government assistance) which allowed them to perform without assistance.

Cultural and affective effects

Perhaps the most salient feature of the data as it relates to cultural and affective effects was that all of the subjects reported taking on parental duties for themselves and their siblings. Notes brought home, for example, were often not shown to parents. In many instances, permission slips were signed by the subjects themselves or by the parents, who did not have knowledge of their contents. Maria recalled that she often 'felt like the adult', making important educational decisions and only later informing her parents. Both Anita and Rebecca mentioned often by-passing their parents when taking care of their younger siblings in such things as writing letters to school, signing notices, and contacting teachers and administrators. Maria stated that due to her brokering in elementary and high school, she viewed herself as much more adult than other entering college freshmen.

The subjects reported several positive aspects associated to their brokering experiences. Through handling the various daily challenges of brokering, the subjects gained increased maturity and independence. In addition, high levels of trust were achieved between the brokers and their parents. Nearly all of the informants noted that their parents generally entrusted them with handling school matters independently or with minimal parental involvement, resulting in them sometimes taking on sole responsibility for making educational decisions. This trusting relationship was initially established out of necessity but slowly grew in magnitude and gradually strengthened. Both Kim and Jennifer said that their relationships with their parents were unlike those of their peers

because they were entrusted to make vital decisions and perform important day to day duties. Several of the subjects reported taking advantage of this trust when dealing with what they considered small matters, such as signing their own permission slips. However, they did not consider this to be an abuse of confidence, but rather, just another way of assuming tasks that their parents were unable to perform, thereby relieving them of the burden.

Two other positive effects of brokering reported by the informants are increased general knowledge of the world and broadened cultural understanding. The brokering was performed in a wide array of situations, resulting in the acquisition of knowledge about how institutions function, such as banks and government offices, and the appropriate types of interactions in different social and cultural settings. Laura, Gina, and Jennifer all mentioned that because they were asked to explain cultural differences to the different parties they brokered between, they gained valuable insight into each. Kim echoed the same view, explaining that brokering 'makes you acknowledge both worlds'.

Some of the negative aspects of brokering reported by the informants are added stress and burden associated with increased responsibility, which some said resulted in frustration, resentment, and embarrassment. Maria recalled feeling confused and discouraged when she did not have sufficient knowledge to fill out financial aid forms as a senior in high school. Several subjects said that at times they felt resentful toward their parents and siblings for demanding enormous amounts of time and attention. Gina recalls wanting to spend time with her friends but was kept at home by her mother. Rebecca, who occasionally brokered between her father and customers at their family store, also said that despite her desire to be with friends, she had to refused certain social invitations because she felt an obligation to help her parents. Both Rebecca and Kim recalled feeling ashamed of their parents because they could not speak English, especially in social situations and public places. Rebecca and Robert reported not inviting friends over to their homes because they wanted to hide their parents' lack of proficiency in English. Jennifer, who accompanied her parents to the government assistance office, said her embarrassment at applying for assistance was compounded by her parents' lack of English language skills.

Many of the brokers said that brokering sped their acculturation into American culture and their integration into American society. How brokering effects the acculturation process of brokers' parents is less clear, and beyond the scope of this study. However, some of the subjects commented on this issue. A few said that the process was retarded because their parents' ability to rely upon them for help removed their parents' motivation for learning and interacting with the second culture. Others said that acculturation was spurred because the brokers transmitted valuable cultural information to their parents who may not have found other sources for such information. Still others said brokering had no effect.

Language and literacy effects

Almost all of the informants considered language development to be a benefit of brokering. Both Roxanne and Sandra, for example, noted that they learned

new words in English and Cambodian by having to broker for their mothers. Maria had similar experiences:

> It (brokering) really helped me...learn to translate in both languages. I had to understand what was going on in English in order to explain it in Spanish to my mother. Yet, at the same time, I had to understand Spanish well enough to communicate what my mother felt to whoever (*sic*) was speaking English. So, I really had to know what was going on in both languages in order to do that.

Increased language acquisition, while self-reported, is confirmed indirectly by the rapidity with which the subjects began brokering after their arrival in the United States, as well as the complexity of texts translated. Many subjects began brokering almost immediately upon arrival, and all were functioning in the role within three years and handling some rather difficult documents.

The texts reported as being read and translated or interpreted by the subjects ranged from simple school forms and medical prescription instructions to filling out social security, tax, and other government forms. Anita recalled orally translating mortgage agreements, bank statements, credit card bills, and other financial documents for her parents at the age of 12 and 13. Jennifer reported that within a year of arrival she accompanied her mother to the county assistance office to fill out forms which she needed to explain to her mother. Many brokers were in charge of sifting through the mail and reading and explaining a variety of commercial and personal correspondence to their parents, sometimes within months of their arrival.

In addition to increased language acquisition and the comprehension of adult-level texts, some brokers stated that their brokering experience was crucial to the maintenance of their native language. Kim reported that she and her two older siblings often brokered for her parents, while her younger sister did not. As a result, she believes that the older members of the family — all of whom arrived before the age of five — were able to maintain their Vietnamese while the youngest member did not. Moreover, she reports meeting other Vietnamese-Americans who maintained their language via brokering, in contrast with others who did not broker and underwent native language attrition.

Cognitive effects

One further consequence of brokers taking on parental responsibilities is that brokers were required to do what we consider adult-level problem solving as children and young teens. In addition to comprehending rather high level vocabulary, brokers reported making decisions on questions regarding course selection in school, financial aid forms, school registration of neighbour children and siblings, the screening of phone calls, the separation of 'important' mail from junk correspondence, and other day-to-day activities normally done by parents and other adults. While the exact nature of such tasks are difficult to measure, they were at a level well above that normally executed by their peers, or children in American culture generally.

Subjects generally believed that their experience brokering had no effect positive or negative on their academic success, except to assist them in acquiring

language. All but one of the subjects considered themselves very good students throughout their schooling, witnessed by the fact that all are either college graduates or are currently enrolled university students. The exception, Anita, while a university graduate, reported struggling through junior and senior high school as well as college. Interestingly, she also reported engaging in the most demanding cognitive and literacy tasks, the reading of mortgage and other financial documents.

Discussion

Cultural and affective

Taking on substantial amounts of parental duties, especially those between home and school, resulted in brokers assuming the role of 'surrogate parent' for themselves and their siblings. As we have seen, the responsibilities they assume are not merely interpretation or translation in nature, but include decision making and mediation. These findings support the research done by Harris & Sherwood (1978), Downing and Dwyer (1981), and Schieffelin & Cochran-Smith (1984) who found that brokers functioned in a wider capacity as conveyers of linguistic and cultural information.

Our affective findings suggest that children's self-concepts are impacted and shaped by the brokering experience. In addition to the benefit of boosted confidence that Shannon (1990) cites, the subjects in this study reported other benefits that included greater independence, maturity, knowledge, and trust when compared to other children. However, they also felt that additional responsibility brought increased burdened and stress. It is clear that brokers must contend with different sets of emotional and social factors not faced by their peers.

Moll (1992) defines funds of knowledge as 'the essential cultural practices and bodies of knowledge and information that households use to survive, to get ahead, or to thrive' (p. 21). The subjects noted that their parents lacked important information about the nature of American schools and their workings. However, their parents did possess valuable funds of knowledge of the first culture. Passing on this knowledge helped many of the brokers develop appreciation for their heritage and culture. High levels of sensitivity toward and broadened understanding of the first culture, together with their newly acquired knowledge of the second culture, make brokers particularly valuable sources of intercultural information and insight.

What is clear from the brokers' recounting of their experiences is that communication between home and school for many LM students are mediated at best, non-existent at worst, depending on the level of responsibility students assume for making educational decisions. In many cases, parents who reportedly valued education highly had to relinquish decision making responsibilities to their children to such an extent that they remained largely ignorant about their children's education. In addition, LM students often feel the responsibility to shoulder, to whatever degree possible, the enormous task of acculturating. The result is that educators often receive inaccurate or incomplete information from

child informants and they fail to establish the home-school relationship that strengthens support for student success.

Language and literacy

Krashen (1985) hypothesises that the more new comprehensible input a learner receives, given a positive affective disposition, the more language they will acquire. Language brokers all report such acquisition as taking place, specifically in those areas which Krashen would define as i + 1. New vocabulary was encountered both in the first and second language during brokering. The subjects' self-reports strongly support Krashen's hypothesis on language acquisition. Indeed, in cases such as Kim's, brokering provided the sole source of input in the absence of any formal instruction, leading to the maintenance of relatively high levels of oral proficiency in the native language.

Particularly impressive about the broker experience is the rapidity with which oral and written language was apparently acquired in order to allow the subjects to translate very advanced level of the texts for their parents and peers. Subjects report translating linguistically sophisticated government and financial documents as early as the age of 12, although the precise complexity of these texts cannot be verified by the researchers. One may reasonably ask if brokers indeed were comprehending the text they were translating. Both Harris (1980) and Malakoff & Hakuta (1991) note that translation (both oral and written) involves a complicated process of comprehension and reformulation of a text's meaning. Malakoff and Hakuta confirm that child bilinguals are reasonably accurate translators and interpreters (the median age of their subjects was 10.7 years). While the subjects sought assistance from more capable resources (siblings, parents, the dictionary) at times, they also reported being able to read some of these documents eventually without assistance (see discussion of Vygotsky's model of learning below). The best check of their comprehension, however, was the resolution of the problem that comprehending the text involved: the rent was paid, the bank accounts balanced, the children enrolled in school.

The self-reported ability of the brokers to read adult-level texts as children raises several issues in regards to the theoretical models and practical assessments used in bilingual education. Cummins (1989) states that students' proficiency in reading academic texts (termed Cognitive Academic Language Proficiency (CALP)) lags significantly behind their oral proficiency (termed Basic Interpersonal Communication Skills (BICS)). Both Cummins (1989) and Collier (1987) have noted that on average students take between five and seven years to reach the fiftieth percentile in academic reading. Reading scores for these calculations were taken from standardised tests. The broker subjects, however, were able to comprehend texts not only above their grade level (itself an important challenge to traditional views of literacy), but in their *second* language. While Cummins & Collier's analysis is no doubt correct for the sort of unfamiliar academic reading involved in psychometric testing, the evidence presented here suggests that LM students (and presumably native English speakers) may be able to handle high level texts much more quickly than school data indicate, given proper conditions.

What emerges from the broker evidence is strong support for the socio-cultural view of what might be termed 'situational literacy', where reading performance is differentiated based upon the conditions present when encountering a text. Those real world conditions under which these LM brokers interacted with texts as brokers were very likely distinct from their normal school experiences. They include:

- a text read for a specific, understood, and authentic purpose;
- assistance available from a more capable other;
- a perception by brokers that their role was an important one in the transaction.

Under such conditions, the brokers were able to perform at amazingly high levels of literacy in comparison with even their native English speaking peers. Although more evidence is needed, the differential literacy finding of brokers may mean rethinking the entire notion of what students can and cannot comprehend at an early age.

A situation model of literacy, then, encompasses several possibilities in terms of performance in and out of school, as indicated in Figure 1. Students may, for example, do poorly reading in school, while doing quite well in a local government office or hospital. Indeed, there exists the possibility of students doing below grade level work in their school assignments while at the same time comprehending and translating the teacher's notes intended for their parents. Traditional assessments assume that only Case 1 of Figure 1 (successful performance both in and out of school) or Case 4 (failure in and out of school) is possible. By relying only on school literacy, schools may misjudge the capabilities of seemingly unsuccessful learners when viewed against their performance outside the classroom.

Gee (1992) and Smith's (1988) work on the contexts of reading and writing and the importance of membership in certain 'clubs' is also strongly supported by the broker experience. When literacy is seen as an interaction among the reader, the text, and the environment, it is easy to see why differential performance is not only possible, but likely. Similarly, readers who view their roles as important in a literacy transaction, as is the case with the brokers, are thereby enculturated into a specific practice of reading and writing which they then come to value as important. They join the club of bilingual brokers.

The specific ways some brokers interacted with the text when they were unable to comprehend it supports Vygotsky's ideas of learners moving through their Zone of Proximal Development. Learners reported using the assistance of

	In School	Out of School
Case 1	+	+
Case 2	+	–
Case 3	–	+
Case 4	–	–

Figure 1 Model of situational literacy performance

a more capable peer or adult to understand what they were asked to read, later internalising the information and gaining the facility to read the same type of text on their own in the future.

Cognition

The evidence shows that brokering involves a great deal of negotiated meaning and problem solving with the assistance of a more capable other, closely matching Vygotsky's model of learning outlined above. The tasks engaged in by the subjects, including decision making involving various school and family matters, suggest that, as in the literacy findings discussed above, these LM children are capable in many cases of what we normally associate with adult-level reasoning in real world contexts. Again, the contextualised and authentic nature of the day to day problems they were asked to solve no doubt played a key role in assisting brokers in carrying out their tasks, as is hypothesised by the situated cognition model of Greeno (1989) and Rogoff (1984), and confirmed by the evidence presented by Saxe (1988) with regards to Brazilian street vendors and Scribner (1984) involving adult grocery shoppers. In addition, the very fact that brokers are involved in translation and interpretation suggests that they are executing high level cognitive reasoning as seen by the analysis of the metalinguistic processes involved in translating done by Malakoff & Hakuta (1991).

Implications and Further Research

There are several important pedagogical and policy implications involved in the issue of language brokering. First, schools must recognise that brokers are themselves decision makers — surrogate parents — in many aspects of their schooling, from routine matters of signing permission slips to selecting courses which have an impact on their academic future. This role is created for them due to a lack of support for non-English speaking parents in many schools and other agencies. In addition to having to make adult decisions as children, we have seen that brokers often lack important linguistic information to make such decisions. Needless to say, these choices may not be in the best interest of the student. Identifying and providing additional support services for such children and their families is imperative if these students are to have the same education opportunities as language majority students.[1]

Second, educators should also be aware that even though brokers seem to gain linguistic competence in both English and their native language, serving in this new role results in increased stress and frustration for the student. These negative results may be difficult to detect since the student may appear to handle the added responsibilities without problems.

Third, despite lacking some knowledge in academic areas, brokers develop knowledge about the world outside of school far more sophisticated than most of their peers. By understanding the wide-ranging nature of brokering, teachers may be able to take such 'funds of knowledge' into account in some of their curriculum decisions.

Fourth, the rapidity with which brokers seem to acquire a sufficient level of English to translate adult-level texts means that both theorists and practitioners in literacy may need to rethink how LM students learn to read and write and under what conditions their performance is displayed. Clearly school literacy is only one aspect of a child's competence in reading and writing. Any school diagnosis based on what may be for the child an unauthentic context for literacy could distort or ignore the student's competency in other settings. Assessments of the cognitive ability of LM students, as in the case of literacy, will be seriously skewed if only in-school, psychometric testing is employed. Schools must look beyond the classroom to evaluate accurately their students' literacy and cognitive performance.

Many important questions remain unanswered about language brokering. A few that researchers need to address include:

(1) How widespread is brokering among LM students? The current LM student population in our schools is at least five million, or around 12% of all children ages five to seventeen (McArthur, 1993). It seems likely that many of these children broker for their parents at some point.

(2) What is the level of comprehension by brokers of the texts they are asked to translate? More careful analysis needs to be done of the types of texts and situations in which brokers interact with them in order to translate and mediate communication for adults. There are many methodological issues involved in measuring reading comprehension and difficulty (see, for example, Meyer, Marsiske & Willis, 1993). Nonetheless, an exploration of a child broker's literacy performance would serve to validate the current findings and give us greater insight into the processes used by bilinguals in reading and writing.

(3) What are the specific strategies for translation and mediation used by brokers? The sophistication of child translators observed by Harris (1980) indicate that brokers employ a range of metalinguistic and metacognitive strategies. By better understanding the nature of those strategies and how they relate to the socio-cultural setting, we may be able to grasp underlying differences and similarities, if any, in monolingual and bilingual language processing, as well as the relationship between scientific and everyday cognition, assuming this is indeed a legitimate distinction.

(4) Why do students perform poorly in school yet succeed in the real world? The present study suggests that LM brokers perform differentially in regards to reading and writing depending on the setting. Knowing the conditions for school success and failure of such brokers could help us understand the variables involved in academic achievement of other LM students.

(5) What are some of the specific types of knowledge gained from brokering experiences? It may be useful for teachers to know what information and strategies that are acquired by brokers outside of school could be integrated into the classroom.

(6) Does brokering help or hinder parents' acculturation and acquisition of English? No clear pattern emerges from the present study or previous examinations of language brokering as to the effect on the cultural and

linguistic interactions of the broker's parents. Further investigation is needed to determine the results of brokering on the dynamics of the LM home.

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Note

1. For a description of one school's attempt to provide cultural brokering see Geutemann (1983).

Appendix: Language Broker Question Guide

Biographical

(1) Date of Birth
(2) Sex
(3) Birthplace
(4) Educational background
(5) Length of residence in the United States/age of arrival
(6) Family members (age, sex, length of residence)
(7) When did you start brokering?
(8) What was the lapse of time between arrival to US and brokering?
(9) For whom did you broker in relation to school?
(10) On what occasions did you broker?
(11) What were sources of miscommunication between the parties you were brokering for? Was it a question of language (i.e. you didn't know how to say certain things in one language or the other), or do you remember problems of comprehension of ideas you were asked to interpret?
(12) Did you ever 'misinterpret' purposely for your own advantage? Under what circumstances did this take place?
(13) Are you still brokering for these family members?
(14) How did brokering affect your view of yourself among: your peers? your family members (pride, stigma, greater self-esteem, burdensome)? Did it affect your view of yourself as a member of the LM culture and US culture?
(15) How did it affect your relationship with your parents/family members in terms of authority? with teachers and administrators?
(16) How did it affect your academic performance (+/-)?
(17) How did it affect your learning of English? that of those for whom you brokered?
(18) Did brokering for siblings effect their education? relationships at school and home?
(19) Did your parents/siblings eventually supersede the need for your brokering? At what point did this happen? How did it affect authority, academic performance, and school relations?
(20) Did you translate texts for your parents? If so, what were they?*
(21) Describe some of the circumstances you brokered under. Did you make any decisions without consulting your parents on matters dealing with interpretation or translation?*
(22) How did your peers react to your brokering? Did they consider it prestigious?*

* = Revised questions after first two interviews.

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