The Role of Prefabricated Language in Young Children's Second Language Acquisition

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Abstract

This study investigates how young learners of English as a second language become both capable of socializing in and linguistically creative in English, through the use of prefabricated language (PL). Four preschool Japanese children in two-way immersion programs were observed from the stages of single-word to multi-word utterances. Along with journals kept by the observer and the subjects' parents, each subject's conversations in school were tape recorded once a week. The utterances were transcribed and coded according to the definitions of PL, analyzed PL and creative language. The utterances of peers and teachers were examined to determine if interactions enhanced PL analysis. The results show that most of the novel sentences were constructed from PL or analyzed PL, but not from the free combination of words. Although the study did not find clear evidence that no internal process was necessary for the creative process, it implies that there is an important role for PL as a scaffold for linguistic creativity. The study provides pedagogical implications for the use and analysis of PL in immersion classrooms.

One of the primary concerns of educators and researchers in immersion programs, and more broadly in bilingual education, revolves around children's acquisition of the second language (L2). It is especially imperative to understand how children become linguistically creative in constructing sentences without formal language instruction. Do children make creative sentences from scratch? Or do they make creative sentences based on ready-made, memorized chunks of sentences, known as prefabricated language (PL) (Brown, 1973; Hakuta, 1974)? Although the role of PL in second language acquisition (SLA) has interested researchers, the relationship between PL and rule-based creative language (Brown 1973) remains unclear and controversial.[1]

It has been argued that PL only benefits children's socialization skills, but does not directly contribute to the creative process of SLA (Krashen & Scarcella, 1978). Such an argument suggests that language acquisition and language socialization are independent from each other. For educators in immersion programs, whose responsibility is to nurture language development along with effective socialization inside and outside the classroom, it is important to know whether encouraging the use of L2 for social purposes can or cannot lead to the acquisition of L2 as well.

The main purposes of this multi-case study were to investigate, in two-way immersion settings, whether (a) PL evolved into creative language through the learners' active analysis of PL, and (b) verbal interaction between the learners and the teachers and/or peers aided the analysis of PL. The study focused on the transitional stage of SLA from one-word utterances to multi-word utterances. It also attempted to provide a solution to some of the methodological problems inherent in most of previous PL studies, such as identifying PL and tracking the process of PL analysis.

Previous PL studies that claim the role of PL in the acquisition of the first language (L1) and L2 (Bolinger, 1976; Clark, 1974; Huang & Hatch, 1978; Itoh & Hatch, 1978; Peters, 1983; Vihman, 1982; Wong Fillmore, 1976; Yorio, 1980) have not squarely faced the possibility that PL analysis may be helped by an internally preprogrammed creative process. Krashen and Scarcella (1978) argue that an internal creative process, independent from the use of PL, develops to "reanalyze" PL and becomes responsible for the true SLA. In order to challenge this argument, it is necessary not only to present evidence for the continuity from PL to creative language, but also to present evidence demonstrating that L2 learners actively analyze PL with the aid of daily socialization, instead of automatic internal "reanalysis."

Theoretical Framework

In the studies that argue against a direct contribution of PL to L1 and L2 acquisition (Bates, Bretherton, & Snyder, 1988; Bohn, 1986; Brown, 1973; Krashen & Scarcella, 1978; Lightbown, 1983), the concept of acquiring a language through the use of PL has been considered behavioristic. The current study sought to present a different perspective, by looking at the possibility of PL's creativity and its relationship to socialization.

The two major theoretical frameworks that underlie the role of PL in SLA in immersion settings are reviewed here: socialization and language acquisition (Bakhtin, 1981, 1986; Hatch, 1978, 1983) and the concept of scaffolding (Cazden, 1992; Peregoy, 1991, 1999; Vygotsky, 1978). [2] While Krashen and Scarcella (1978) claim that socialization is irrelevant to the process of language acquisition, there is also the argument that socialization is at the heart of language acquisition and that verbal interaction during socialization is crucial in the determination of the course of SLA. Hatch claims that "one learns how

to do conversation, one learns how to interact verbally, and out of this interaction syntactic structures are developed" (1978, p. 404) and thus PL "give[s] the child a way to interact, but [it] also [is] grist for the mill of acquisition" (1983, p. 173). Wong Fillmore (1976) finds this claim true in her examination of young L2 learners: The initial interaction using PL enables the learners to eventually construct sentences using the rules they found in PL.

Another theory of socialization and acquisition highlights a sociohistorical perspective of language acquisition, which has recently interested SLA researchers because of its similarity to the Vigotskyan view of language acquisition. Both sociohistorical and Vygotskyan theories emphasize that language acquisition is achieved through social activities (Ochs, 1988). Bakhtin (1981, 1986) argues that one's speech and the meaning of words are primarily social and that one's speech is tightly connected to other people's speech produced in the past. Sociohistorical theory expands the horizon for PL research as it suggests a strong connection between the L2 learners' speech and the native speakers' speech. In this theory, the learners' speech is a social and historical product, obtained through the learners' participation and socialization in the L2 society, from which individuality and creativity is developed. Linguistic development is thought to be a transformation from someone else's speech to one's own speech.

Scaffolding has been reported to enhance SLA in immersion settings (Peregoy, 1991, 1999; Safty, 1990), and it also accounts for the developmental transformation of the learners' speech. Based on the Vygotskyan perspective of development, scaffolding is defined as "temporary support or assistance, provided by someone more capable, that permits a learner to perform a complex task or process that he or she would be unable to do alone" (Peregoy, 1999, p. 138). In a classroom, scaffolding is constructed by either teachers and/or peers, or by the L2 learners themselves, which is called "self-scaffolding" (Behrend, Rosengren, & Perlmutter, 1992). Thus it may take shape as "multiple scaffolds" (Peregoy, 1999). Scaffolding must eventually be taken away, and the responsibility must be transferred from the teachers/peers to the learners (Meyer, 1992).

The role of PL use and analysis in SLA may be interpreted in terms of scaffolding in two ways. One is that PL serves as a tool for self-scaffolding, as L2 learners analyze it in search of linguistic rules. The second is that socialization serves as scaffolding, as the teachers and peers provide the learners both the raw material for PL and assistance for PL use and analysis during their verbal interactions with the learners.

Operational Definition of PL and Creative Language

For the purpose of examining the relationship between PL and creative language, definitions of the two terms must be clarified.[3] Definitional and methodological problems have been the main reasons for much controversy over the role of PL in language acquisition (Bohn, 1986; Krashen & Scarcella,

1978; Vihman, 1982). In previous PL studies of SLA, no clear distinctions were made among PL, analyzed PL, and creative language and, accordingly, this has caused much confusion regarding which method should be used to follow the process of PL analysis. This has led to serious problems in terms of construct validity of studies.

In an attempt to solve these problems, which are common in traditional PL studies, the current study largely adopted the definition and the identification method invented by the researchers of two studies of PL in L1 setting (Lieven, Pine, and Dresner-Barnes, 1992; Pine & Lieven, 1993) and modified them to fit the context of SLA. Focusing on (in)flexibility as the key to distinguishing PL from creative language, PL was defined as the language in which two or more words, that had not independently occurred previously, appeared invariantly in the same order. Analyzed PL was defined as the language in which part of the sentence became flexible while the rest of the sentence remained inflexible. Creative language was operationally defined as either mostly analyzed PL or the language in which two or more independent words were freely combined.

Main Hypotheses

The study consisted of two components: One regarded the construction of creative language through the use of PL, and the other concerned the relationship between verbal interaction, as an important part of socialization, and language acquisition.[4] For the first component of the study, it was hypothesized that creative sentences would be made based on PL rather than from scratch in the initial stages of SLA. This hypothesis reflects earlier findings from previous PL studies in both L1 and L2 contexts, which observed the trace of PL analysis in creative language (Elsen, 1996; Itoh & Hatch, 1978; Thal, Bates, Zappia, & Oroz, 1996; Ventriglia, 1982; Vihman, 1982; Wong Fillmore, 1976; Yorio, 1980).

For the second component of the study, it was hypothesized that the learners would receive crucial aid for the analysis of PL through interaction with their teachers and peers. This hypothesis is based mainly on the similar hypothesis made by Hickey (1993) as well as on findings from various studies including cross-cultural studies of L1 acquisition (Heath, 1983; Miller, 1982; Ochs, 1988; Schieffelin, 1986), studies of individual difference in style of L1 acquisition (Hampson & K. Nelson, 1990; Lieven, 1978; Lieven et al., 1992; Masur, 1989; K. Nelson, 1973; Pine, 1990; Pine & Lieven, 1993) and studies of modification of learners' utterances called "recasts" (Farrar, 1990, 1992; K. E. Nelson, 1977, 1987). These studies have suggested that the type of interaction may affect the ways in which language is used and acquired.

Method

Subjects and Observation Sites

The subjects of the current study were four Japanese preschool children aged between 3 years 4 months and 5 years 3 months at the beginning of the study. Two of the four subjects were girls, named Aya and Misa, and the other two were boys, named Yoshi and Nobu (pseudonyms have been used). They were selected after observing classrooms and interviewing the teachers and the children in order to find a representative group of children that met the following criteria: (a) Japanese preschool children in two-way immersion programs in San Francisco; (b) whose first language was Japanese only; (c) whose utterances in English consisted primarily of single words with occasional multi words at the beginning of the study; (d) no or almost no use of English at home when the study began; and (e) no formal previous English instruction. A handful of Japanese children met these criteria, and the parents of four children agreed to participate in this study. Other than the above criteria, there was no bias in the selection of the subjects.

The two-way immersion programs in two preschools in San Francisco were the observational sites. Preschool A, which the two girls attended, offered a multicultural and multilingual environment with bilingual teachers in English, Japanese, Korean and Chinese. Preschool B, which the two boys attended, presented an English and Japanese bicultural and bilingual environment, with an English immersion class offered once a week.[5]

Instruments

In order to ensure the reliability of this participant observation study, multiple data collection methods were used. The speech of the subjects, teachers and peers was tape-recorded through a wireless microphone attached to the subjects. Additional collection methods included observational notes, parental diaries, and home visit notes or tape-recording the subjects' conversations at their homes. Also, detailed descriptions of the subjects, the schools, the contexts and the learning environments were accompanied with the quantitative study to further enhance the study's reliability.

Procedure

The data was collected in school and at home, thoroughly by the author during the developmental stages from single-word to multi-word utterances of the subjects. Using an ethnographic approach, the study was conducted mainly through participant observation by the author. The subjects were observed in school weekly or biweekly for about a six-month period, except Aya who left the country in the middle of the study and was observed only for a period of three months.[6] The subjects' parents were asked to keep the journal whenever their children uttered new words and sentences at home.

Home visits or tape-recording of the family conversations at home were conducted for an hour once a month for the last three months of observation.

Data Analysis and Coding System

All the collected speech samples were transcribed and the learners' utterances were recorded chronologically. Each utterance in English (including the occasional incorporation of Japanese words) was coded first into two broad vocabulary categories: single-word (SW) utterances and multi-word (MW) utterances. MW utterances were then further categorized into five subcategories: PL, partially-analyzed MW (AN) utterances, productive MW (PR) utterances, freely-combined MW (FC) utterances, and uncategorized MW (UMW) utterances. (See Appendix A for details of definitions, and Appendix B for a coding sample.) The transformation from PL to AN to PR by freeing one or more words from the original PL is interpreted as self-scaffolding gradually being dropped until the learners become fully capable of the task (creating sentences) on their own.

For examining whether verbal interaction aided PL analysis, the teacher/peer utterances immediately preceding learner utterances were categorized into three types of speech: learner-utterance-eliciting speech, imitation-eliciting speech, and non-eliciting speech. The learner utterances after teacher/peer utterances were first categorized into imitation or non-imitation. Imitative speech was then subcategorized into three types of imitation: reduced imitation, exact imitation, and expanded/modified imitation. (See Appendix C for details of definitions.) Imitations in verbal interaction are interpreted as mutual scaffolding built by both the learners and the teachers/peers, which supports the advancement of the creative construction of sentences.

The coding for both components of the study was conducted thoroughly by the author. For the enhancement of internal reliability of the study, intra-observer judgment of the coding of each utterance was examined, first during the pilot study, using the sample utterances from the interviews for selecting subject. After some adjustments of the coding procedure, the first one hundred vocabulary of each subject was coded twice for the consistent intra-observer judgment. Furthermore, when necessary, the teachers and parents were asked to provide some judgment regarding repetition and imitation of the children's utterances.

The frequency of the occurrence of each vocabulary category of speech and its developmental change was examined and compared in a quantitative study. Details of individual differences in the usage and analysis of PL were examined closely in a qualitative manner.

Results

The results from the quantitative examination of each subject's vocabulary demonstrate the four subjects' use and analysis of PL and its developmental

change. First, the composition of vocabularies of the four subjects, shown in the percentage of each vocabulary category of the subjects' utterances, shows that the SW utterance category was the most frequent (45.7% of the total vocabularies of the four subjects) in a transition from the one-word to the multi-word utterance stages. FC utterances occurred least frequently (less than 1%) while PR utterances were the second most frequent category (27.4%), followed by PL and AN utterances (14.6% and 11.4%, respectively). The comparison indicates that MW utterances were rarely FC utterances and, more importantly, that most novel utterances were PR and AN utterances, which were made based on PL analysis (see Table 1).

Table 1

The Number and the Percentage of Vocabulary, with Figures for the Total Number of Four Subjects and Percentages

	Aya	**Misa**	**Yoshi**	**Nobu**	**TOTAL**
SW	68 (71.6%)	231 (48.1%)	124 (46.3%)	281 (40.3%)	704 (45.7%)
PL	24 (25.3%)	72 (15.0%)	43 (16.0%)	86 (12.3%)	225 (14.6%)
AN	1 (1.1%)	54 (11.3%)	28 (10.4%)	93 (13.3%)	176 (11.4%)
PR	2 (2.1%)	118 (24.6%)	67 (25.0%)	235 (33.7%)	422 (27.4%)
FC	0 (0.0%)	5 (1.0%)	6 (2.2%)	2 (0.3%)	13 (0.8%)
Total	95	480	268	697	1540

SW = single-word utterances, PL = prefabricated language, AN = partially-analyzed multiword utterances, PR = productive multiword utterances, FC = freely-combined multiword utterances.

Second, in regard to the frequency of PL analysis by the subjects, the study showed that half of PL (43.3%) was analyzed and only 28.4% of analyzed PL eventually became productive patterns. However, most PR utterances (61.4%) were found to originate in PL. In other words, even though a relatively limited amount of PL was analyzed during the observation, it was used fully, maximizing its potential to be analyzed to the point where productive patterns were developed.

By examining developmental changes in the vocabulary of each subject, it was found that, in general, PR utterances eventually increased in proportion while the frequency of PL utterances decreased and was surpassed by PR

Figure 1. The frequency of different categories of vocabulary at each vocabulary count for each subject

Please see the HTML version of this article for Figure 1.

Figure 1. The frequency of different categories of vocabulary at each vocabulary count for each subject (cont.)

Please see the HTML version of this article for Figure 1.

utterances, as seen in Figure 1.[7] By and large these results support the statistically powerful finding in the study by Pine & Lieven (1993) in which there was a significant correlation between PL (called "frozen phrases" in their study) and PR ("productive positional patterns").

The qualitative examination of individual data revealed some characteristics of the use and analysis of PL.[8] First, the record shows that sometimes PL was clearly picked up through socialization, primarily in the classrooms, on the playground, at home with guests, or on the street. Some of them came from television. Such PL is characterized as "community-wide" expressions (Peters, 1983). Some were "exact imitation" of the original and others were "reduced imitation," in the same or similar contexts as the original. The fact that PL echoes expressions originally uttered by someone else reflects an observation of L1 development, in which a girl borrowed the structure and words/phrases from pre-sleep dialogues she had with her father in her own pre-sleep monologues (Dore, 1995).

Second, when PL was analyzed, the first few analyzed PL utterances tended to resemble the original PL. For instance, Aya analyzed PL, *more cracker please*, by replacing a word in PL with semantically similar words (first *more apple please*, then *more salad please*), before expanding the range of the word selection finally to, *more fork please*. This suggests that the learners seem to first try out semantically similar words for replacement and gradually increase the selection of words. Such a view is consistent with some L1 studies that argue that grammatical rules are initially learned on an item-by-item basis (Lieven, Pine, & Baldwin, 1997; Pine & Lieven, 1997; Pine & Martindale, 1996).

Third, while all the subjects engaged in noun replacement (e.g., [this + X]), the more advanced subjects also used verb replacement (e.g., [I wanna + V], [V + it], and [I'm V-ing]) and embedded phrases and sentences into the analyzed PL (e.g., *I did take this off yesterday* by combining the phrases made from the patterns, [X + did + Y] and [take + X]). Such strategy helped the subjects in constructing longer and more complex phrases and sentences. Also, the subjects who used and analyzed a wider variety of PL produced more PR utterances. For instance, the subject who had only four PL utterances that became productive patterns produced 67 PR utterances in which the structures were similar to each other, while the subject who had 47 PL utterances that became productive patterns produced 235 PR utterances with more variety in the structures.

Finally, the way errors were made in the course of PL analysis presented some examples of the subjects' active generalization and abstraction of rules. For instance, in one case of the [I'm + X] pattern, in which a subject originally produced grammatically correct sentences (e.g., *I'm more than you*), the subject later made errors by incorporating uninflected verbs (e.g., *I'm drink some water*). In an example of Misa's PL analysis in Table 2, her sentences are chronologically ordered. The list is not exhaustive, but only pertains to the utterances related to the patterns, [I + X] and [I'm + X]. The asterisks indicate

Table 2

Examples of Misa's PL Analysis with [I + X] and [I'm + X] Constructions

<I + X> construction	<I'm + X> construction
I have	
I wanna do it	
I wanna do it	
I need a truck	
I don't	
I know	
I go by myself	
I put it	
I like peanut-butter sandwich	
I do	
I don't wanna spaghetti	
I got listen	
I want butter	
	I'm bad than you
	I'm badder than you
	I'm more than you
I like butters	
	I'm princeess
	I'm the horse
I don't know	
I didn't	
I didn't do it	

Table 2 (cont.)

Examples of Misa's PL Analysis with [I + X] and [I'm + X] Constructions

<I + X> construction	<I'm + X> construction
	I'm doin' monkey chee
	*I'm drink some water
	*I'm pour it off
	I'm this
I feel shark	
I can't	
	I'm scared
	I'm over here
	I'm playing with Ann
I get	
	I'm the Rena
	I'm next to you
I told you before	
I play here	
I don't want to play with you	
	I'm Cutey Honey
I can do it	
I like eggs	
I wanna that	
That's not I do	
I got the toys	
I have apple	
So I need a apple	
I got first	

Table 2 (cont.)

Examples of Misa's PL Analysis with [I + X] and [I'm + X] Constructions

<I + X> construction	<I'm + X> construction
	I'm a apple
	I'm hungry
I make the princess	
	I'm taking the apple
I wanna be Mommy snake	
	Because I'm wearing costume
	I'm gonna make this
	I'm red T-shirt
I have ABCD	
	I'm coming
I need one trace	
I can see you	

Note: Asterisks indicate erroneous phrases and sentences.

erroneous sentences. (The errors other than the choice between *I* and *I'm* are not considered.)

The two errors (*I'm drink some water, I'm pour it off*) occurred only after the subject used verbs in the [I'm + X] pattern for the first time in the record (e.g., *I'm doin' monkey chee*). Although this particular sentence did not completely satisfy the category of PL vocabulary, it is likely to be an imitation of someone's utterance as a whole, considering that none of its words were uttered independently before, and that the phrase, *I'm doin'*, appeared for the first time. Eventually, Misa corrected herself and stopped using uninflected verbs in the [I'm + X] pattern. In this case, what provoked the subject to temporarily produce erroneous sentences seems to be her grammatically correct new sentence made prior to the errors. The introduction of a verb to an *I'm* sentence, which had not appeared before, seemed to encourage the subject to try this new combination of *I'm* with verbs in a wrong form.

A different example given below highlights Nobu's abstraction of rules from the multiple patterns he was using concurrently: [you + X], [you are/ you're + X], and [your + X]. In Table 3, the sentences are chronologically

Table 3

Examples of Nobu's PL Analysis with [you + X], [you are/you're + X], and [your + X] Constructions

[You + X]	[You are/You're + X]	[Your + X]
	You are rooster	
*You what's that		
You say		
You say Mary		
*You Richard		
*You name is Richard		
	You are bad teacher	
	You are bad boy	
	You're the bad guy	
	You're the good guy	
		Your name is Chuck
You see		
	You are the purple	
	You are robot	
	You are kankan	
	You're cool	
*That you book		
		Your Mama
*You here		
*You girl		
*You not girl		
*You robot		
Alan say you like him		
You finished		

Table 3 (cont.)

Examples of Nobu's PL Analysis with [you + X], [you are/you're + X], and [your + X] Constructions

[You + X]	[You are/You're + X]	[Your + X]
You shake		
You see it		
You win		
You got lots of money		
You did		
You got		
	You're my Dad	
	You're crying	
You broke mine first		

Note: Asterisks indicate erroneous phrases and sentences.

ordered. Missing articles and other errors that are not related to the use of copula are not considered.

From the pattern [you + X], Nobu produced some errors such as *you what's that* and *you Richard* while he was also producing correct sentences in [you + X]. Then, after producing a series of correct forms in [you are/you're + X] (e.g., *You are bad boy, You're the bad guy*, in a playful tone, *You're cool*) and [your + X] (e.g., *You're name is Chuck, Your Mama*), he started making errors by putting words other than verbs in the [you + X] pattern (e.g., *You here, You girl, You not girl*). Finally, only after producing analyzed PL with a verb in [you + X] (*Alan say you like him*), Nobu managed to correct himself and put only verbs or auxiliaries in [you + X] (e.g., *You shake, You did, You got*). This is an example of PL analysis by comparing different but similar forms used in parallel.

The next question looked at was whether PL analysis was assisted by verbal interaction with the teachers and peers.[9] Most teacher/peer utterances immediately preceding learner utterances were non-eliciting (83.6% of the total teacher/peer utterances was non-eliciting speech). At the same time, the majority of learner utterances did not incorporate any words from the previous teacher/peer utterances (the ratio of non-imitation to imitation is 100 to 23 for Misa, 100 to 12 for Yoshi, and 100 to 16 for Nobu), except Aya who left the study early. That is, the interactions between the subjects and the teachers/peers were not reciprocal, and the learners needed little assistance for PL analysis. Therefore, the result of this study did not find evidence to support

the hypothesis made by Hickey (1993) that the learner may receive crucial aid in PL analysis through interaction.

Still, among the imitative learner utterances, expanded/modified imitation was associated with AN and PR utterances (Figure 2) while reduced or exact imitations of the teachers/peers were more related to SW or PL utterances. In addition, in situations where teachers/peers elicited learner utterances, expanded/modified imitation by the subjects often occurred, and such utterances were also categorized as AN or PR utterances (Figure 3).

Figure 2. The frequency of expanded/modified utterances in each vocabulary category

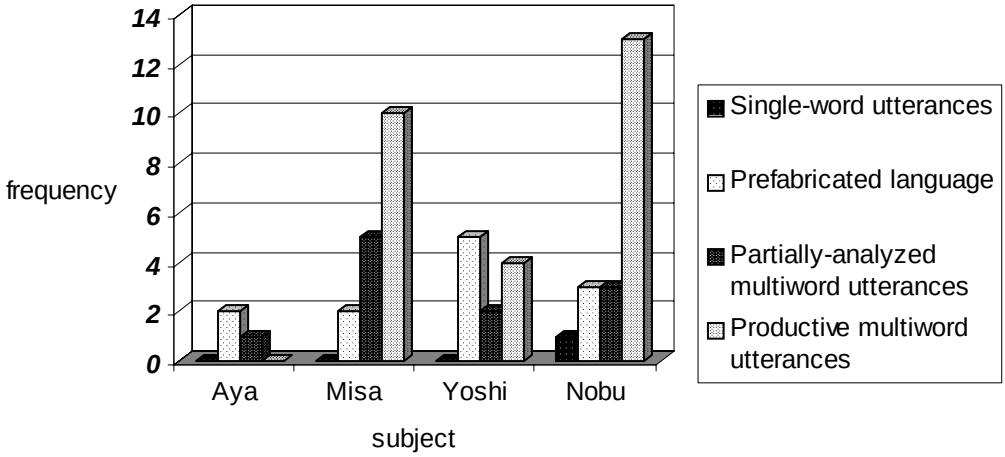
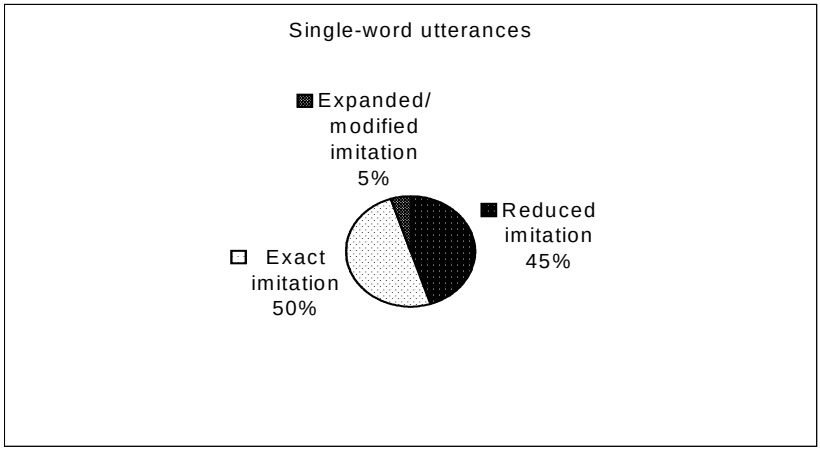
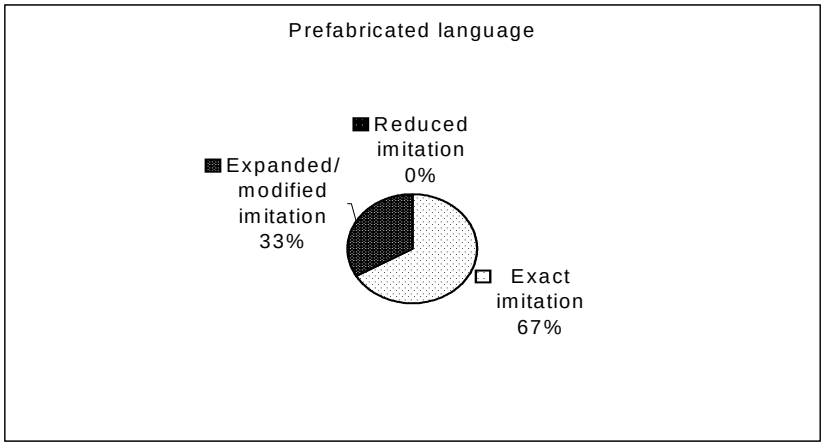
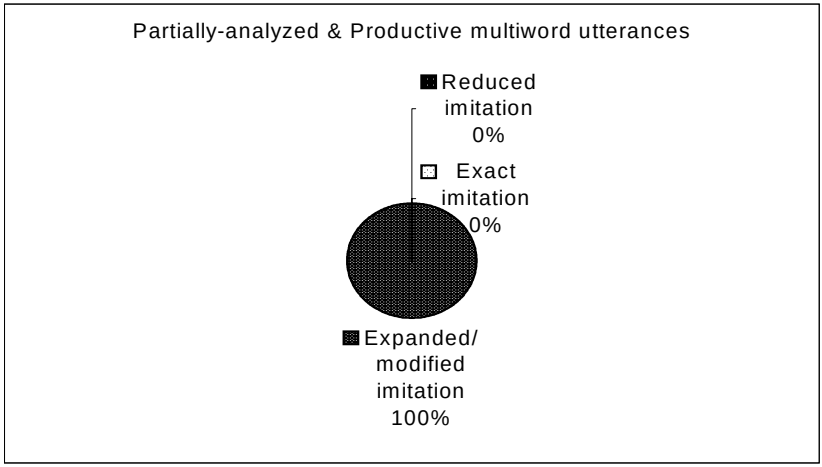


Figure 3. The proportion of the combination of learner-utterance-eliciting speech by teachers/peers with different types of learner utterances in each vocabulary category







While K. Nelson (1981) claims that the use of PL are related to differences in interactional styles between children and parents, the finding in the current study further implies that the analysis of PL also tends to be sensitive to a particular interactional style. On five occasions, the teachers/peers expanded or modified the previous learner utterances, then the subjects further expanded or modified the teacher/peer utterances, which resulted in PL analysis. Such an incidence shows a resemblance to a benefit of "recast" to language acquisition that has been well discussed (Baker & Nelson, 1984; Farrar, 1990, 1992; K. E. Nelson, 1977, 1987).

Discussion and Conclusions

One of the most significant findings in this study was that even telegraphic speech (two or three content words without function words) was not the product of free word combination, but based on PL or analyzed PL. As clearly translated into the three distinctive stages of PL analysis, the subjects picked up PL to start with, and gradually freed the words in PL that were originally fixed, replacing them with different words, thereby constructing novel sentences. The subjects seldom created novel sentences without PL as a basis. This finding, corroborating the findings in L1 studies (Lieven et al., 1992; Pine & Lieven, 1993), refutes the argument made by Krashen and Scarcella (1978) that, because PL is separated from analytic language such as telegraphic speech, PL does not directly contribute to the creative process.

The frequency of the use of PL and a hint of PL's direct role in SLA in this study are also coherent with the finding from the study of L2 learners by Wong Fillmore (1976), and the reports in L1 cross-cultural studies of working-class white children by Miller (1982), working-class black children by Heath (1983), Samoan children by Ochs (1988) and Kaluli children by Schieffelin (1986). Along with the present study, these studies show that both L2 learners and L1 learners in various cultural contexts use PL frequently, in contrast to the majority of Western middle-class children, who are reported to use much less PL (K. Nelson, 1973, 1981), but are believed to acquire language only "one word at a time" (Bloom, 1973).

Another finding from the study implies the crucial role of PL not only in the initial stage of SLA, but also in the later stages even when the subjects showed increasing control and freedom over the construction of sentences. The two advanced subjects showed their capability of finding abstract rules step by step. Interestingly enough, errors and rule-applications occurred either when a new expression was introduced or when ongoing analysis of similar expressions was available for a comparison. PL seems to continue to help the subjects discover abstract rules, as long as the learners keep using and analyzing more and more varieties of PL.

Nevertheless, because the current study did not find an external factor, such as verbal interaction, directly and immediately associated with PL analysis, it failed to provide evidence that "reanalysis" by an internally preprogrammed process was not necessary to account for the creative process. Therefore, the claim of PL's direct contribution to the creative SLA process was only partially supported.

This also suggests that the immediate impact of verbal interaction for PL analysis seems not to be as great as the subjects' own active PL analysis. The study found that the subjects tended to find opportunities to analyze PL no matter how much assistance was offered through verbal interaction. Still, it does not mean that the subjects did not need any support from verbal interaction. First, since this study only focused on the immediate effect of verbal interaction, the result of the study does not exclude the possibility that verbal interaction has a delayed effect.[10] Also, when PL was analyzed during the interaction, a certain style of interaction seemed to encourage PL analysis. For instance, a subject in this study analyzed PL for the first time during a playful interaction with her peers. A word play involving modification of each other's utterances provided the subject with a crucial cue and showed her a way to manipulate the language on her own. Although PL analysis took place during verbal interaction only sporadically in this study, as K. E. Nelson (1987) argues, if cognitive comparison occurs even as a "rare event," such an event may promote language acquisition.

In sum, with the help of an improved research method, the current study demonstrated: (a) the learners' active role in the creative process, and (b) how language development goes hand in hand with socialization. The learners in the two-way immersion programs described in this study were attentive to recurrent, useful, or favorite expressions they could or wanted to use for their social purposes, picking them up from the speech of other people. Afterwards, such expressions, stored in their memory as PL, became the basis for the learners' active analysis of linguistic rules. Socialization provides materials and opportunities for the learners' PL use and sometimes its analysis, which enables the learners to eventually construct creative sentences. Thus, PL as the language for socialization is also used for acquisition, contrary to the claim made by Krashen and Scarcella (1978).

Theoretical and Pedagogical Implications

The concept of scaffolding is extremely useful for explaining the fact that the language learners acquire L2 through socialization. As Hatch (1978, 1983) suggests, the four subjects in the current study first learned to socialize with their teachers and peers by using PL. Then, through gradually analyzing PL, they learned how to create sentences on their own. Thus, both PL and socialization are necessary scaffolds for the learners to be linguistically competent and creative. The acquisition process through PL is explained in

terms of the developmental transformation from the stages of requiring assistance (the use of PL and verbal interaction) to independence from assistance (the construction of the learners' own creative sentences) (Vygotsky, 1978).

This study also urges a fundamental review of linguistic creativity. As it is pointed out, many parts of speech are fixed (Nattinger & DeCarrico, 1992) and repetitive or imitative (Tannen, 1987, 1989) to some degree, and not totally inventive. In the current study, the process of sentence construction was found to be an appropriation of the sentences that were already made and used by teachers and peers. Such a finding reflects a sociohistorical perspective of language acquisition, in which it is argued that one learns a language by incorporating the utterances of other people and gradually changing them into one's own. Thereby the learner becomes not only linguistically, but also socially, connected to the community in which the language is used (Bakhtin 1986).

As for the pedagogical implications, the findings presented in this study corroborate some of the criteria for a successful two-way immersion programs that were advocated by Lindholm (1990): (a) "optimal language input (input that is comprehensilble, interesting, and of sufficient quantity) as well as opportunities for output should be provided to students;" and (b) "positive interactions among students should be facilitated by the use of strategies such as cooperative learning" (pp. 91-105). An ideal environment to enhance PL use and analysis in an immersion classroom is a situation where learners are provided plenty of opportunities for the use and analysis of variety of PL, and for constant language socialization between the learners and the teachers and/or peers who are native speakers of the learners' L2.

Since more PL analysis results when there is more variety of PL in use, as found in this study, teachers can create classroom verbal activities full of various, recurrent expressions in different contexts, and with rich opportunities for the learners to actually use PL and to gradually modify and/or expand the original forms of PL. Word play may be one of the tools for encouraging the young learners to manipulate PL and transform it into their own expressions. Adopting the concept of scaffolding to classroom activities, in the forms of routines, common classroom expressions, verbal interactions with the learners (Peregoy, 1991, 1999; Peregoy & Boyle, 2001), will surely help the teachers to assist the transformation of PL into creative language.

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Appendix A

Definitions of terms in learner utterances

Single-word (SW) utterances: are the recorded utterances made of a single word, where a word means "one of the units of speech or writing that native speakers of a language usually regard as the smallest isolable meaningful element of the language" (The Oxford Companion to the English Language 1992), including lexical reduplications (i.e., "bye-bye," "yum-yum"), word-compounds (i.e., "orange juice," lunch time"), and contracted words (i.e., "that's," "you're"). It must satisfy one of the following conditions in the record:

1. Any one word uttered independently
2. A common noun that has not occurred independently but accompanied by other words in a previous utterance
3. Any proper noun, including one that has not occurred previously
4. An English borrowing word in Japanese (i.e., "swimming," "butter")
5. A word, other than the above which has not occurred independently but accompanied by other words in three different previous utterances when no words next to it are the same

Multiword (MW) utteranaces: consist of more than one word, including a set of words which has previously occurred in learner utterances in the record, but excluding lexical reduplications and word-compounds. They include the following subcategories. The set of words embedded in an MW utterance must be categorized as well. However, not all the MW utterances can be further coded as one of the subcategories. Every utterance refers only to the one that is recorded.

1. PL: utterance that contains two or more words or sets of words, none of which have occurred in the same position before, allowing only one SW or one set of words which has occurred independently. One of the following conditions must also be met:

   (a) Produced as an exact or reduced imitation, elicited or spontaneous

   (b) Invariantly repeated at least once.

2. Partially-analyzed MW (AN) utterances: analyzed utterances in which,

   (a) One or more words or sets of words have occurred in the same position in one previously recorded MW utterance with one word or a set of words which makes up the rest of the utterance is categorized as SW vocabulary, has occurred independently, or within another MW utterance before, or

(b) one or more words or sets of words have occurred in the same position in one previously recorded MW utterance but a word or a set of words which has accompanied them previously is released, or

(c) all the words or sets of words have occurred in the same position at least once before in the record, categorized as PL vocabulary, but also each word in the PL vocabulary has occurred independently afterward.

3. Productive MW (PR) utterances: analyzed utterances which contain

   (a) one word or a set of words which has occurred in the same position in two different previous MW utterances with one or more words or sets of words which are categorized as a SW vocabulary, has occurred independently, or within another MW utterance before, or

   (b) one word or a set of words which has occurred in the same position in another productive MW utterance as in (i), which makes a productive pattern, regardless of whether the rest has occurred previously. The word will be added as a SW vocabulary and the set of words will be considered independent.

4. Freely-combined MW (FC) utterances: are the recorded utterances in which all the words or sets of words are either categorized as SW vocabulary, or have previously occurred independently or within three different MW utterances before, but none of them has been combined in the same position in a previous MW utterance. These exclude reduced or exact imitation.
5. Uncategorized MW (UMW) utterances: are the recorded utterances which cannot be categorized as any of the above.

Appendix B

Sample vocabulary coding

Single-word MW utterances	PL	Partially-analyzed MW utterances	Productive MW utterances	Freely-combined MW utterances	uncategorized MW utterances
		Look at			
			I'm bathroom		
orange, some		some orange	I some orange		
			My chicken		
rain					
		It's rain			
		Rain time			
		more orange	I more orange		
		More orange			
			Two orange		
	Bless you				
	Bless you				
	Over here				
Honey					
					He's not honey
Black					
Orange					
	How cute x6				
Cute					
Crazy					
	What's that				
red			Red and orange		
					They're orange

Appendix C

Definitions of terms for interaction patterns

After coding learner utterances, teacher/peer utterances that preceded learner utterances in the records were coded as follows:

Elicitation is a teacher/peer utterance which precedes any learner utterance in the records, but not a reproduction of any word in the prior learner utterance in the same recorded interaction. It is further categorized as follows:

1. Learner-utterance-eliciting speech: utterance which is a request for information by asking questions and by directing or encouraging a learner to speak up;
2. Imitation-eliciting speech: utterance which directs, requests, or encourages a learner to imitate;
3. Non-eliciting speech: utterance which simply refers, states or describes about objects, actions, or incidents, and expresses feelings or beliefs, without an obligatory response from the learner.

Each SW and MW utterance of learner as well as every recorded teacher/peer utterance that preceded learner SW and MW utterance was categorized into imitation or non-imitation of the prior teacher/peer utterance. The definition of imitation and non-imitation is as follows:

Imitation is a reproduction of the prior utterance made by the conversation partner in the records. It is further categorized as follows:

1. Reduced imitation is the partial reproduction of the prior utterance, including at least one content word from the prior utterance without any new addition;
2. Exact imitation is an utterance in which all the items are reproduced without any change or addition;
3. Expanded/modified imitation is reproduction of the full or a part of the prior utterance, but one or more new items are added.

Non-imitation is an utterance which does not reproduce any of the prior utterance made by the conversation partner.

Endnotes

[1] Krashen and Scarcella (1978) posited three conditions of SLA through PL: (1) learners learn only PL, but develop no creative language; (2) an independent creative process develops to which PL does not have any direct contribution; (3) PL directly evolves into creative language. See dissertation for more detail, and for the entire arguments for and against any role of PL in language acquisition in terms of analytic versus gestalt modes, myth of the frequency of PL use, and the issue of reanalysis.

[2] The original dissertation by Perera (2000) focuses more on linguistic and cognitive theories, such as "the experience model" (Hatch, Flashner, & Hunt, 1986), including Hatch's precedent discussion about the role of PL in SLA (Hatch 1983). The cognitive theories and models that explain the ways in which rote-learning turns into system-development are also discussed, including "item-learning and system-learning" (Cruttenden, 1981), "sequencing theory" (Ellis, 1996a, 1996b), connectionist theory including PDP model (McClelland, Rumelhart, & the PDP Group, 1986; Rumelhart, McClelland, & the PDP Group, 1986), and a model of acquisition through PL (Peters, 1983, 1986).

[3] Perera (2000) extensively examines the problems of definitions and identification of PL and the process of PL analysis, including three different criteria introduced by Brown (1973), Hickey (1993), and Peters (1983). Also, the detail of the studies by Lieven, Pine, & Dresner-Barnes (1992) and Pine & Lieven (1993) are discussed.

[4] In the dissertation (Perera, 2000), four research questions were asked. In the transitional stage from single words to multiword utterances in SLA:

(a) Are non-imitative, novel phrases and sentences made based on PL or by the juxtaposition of single words?

(b) Does the use and analysis of PL contribute to the construction of creative language? If so, in what manner?

(c) What are the similarities and differences between individuals in the use and analysis of PL?

(d) Do interactional factors such as elicitation by teacher/peers and imitations of teacher/peer utterances by learners aid PL analysis?

[5] While the purpose of Preschool A was to offer a bilingual learning environment equally for both English and Japanese speakers, Preschool B emphasized more in the maintenance of heritage language, in this case Japanese, in addition to promote bilingualism among English and Japanese speakers. Although the two preschools were both two-way immersion programs, they were not totally compatible to each other. Yet, the difference between the two reflects the reality that a variety of two-way immersion programs are currently operated throughout the United States.

[6] See the details of each subject's profile in the dissertation (Perera, 2000), such as the general background, personality, behavior at school, friends, language at school, behavior at home, and language use at home.

[7] Perera (2000) provides more detailed descriptions with more tables about composition of vocabulary, frequency of PL analysis, and developmental change in vocabulary composition.

[8] For the complete results and analyses of individual differences in the use and analysis of PL, see the dissertation (Perera, 2000).

[9] Perera (2000) provides complete results and analysis with more figures, focusing on teacher/peer utterances, learner utterances, and interaction between the teachers/peers and the subjects. Special interactional styles are also discussed.

[10] In the dissertation (Perera, 2000), the study suggests further investigation regarding the use and analysis of PL: It is necessary to examine (1) the long-term interactional effects on PL analysis, (2) errors and rule-application more systematically, (3) the definitions of PL and creative language, and (4) the method of following the analysis of PL with respect to the improvement and validity of the method (including the duration of the study and the starting point of the observation). More importantly, the study of PL in general must be continued since it will contribute to a better understanding of the process of SLA and to provoke constructive discussions over the relationship among socialization, rote learning, and linguistic creativity.

Acknowledgements and Biographical Information

I received a Ph.D. in applied linguistics from Georgetown University in January 2000. I truly thank the dissertation committee chair, Professor James E. Alatis, and the two readers, Professors Heidi Hamilton and Anna Uhl Chamot, for their guidance and encouragement. I am also grateful to the children, their families and teachers, who participated in this dissertation project. This article summarizes my doctoral dissertation, which was awarded the Second Place in the NABE Outstanding Dissertation Competition for year 2001.

I was a Lecturer of Japanese language in the Department of Foreign Languages and Literatures at San Francisco State University at the time of the submission of this article. Currently, I serve as a panel chair of the grant applications for the U.S. Department of Education.