L1 LEXICAL ACCESS OF INDONESIAN MIGRANT WORKERS IN TAIWAN: ATTRITION OR MAINTENANCE

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ABSTRACT

This study examined L1 lexical access among Indonesian migrant workers who speak Javanese in Taiwan. It aimed to investigate lexical attrition of Javanese speaking migrant workers who have been living in Taiwan for more than 7 years. The data was collected by administering picture naming task and Sociolinguistic Background Questionnaire. Descriptive statistical and Pearson Correlation analyses were performed to analyse the data. This study found that the Indonesian Javanese-speaking migrant workers in Taiwan were significantly disadvantaged in retrieving high frequency and low frequency items. Besides, it was also found that the migrant workers significantly took longer time in retrieving medium frequency items. The Indonesian Javanese-speaking migrant workers apparently retained using Javanese for interactive, non-interactive, and inner purposes.

Keywords: *l1 lexical, access, migrant, workers*

INTRODUCTION

Generally, migrants who newly live in a host country will learn a new language. As L2 competence developed, it is highly possible that migrants experience more traffic in their mind. Language traffic in bilingual or multilingual speakers might be heavier than monolinguals, which eventually impacts the language that is less used or activated. Language that is rarely used in almost all domain will be pushed to the background and more stimuli are needed to activate the minority language. In contrast, the frequently used language will predominant the language traffic and will be more easily activated by the speaker (Köpke, 2007).

The longer migrants living outside their native country, the less likely they use or even got contact to their L1 and develop the L2. As the result of living in non-L1 environment for a long period of time and exposed to L2 speaking environment, they might find difficulty using their L1, and more severly, they might suffer from L1 attrition (Schmid, 2004; Cherciov, 2011, Yilmaz & Schmid, 2012; Schmid, Köpke, & de Bot, 2012; Schmid & Jarvis, 2014). For example, de Bot, Gommans, & Rossing (1991) found attrition among immigrants after living in a new country for 10 years, Mägiste (as cited in Schmid, 2011) found attrition among immigrants after 5 years of residents, by Huls and van de Mon (as cited in Schmid, 2011) found attrition among Turkish immigrants between 5 to 15 years of residence. This might be different to migrants workers in L2 country who have high mobility. They might live in a certain country for a certain period of time, and move to other country and spend some years there. As it is argued earlier, living as migrant in a certain country may lead them acquire new languages.

How migrants use their L1 may also influence attrition they might get in the host country. It is reasonable to assume that migrants who maintain using their L1 will remain fluent compared to migrants who do not do so. In terms of language use, Schmid (2011) suggests to take close evaluation in defining the language use. According to her language use is not merely on how much a particular language used in daily conversation. She argues that an individual may also use language in other activities, such as thinking, reading, watching, talking to pet, etc. Therefore, Schmid (2011, p. 83) distinguishes language use into three types: 1) interactive language use (spoken and written communication with others); 2) non-interactive exposure (reading, media); and 3) inner language (thought, dreams, diary writing, counting/ maths, etc.).

This study explores the topic of attrition among Indonesian migrant workers in Taiwan who have been living in Taiwan for at least 7 years. Working as migrant workers, particularly as domestic worker and caregivers in Taiwan demand high work responsibility as well as work time. This bring those migrant workers get limited contact to their L1. However, as the

result of globalism and highly advanced technology in communication, they may still get opportunity to compensate the limited contact to their L1 in terms of interactive purpose. There actually have been many studies investigating attrition phenomena among migrants in L2 country, yet, there have been few studies studying this issue among migrant workers.

There are two issues addressed in the present study. First, this study explores lexical attrition in terms of lexical access of Indonesian migrant workers in Taiwan who speak Javanese. The second issue is whether or not language use correlates to the performance of the migrant workers in lexical access.

METHODS

A total of 29 respondents were included in the present study, 15 female respondents respondents served as the migrant group, and 14 female respondents as the control group. The migrant group was the Indonesian migrant workers who spoke Javanese as their L1, had been living in Taiwan at least 7 years , the age ranged between 28-46 years old. On the other hand, the control group was Javanese speakers residing in Indonesia. The participants of the two groups spoke Indonesian in some degree since it is the language used in education. In other words, they may be bilingual, in some degree. As argued by Dostert (2009), it is rather difficult to have 'pure', native control group, which has not been influenced by any foreign language since a completely monolingual speaker is hardly to find. Almost all individuals, as of today, have learned at least one foreign or other language at school. Then, in the context of the present study, since the control group lived in Indonesia and Bahasa Indonesia is the national language as well as language of intruction in education, there was high probability that they have learned at least Bahasa Indonesia at school. Therefore, at best, the respondents of the control group were the Javanese speakers who got minimal exposure of Indonesia and lived in an environment where Javanese was the dominant language.

In terms of the length of residence, the migrant workers who were included in this study were those who have been working in Taiwan for at least 7 years. There is actually a discrepancy of the length of immigration suggested by attrition scholars. Many researchers suggested that L1 attrition might be evident among immigrants who have been living in the

L2 country for at least 10 years (Schmid, 2011; de Bot et al.,1991). However, Mägiste (as cited in Schmid, 2011) found attrition among immigrants who had been living in the host country for less than 5 years. A similar result also suggested by Huls and van de Mon (as cited in Schmid, 2011); they found that two Turkish migrant families in the Netherlands experienced attrition in their L1 between five and fifteen years after emigration. The discrepancy of results indicates that attrition is a fluctuating process, and probably closely linked to the degree of acquisition effort rather than the length of residence in the L2 country. Hence, this study included migrant workers who claimed they have lived in Taiwan at least for 7 years.

A picture naming task developed by University of Hawaii at Manoa was used to assess participants' performance in accessing words. This language assessment tool was chosen because the tasks in the test enable the researcher to measure the accuracy and response time of the participants in retrieving the L1 items. Originally, the test consisted of three different tasks: body-part naming task, nature-term naming task and phrase-building task (O'Grady, Schafer, Perla, Lee, & Wieting, 2009). However, only the body-part naming task was used in this study. Pictures of human body part were shown on a laptop screen and the participants were required to name the picture as quickly as possible.

The body-part naming task consisted of three different categories of strata based on their frequency and complexity. The task was administered orderly from high frequency, medium frequency, and low frequency. In total, there were 42 items which were divided into three different strata: 18 high-estimated frequency items, 12 medium-estimated frequency items, and 12 low-estimated frequency items. Since there was a beep sound at the onset of every picture, it helped the researcher measure the response times of the participants in naming the objects. The participants' responses were recorded by using voice recorder application, WavePad, in order to analyze the amount of time they needed to name each picture.

Besides the body-picture naming task, a sociolinguistic background questionnaire from the Sociolinguistic and Personal Background Questionnaire was also employed in the present study was used (Schmid & Dusseldorp, 2010). The items in the questionnaire included the participants' personal background, such as age,

sex, educational background, and the year they first came to time. Besides, this questionnaire also included their language experiences in Taiwan; the frequency of the L2 (Mandarin) and the L1 (Javanese) in the three language use purposes (interactive; non-interactive; and inner language use) described in the literature review. Likert scale range 1 to 5 was used to quantify the frequency use of each language, in which 1 was used to score never; 2 to score rarely; 3 to score sometimes; 4 to score frequently; and 5 to score all the time.

The analyses of the body-part naming task were concentrated on the proportion of correct responses and reaction times of the three different strata (high-estimated frequency, medium-estimated frequency, and low-estimated frequency items) of both group (Migrant Group and Control Group). The list of types of responses that were also considered correct besides the required responses is presented in Table 4.1. The list of criteria used in this study follows

Table 1. Criteria for Correct Responses in Picture Naming Task

	Correct	Examples
•	variant forms	*kéntol* or *kémpol* ('calf')
•	single word or phrase	*kémpol* or *kémpolé sikil* ('calf')
•	any form of style level	*kéntol* or *kémpol – ngoko wengkelan - krama*
•	self-repair after incorrect initial response	*sikil* ('leg') / *kéntol* ('calf') the second response is counted correct

After scoring all tasks, statistical treatments by using SPSS 22.0 were performed. The descriptive statistical analyses including the minimum and maximum score, mean, standard deviation were performed to each group's scores. After that, significance analyses by using independent t-test were also employed. The independent t-test was used to examine whether or not the scores of the migrant group were significantly different with those of the control group. After that, in order to examine the effect of the language use, Pearson's correlation analyses were employed in this study.

RESULTS AND DISCUSSION
Results

Table 2 shows that the means of correct responses of the migrant group in body-picture naming task are relatively lower than the means of the control group.Table 2. Scores-Mean Difference between Migrant Group and Control Group in Body-Part Naming Task

	Group	N	M	SD	t	p
HF Correct Responses	Migrant Group	15	11.47	4.78	2.21	.035*
	Control Group	14	14.50	1.87		
MF Correct Responses	Migrant Group	15	9.20	2.01	.63	.532
	Control Group	14	9.64	1.73		
LF Correct Responses	Migrant Group	15	4.73	2.18	3.20	.003**
	Control Group	14	9.64	2.91		
HF Response Times	Migrant Group	15	1520.20	774.59	1.05	.30
	Control Group	14	1285.14	328.29		
MF Response Times	Migrant Group	15	1816.67	553.39	2.58	.008**
	Control Group	14	1352.21	262.69		
LF Response Times	Migrant Group	15	2243.53	604.90	1.37	.182
	Control Group	14	1939.43	590.43		

* significantly level at $p < .05$
** significantly different at $p < .01$

The average of correct responses in naming the high-estimated items obtained by the migrant group ($M = 11.47$) appears to be lower than that of the control group ($M = 14.50$). A similar result is also indicated by the mean comparison between the migrant group and control group's correct responses in naming the medium-estimated frequency items. The data shows that the control group has higher mean score in the medium-estimated frequency items (M= 9.64) than the migrant group (M= 9.20). However, the means of correct responses obtained by the migrant and control group in naming the medium-estimated frequency items are almost similar. Lower score in naming the low-estimated frequency items obtained by the migrant group is also shown in the table. However, despite the lower scores of the migrant group in naming the items in the body-part naming task, the significant analysis shows that only scores in the high-estimated and the low-estimated strata which are significantly different between the two groups. The result shows that the score of the migrant group in naming the medium-estimated item is not significantly different with that of the control group.

Table 2 also shows that the mean values of the migrant group in terms of response times in the body-picture naming task are continuously increasing in the high-estimated frequency to the low-estimated frequency items, i.e., $M=$ 1520.20 milliseconds; $M=$1816 milliseconds; and $M=$ 2243.53 milliseconds. These values indicate that the migrant group appears to take longer time in naming the pictures which are estimated as less and least frequently used. The mean values obtained by the migrant group in naming the three strata items seem to be higher than the control group's; i.e., $M=$ 1520.20 and $M=$ 1285.14 milliseconds for the high-estimated frequency items; $M=$ 1816.67 and $M=$ 1352.21

milliseconds for the medium-estimated frequency items; and $M=$ 2243.53 and $M=$ 1939.43 milliseconds for the low-estimated frequency items. These values indicate that the migrant group took longer response time as the items became less frequently used.

The results of t-test show that the p values of response times in naming high-estimated and low-estimated frequency items are .30 and .182 with t values are 1.05 and 1.37, respectively. These values indicate that the mean differences between the two groups in the high-estimated and low-estimated frequency items are strongly not significant, because the p values are greater than .05. However, a highly significant difference is indicated by the p value of mean difference in the medium-estimated frequency items, $p = .008$, $p < .05$, with $t = 3.174$.

To summarize, the results from the body-part naming task (correct responses and response times in high-estimated, medium-estimated, and low-estimated frequency items) reveal that there are significant differences of correct responses between the migrant group and the control group in naming the high-estimated ($p = .035$) and low-estimated frequency items ($p = .003$) . It is also revealed that there is no significant difference of response times between the migrant group and the control group in the high-estimated and low-estimated frequency items, only the means in the medium-estimated frequency items, indicating a highly significant difference ($p = .008$) .

Table 3. Pearson's Correlations (r values between the brackets) between the Language Use and the Migrant's Scores in Body-Part Naming and Storytelling Tasks

	Mandarin			Javanese		
	Interactive	Non-interactive	Inner	Interactive	Non-interactive	Inner
Body-Picture Naming Task						
Correct Response						
High Frequency	(.343) .221	(.001) .996	(.219) .434	(.392) .149	(.346) .206	(.192) .492
Medium Frequency	(-.036) .899	(-.079) .781	(-.040) .887	(-.112) .690	(.192) .492	(.261) .348
Low Frequency	(.138) .624	(.161) .567	(.452) .091	(.365) .182	(.277) .317	(.160) .570
Correct Response Time						
High Frequency	(.165) .557	(-.280) .312	(.409) .130	(-.375) .169	(-.622) .013	(-.576) .025
Medium Frequency	(.144) .609	(-.183) .514	(-.116) .682	(-.550) .034	(-.216) .438	(-.276) .320
Low Frequency	(.099) .725	(-.272) .327	(.270) .330	(-.506) .054	(-.406) .133	(-.445) .096

Table 3 shows the analyses of the correlation between migrant group's language use (Mandarin and Javanese use) and the scores they obtained from the body-part naming task. The r values are presented in the brackets, with the p values shown after. This table is used to demonstrate whether or not the language uses claimed by the migrants significantly correlate with their scores in the task.

Data in Table 3 shows that the amount of L2 use for the interactive, non-interactive, and inner language uses are not significantly correlated with the scores of the migrant group on the correct responses in the three item strata (high frequency, medium frequency, and low frequency). By contrast, the use of L1 on the correct responses in the body-part naming task shows a significant correlation only for the use of L1 in non-interactive and inner language use to the correct response in high-estimated frequency items, while in the medium-estimated and low-medium frequency items, the L1 use do not seem to have any significant correlations. It is similar to the response time needed in the three item strata, the L2 use the three different language purposes do not significantly correlate with the migrant scores on the response times of the three item strata, whereas the L1 uses on the response time are significantly correlated with different strata items. For the response time in the high frequency items, the amount of L1 use for the non-interactive and inner purposes significantly correlate with the time needed to retrieve the high-estimated frequency items. However, for the response time in the medium-estimated frequency, only the L1 use for the interactive purpose indicates a significant correlation. Furthermore, the data shows no significant correlation between the L1 uses for the three different purposes with the response time in low-estimated frequency items.

Table 4. Summary of Correlations between Scores on the Use of Mandarin and the Scores in the Body-Part Naming Task, Lexical Accuracy

Correlation	
Correlation between L1 non-interactive use and HF response times	√ -.622*
Correlation between L1 inner use and HF response times	√ -.576*
Correlation between L1 interactive use and MF response times	√ -.550*

The summary of correlations in Table 4 shows that the use of Javanese mostly correlates with the response times needed to name objects in the body-part naming task. While for the correct response, it appears to not giving significant contribution on the correct response in the task. Moreover, the summary also indicates that the use of Mandarin does not significantly correlate with the migrant performance in the body-part naming task, in either correct responses or response times.

Discussion

The results from the body-part naming task reveal that the migrant group has difficulty in retrieving the least frequently used items and the score of the migrant group is proved to be significantly lower than the control groups. Similar to what is found by Hulsen (2000), this study also finds that the migrant group did not perform differently in naming the more frequently used items. These findings are in line to what is suggested by the Activation Threshold Hypothesis (ATH) that attriters might have more difficulties in retrieving the less frequently used items due to the gradual inhibition (Paradis, 2007). Even though the results of the correct responses in naming the high-estimated and the medium-estimated frequency items are not significantly lower than those of the Javanese speakers' in the home country, yet the migrant groups constantly showed lower performance in naming the three different word strata.

Despite the fact that the only significant different performance in terms of response times is in naming the medium-estimated frequency items, the results also indicate that the migrant group consistently took longer time in naming each stratum items. The interesting finding in terms of the response time is that the migrant group which was expected to have significantly lower performance than the control group apparently is not found. It may indicate that the control group also had difficulties in retrieving the low-estimated frequency items. However, this study seems to have limitations to explain this.

Yet, psycholinguistic theory might be able to explain the retrieval problems among native speakers in the L1 environment. Lexical production in picture naming task does not only simply activating a certain items from the mental lexicon (Jay, 2003; Costa, Colomé, & Caramazza, 2000). It includes processes of semantic representation, lexical retrieval, word formation and lexical production and the problems probably occur during the retrieval process. Costa et al. (2000) argue that competitions might also occur in monolinguals during the lexical production process. However, the competition load in monolinguals may be different than that of in the bilinguals. They believe that during the lexical production, several semantic representations which are related to the target words are activated, rather than only one. For example, when the picture 'mouth' is shown on the screen, the word 'mouth' is not automatically activated and provided by the mental lexicon, yet other item which are semantically related such as 'lips' is also activated. Then, the speaker has to select which lexicon represents the picture. They might need longer time to select the appropriate target words or fail to recall the target words. This kind of errors is seemingly encountered in the responses of the control participants. For example, they mentioned *lambé* 'lips' rather than *cangkem* 'mouth' when the object 'mouth' is shown and vice versa.

The present study also found that migrant group relatively used Mandarin language more frequently than Javanese language. However, despite getting exposure to Mandarin speaking community, apparently the Indonesian Javanese-speaking migrants still retained using their Javanese language. This may suggest that the assumption presented in the introduction of this study, that the Indonesian Javanese-speaking migrants use more dominantly Mandarin due to the extensive contact with the Mandarin language is not accepted. By contrast, the result shows that the migrant group uses the Javanese significantly more frequent than the Mandarin for the non-interactive purposes. In other words, it can be inferred that they still retain using the Javanese language regardless of the fact that they live in the Mandarin speaking environment.

The effect of language use impacts migrants' performance in terms of response times. The result shows that L1 non-interactive use correlates negatively to response time needed to retrieve high frequently use items, meaning the more frequent the L1 used, the shorter the response time needed to retrieve certain words. As it has been discussed in previous section that activities such as reading and writing can be categorized to non-interactive use of language. Literatures suggest that non-interactive use activities, such as watching, reading, and listening can be regarded as maintenance of L1 and help migrants maintain a certain level of L1 competence (Köpke , 2007; Schmid, 2010).

The result from Pearson Correlation analysis in Table 4 shows that the inner use of L1 negatively correlates with the response time needed to retrieve medium frequent items in picture naming task. It may indicate that the more frequent the L1 used the shorter the response times needed to retrieve their L1. This finding also indicate that language use does not necessarily mean to be used in communication or for interactive use. Inner language use also play

role in maintaining L1 in some degree. It is also intriguing to investigate the role or impact of inner language use in language learning. However, this study has limitations to elaborate it.

Conclusion

This study found that the Indonesian Javanese-speaking migrants in Taiwan had significant difficulties in retrieving their L1 items, particularly in high frequent and low frequent items. Besides, they also significantly took longer time in retrieving medium frequent items of their L1. The present study also revealed that the migrant workers in the study produced more disfluency markers than the native speaker in the home country, particularly in pauses and repetition.

In terms of exposure to Mandarin speaking environment, the data showed that even though the migrant workers in the present study apparently use the Mandarin language more often than their L1 in interactive, non-interactive, and inner uses, yet, the frequency was not significant. The use of Mandarin significantly affected the production of disfluency markers. This study also found that the migrant workers maintained their native language and it contributed to their performance in retrieving the L1 lexical items.

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