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How Does Early L2 Exposure Impact L1 Proficiency?
Evidence from Tagalog-English Bilingual Children

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ABSTRACT

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Despite the rich potential for new information that bilingualism research can generate from bilingual countries in the Global South, such as the Philippines, very few bilingualism studies come from these contexts. Hence, this study aims to address this gap by examining how exposure to a second language (L2) impacts proficiency on the first (L1) among 100 Tagalog-English bilingual children aged 4 to 7 years in the Philippines. A language exposure assessment adapted from DeAnda et al.'s (2016) Language Exposure Assessment Tool (LEAT) was used to measure cumulative L2 exposure (English), while grammar, vocabulary, and spelling proficiency tests in Tagalog were used to measure L1 proficiency. Multiple and linear regression analyses showed that (a) overall L2 exposure does not impact overall L1 proficiency [$F(1, 98) = 3.89$; $p = 0.051$]; although (b) L2 exposure negatively influenced L1 vocabulary [$F(1, 98) = 5.04$; $p = 0.027$; $\beta = -0.22$] and grammar [$F(1, 98) = 7.40$; $p = 0.007$; $\beta = -0.27$], but not spelling [$F(1, 98) = 0.09$; $p = 0.766$; $\beta = -0.03$]. Thus, on the query regarding the influence of L2 exposure on L1 proficiency, evidence from Tagalog-English bilingual children showed that exposure to L2 English translated in negative outcomes on two measures of L1 skills, i.e., Tagalog vocabulary and Tagalog grammar.

KEYWORDS
L2 exposure, L1 proficiency, bilingualism, Tagalog-English bilingual children

1. Introduction

One of the most widely debated topics in bilingual research is whether early exposure to a second language (L2) hampers or facilitates the development of the first language (L1) of a bilingual child (Hoff et al. 2012). On one hand, some researchers argue that early L2 exposure negatively influences L1 proficiency, claiming that a child may be unable to unlock proficiency in both, if a second language is introduced too early (Chureson 2013, Polinsky 1995). However, other researchers challenged this negative claim, saying that there is, in fact, benefit in introducing a L2 early into a child's language development (Bassetti and Nicoladis 2016, Lofranco et al., 2006). These ongoing assertions are heavily informed by bilingual research, which tends to favor English as L1 and Western samples, typically American bilinguals (Byers-Heinlein and Lew-Williams 2013, Espinosa 2015) or British bilinguals (D'Souza et al. 2020, Haman et al. 2017). As a result, despite the rich potential that bilingual studies from Global South countries could offer to arrive at a more nuanced understanding of this bilingual phenomenon, very few studies come from these contexts.

In the Philippines, even though studies focusing on learning English as a L2 are fairly common (Castillo et al. 2020, Lucas, Bernardo and Rojo-Laurilla 2016, Macayan et al. 2018a, 2018b, Quinto and Macayan 2019, 2020), bilingual studies documenting the influence of L2 on L1 are few and far apart (Dita 2009, Lofranco et al. 2006, Quinto and Velasco 2013, Ronquillo 2015). In this Southeast Asian nation of 104 million people a majority of whom speak at least two languages, bilingual competence is preferred and viewed positively (Ledesma and Morris 2005), primarily for being a bilingual's strategic advantage (Bautista 2004). Filipinos use both Tagalog and English for wider communication and as languages in education. However, bilingual education remains contentious in the Philippines because of its possible harm or gain on students' language proficiency (Dita 2009). The debate in bilingual acquisition, along with the lack of bilingualism studies focusing on Tagalog-English bilingual children, warrants further investigation particularly on aspects of bilingual acquisition, which have not been previously examined, such as vocabulary (Bainbridge 2020), grammar (Pecho 2018, Ronquillo 2015), and spelling (Guimaraes and Parkins 2019).

This study aims to examine the influence of early L2 (English) exposure on L1 (Tagalog) proficiency among a sample of Tagalog-English bilingual children in the Philippines. Specifically, it aims to answer the following research questions:

1. Does early L2 exposure influence L1 proficiency?
2. How does early L2 exposure influence L1 proficiency levels of Tagalog-English bilingual children on the following:
   2.1 Tagalog vocabulary use;
   2.2 Tagalog grammar; and
   2.3 Tagalog spelling?

2. Conflicting Findings on the Influence of L2 Exposure on L1 Proficiency

In the research on bilingual language development, the conflicting assertions on the influence of L2 exposure on L1 proficiency continue to be an ongoing discussion between researchers. The first view espouses that it is unwise to introduce a second language to young children until they have attained proficiency in L1. If a second language is introduced early, the child will be unable to master both. To put it simply, the first assertion believes

that L2 exposure negatively influences L1 proficiency. For example, Polinsky (1995) states that when a child learns a second language, the disproportionate amount of input from the two languages could delay the complete acquisition of L1 grammar. Moreover, Chureson (2013) claims that L2 exposure impedes L1 by making it less "pure". The use of a L2 lead to situations where speakers could no longer communicate effectively in a single language.

In contrast, the second assertion argues that a second language may be introduced early on and, in fact, assists in building L1 proficiency as well as contributes to other language skills. Paradis and Kirova (2014) claimed that there is no distinction between a bilingual and monolingual ability to generate rational discourse. Lofranco et al. (2006) tested the capability of narration writing in English from Filipino-American children who spoke English but were constantly exposed to the Filipino language at home and found that their work was comparable to monolingual English-speaking children. In sum, the second assertion believes that L2 exposure has no negative influences on L1 proficiency. Despite efforts to document the influence of L2 exposure on L1 proficiency, there remains conflicting views about the phenomenon. As these two different points of views continue to stand in the literature on bilingualism, a deeper and more nuanced understanding is needed to properly assess the influence of L2 exposure on L1 proficiency in specific contexts and aspects of L1 acquisition.

Bilingual research in the context of the Philippines and studies involving Tagalog-English bilingual samples are clearly underrepresented in bilingualism research. Nonetheless, there have been efforts among Filipino researchers to explore this burgeoning area of bilingual research in the Philippines, where bilingualism is seen more as a strategic advantage (Bautista 2005), rather than an impediment (Chureson 2013). Notably, Dita (2009), in her detailed account on the metalinguistic awareness of Filipino bilingual children, explained that one focus of bilingual research is the proficiency level of bilinguals in the two languages. She differentiated the capabilities of 52 partial and full Filipino bilinguals through three metalinguistic awareness tests in both English and Filipino. The findings showed that full bilinguals significantly outscored the partial bilinguals, especially in the terms of vocabulary. Another notable study is that of Ronquillo (2015) which tackled the interference of L2 exposure and its effects on L1 word order and case acquisition of a child. In this study, a bilingual child described actions seen in an image using Tagalog, and then another set using stimulus Tagalog sentences. Results of the low performance led to the conclusion of a possible interference of L2 exposure in acquiring Tagalog word order. While studies using Tagalog-English bilinguals as sample exist, the insufficient number means more work needs to be done in this field. Through the present study, additional and important findings may be generated regarding Tagalog-English bilingualism and enrich existing concepts and ideas regarding the bilingual phenomenon in the Philippines.

3. Method

3.1 Participants

The participants of the study are Filipino children aged 4 to 7, whose L1 is Tagalog and L2 English. Their language ratio must not exceed 80-20%, greater than the 10% L2 allocation in Hoff et al. (2012). Language ration was assessed using parent report (McKenzie 2010). The bilingual children were recruited from two primary grade schools situated in two cities in the National Capital Region, Philippines. In order to fulfill the requirements in considering a child a bilingual, the researchers used purposive or judgement sampling, which is a non-probability sampling technique that has no set number of informants. It is simply a technique where the researchers set a quota and set out to find individuals, in this case Tagalog-English bilingual children with a maximum 80% L1 (Tagalog)

and minimum 20% L2 (English) language ratio, who can fill the quota, and provide information from their empirical knowledge (Tongco 2007). To do this, the researchers asked for a parent estimate in a designed demographic profile sheet. The researchers adapted parent report as their strategy for assessing language ratio (McKenzie 2010), largely because of the pandemic-related restrictions that were in place in the country at the time of this study. Nonetheless, through a process of elimination by analyzing the responses in the demographic profile sheet, 100 Tagalog-English bilingual children were listed as final participants and were invited, through their parents, to participate in the study. Permissions and informed consents on the level of the two participating schools and the bilingual children's parents were sought before any data collection procedure was conducted.

3.2 Data Collection

Three data collections tools were utilized in the present study: (1) a demographic profile sheet, (2) a language exposure assessment tool, and (3) a Tagalog proficiency test on vocabulary, grammar, and spelling compiled into a single module.

3.2.1 Demographic Profile Sheet

In order to assess the eligibility of the participants, establish communication with their parents, and identify their school, the researchers created a demographic profile sheet that was distributed as a Google Form for parents to fill up. In the form, parents were asked for their contact, school, and child's information, this mostly being in relation to the requirements, such as age, first language, and second language. They were also asked to provide their email for the researchers to communicate with them about the data collection procedures.

3.2.2 Language Exposure Assessment Tool (LEAT)

The researchers used DeAnda et al.'s (2016) Language Exposure Assessment Tool (LEAT) to measure the L2 exposure of the children. It is a computerized interview-style assessment that calculates relative language exposure, along with qualitative aspects of early language experience. Two tables are meant to be filled up. The first details who sees the child on a regular basis as well as the languages they use. The second table is an extension of the first, with four columns to fill up. Each row can be expanded to provide more detailed information. An example of this can be seen in Figure 1.

Figure 1. Primary Input by Language and Person

The parents must provide an estimate on the number of hours in a day the child is exposed to each language, what days does this happen, what is the first and second language of the person or situation that uses these languages, and from what ages (in months) was the child exposed to them. Due to its complex nature, the researchers are to fill up the LEAT after online interviews with the parents, which is also the only possible way to

collect data due to pandemic-related restrictions at the time. The researchers themselves read the manual thoroughly and trained themselves into collecting L2 exposure data using the tool by role playing the online interviews. DeAnda et al. (2016) found that the LEAT demonstrated high levels of reliability and construct validity, concluding that it is an efficient tool to be used for data collection.

3.2.3 Vocabulary Test

To measure Tagalog vocabulary proficiency, the researchers adopted the Tagalog version of the vocabulary test used by Dita (2009), which was patterned after the Wechsler Intelligence Scale for Children – Revised (WISC-R). The test aims to measure the children's familiarity with different Tagalog words. The examination was further modified by the researchers to ensure that it would be appropriate for younger bilingual children. The modified version instructs the child to match the word to the correct picture. It is divided into easy and hard levels, with the score system of 0 for incorrect, and 1 and 2 for a correct answer in the easy and hard levels, respectively. There were 10 questions presented per level, totaling 20 items and a perfect score of 30.

3.2.4 Grammar Test

To measure grammar proficiency, the researchers adapted and modified tests used in one of the two primary grade schools in this study. Two different grammar tests were provided; the first to observe their understanding of pronouns, and the second on adjectives and subjects. Again, there are 10 items for each part with a score of 1 for each correct answer, totaling to 20 items and an overall perfect score of 20. For the first test, the child is to underline the pronoun out of the two options to make the sentence grammatical. For example, *"Hanapin mo (sila, ka) sa may kanto."* where the answer would be *"sila"*. The second test provides 10 simple sentences that the child must understand to answer a question that will test their knowledge on adjectives, nouns, and subjects of a Tagalog sentence. For example, the child was given the sentence *"Ang damit ay madumi"*, together with the question, *"Ano ang madumi?"*. They would then have to answer *"damit"* as this is the subject that pertains to the adjective. As these are standardized tests of an established primary grade school, the researchers can vouch for their reliability.

3.2.5 Spelling Test

To measure proficiency in Tagalog spelling, the researchers crafted their own spelling test. Similarly, the spelling test consists of two different levels with 10 questions and a total score of 20. The first consists of 10 items based on a test found in Samut-Samot, a website that provides free worksheets for Filipino kids developed by a stay-at-home mom living in the Philippines (Samut-Samot 2021). In this test, the child is given an incomplete word and three options to underline to correctly complete the word. They must then write the complete word in the box next to the question. Figure 2 illustrates an example of the test's questions.
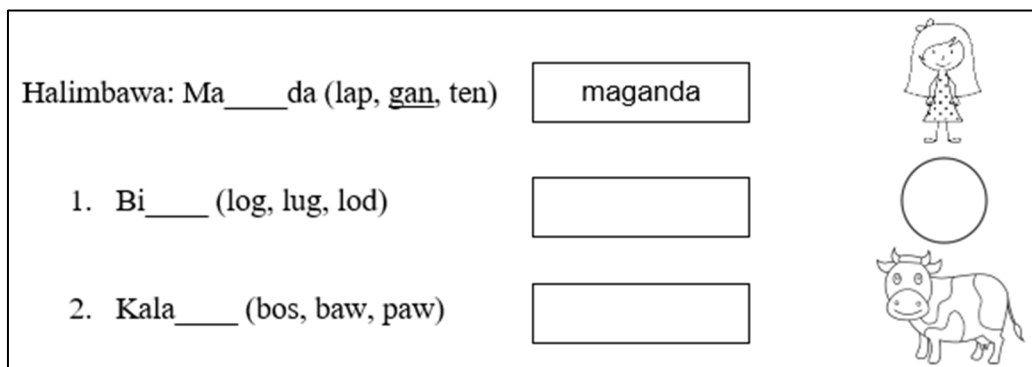
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Figure 2. Sample items from the Spelling Test – Part 1

The second test is another 10-question spelling test to observe whether the child knows the spelling of simple Tagalog words. They are provided three choices to choose from, one of which is the correct spelling, and two are misspellings. The children must then underline what they think is the correct spelling. The questions were presented in the manner shown in Figure 3.
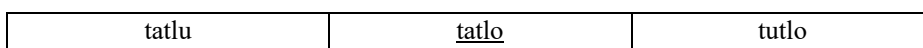
tatlu	tatlo	tutlo

Figure 3. Sample items from the Spelling Test – Part 2

Due to the younger aged participants, parents have a choice of reading out the words to the children as a list of the spelling words are provided in the last page. Also, due to the modifications, the researchers made certain that the finalized tests for vocabulary, grammar, and spelling were validated by a professional Filipino language teacher. Any recommendations and comments were then applied onto the test. With the lack of existing standard spelling test in Tagalog, the researchers found the most suitable method was to craft their own based on existing examinations online and administered in primary grade schools.

3.3 Data Analysis

The researchers used quantitative techniques to treat the multivariate data (Lattin, Carol and Green 2003). For the first research question, the researchers examined the data using simple linear regression. It is defined as a statistical method to study the directional relationship between two variables, one independent and the other dependent. In relation to the study, the researchers analyzed the influence of early L2 exposure (regressor or independent variable) and the totaled score for L1 proficiency (regressand or dependent variable). The second research question extends the analysis by using the factors of L1 proficiency levels in this study, namely Tagalog spelling, Tagalog vocabulary use, and Tagalog grammar as outcome variables. Thus, the researchers used multiple linear regression, which is a type of inferential statistics that serves as an extension of simple linear regression and demonstrates how dependent variables are influenced by one or more independent variables.

4. Results and Discussion

4.1 Influence of L2 exposure on overall L1 proficiency

To determine the influence of L2 exposure on overall L1 proficiency, the researchers used the statistical method of simple linear regression. Table 1 shows the regression results of L2 exposure as a predictor variable and L1 proficiency as outcome variable based on the sum of the scores for Tagalog vocabulary use, Tagalog grammar, and Tagalog spelling tests.

Table 1. Regression Results on the Influence of the Dependent Variable, L2 Exposure, on the Dependent Variable, Overall L1 Proficiency

n = 100	Regression Summary for Dependent Variable: L1 Proficiency Score (Data-Gathering) $R = 0.20$ $R^2 = 0.04$ Adjusted $R^2 = 0.03$ $F(1, 98) = 3.89$					
	β	Std.Err. of β	b	Std.Err. of b	$t(98)$	p
Intercept			68.42	1.50	45.65	0.00
L2 Exposure (%)	-0.20	0.10	-7.49	3.80	-1.97	0.051

The results indicated that L2 exposure does not predict overall L1 proficiency [$F(1, 98) = 3.89$; $p = 0.051$]. Conversely, the adjusted $R^2 = 0.03$ reveals that only around 3 percent of the time does L2 exposure predict L1 proficiency. An insignificant indirect relationship between L2 exposure and L1 proficiency, as seen in the negative β value, was also observed.

Research on bilingual acquisition has historically revolved around whether early L2 exposure is harmful or beneficial to bilingual children's ongoing L1 development. The findings revealed that L2 exposure ultimately had no influence on overall L1 proficiency, consistent with previous findings that that bilingualism is not a cause of uncertainty and has no intrinsic negative effects on L1 development (Bassetti and Nicoladis 2016, Lofranco et al. 2006). Children at the early stages of bilingualism may experience some developmental delays compared to children who only speak one. However, these detected delays are not long-term struggles, and bilinguals overall do not lack in all regions of language acquisition.

4.2 Influence of L2 exposure on specific L1 proficiency measures

4.2.1 Influence on Tagalog vocabulary use

Tables 2 shows the results of the multiple regression analysis conducted with L2 exposure as the independent variable and L1 vocabulary as one of the dependent variables.

Table 2. Regression Results on the Influence of L2 Exposure on Tagalog Vocabulary Use

n = 100	Regression Summary for Dependent Variable: Vocabulary (30) (Data-Gathering) $R = 0.22$ $R^2 = 0.05$ Adjusted $R^2 = 0.04$ $F(1, 98) = 5.04$					
	β	Std.Err. of β	b	Std.Err. of b	$t(98)$	p
Intercept			30.67	0.62	49.60	0.00
L2 Exposure (%)	-0.22	0.098	-3.52	1.57	-2.24	0.027

The results indicate that L2 exposure significantly predicts Tagalog vocabulary use ($F(1, 98) = 5.04$; $p = 0.027$). However, the adjusted $R^2 = 0.04$ shows that only an approximate 4 percent of the time does L2 exposure predict L1 vocabulary, suggesting the existence of other factors besides L2 exposure for predicting Tagalog vocabulary use. The negative value in the β also signifies the indirect relationship between L2 exposure and L1 vocabulary.

Before a child gains the ability to speak in coherent sentences, they are first taught simple vocabulary words in the early stages of their life. Vocabulary is a central idea in language teaching. Without it, an individual will be unable to express their ideas and fail to understand others. It is evident that vocabulary is an essential product of the development of language and this ability, according to Bainbridge (2020), is often picked up in the languages they are dominantly exposed to. The researchers therefore argue based on the findings that L1 vocabulary is affected by exposure to a L2, interfering the acquisition and confusing children with L1 words they ought to understand. In this study, it was found that the higher the L2 exposure, the lower were the L1 vocabulary scores of the participants.

4.2.2 Influence on Tagalog grammar

Tables 3 shows the results of the multiple regression analysis conducted with L2 exposure as the independent variable and L1 grammar as one of the dependent variables. Similarly, the regression results showed that as for Tagalog grammar as the dependent variable, L2 exposure was a significant influence.

Table 3. Regression Results on the Influence of L2 Exposure on Tagalog Grammar

n = 100	Regression Summary for Dependent Variable: Grammar (20) (Data-Gathering)					
	$R = 0.27$ $R^2 = 0.07$ Adjusted $R^2 = 0.06$ $F(1, 98) = 7.40$					
	β	Std.Err. of β	b	Std.Err. of b	$t(98)$	p
Intercept			19.84	0.49	40.72	0.00
L2 Exposure (%)	-0.27	0.097	-3.36	1.24	-2.72	0.00

The results indicate that L2 exposure very significantly predicts Tagalog grammar ($F(1, 98) = 7.40$; p = 0.00). However, the adjusted $R^2 = 0.06$ shows that only an approximate 6 percent of the time does L2 exposure predict L1 grammar, suggesting the existence of other factors besides L2 exposure for predicting Tagalog grammar. As with L1 vocabulary use, the negative β value points to an indirect relationship between L2 exposure and L1 grammar. Likewise, it was hypothesized that L2 exposure plays a significant role in the development of L1 grammar.

A child's grammar abilities are often obtained through practice and school learnings. In terms of the significance of L2 exposure, Ronquillo (2015) found that exposure to a second language interferes and affects the acquisition of a child's L1 grammar, especially since they are still developing their grammatical speech, along with the different grammar rules in the Tagalog and English languages, such as the difference in verb-initial order of the two languages, with the former strictly fixed at an SVO (Subject-Verb-Object) word structure and the latter having VSO (Verb-Subject-Object). Pecho (2018) also noted that Tagalog lacks past, present, and future tenses, compensating this with "aspects" to indicate whether an action is finished, ongoing, or about to happen. Thus, in this study, the researchers found that L1 grammar is affected by exposure to a L2. The higher the L2 exposure, the lower was L1 grammar proficiency of the participants.

4.2.3 Influence on Tagalog spelling

Tables 4 shows the results of the multiple regression analysis conducted with L2 exposure as the independent variable and L1 spelling as one of the dependent variables. Unlike with Tagalog vocabulary use and grammar, the regression results showed that L2 exposure does not predict the L1 spelling proficiency of the participants

Table 4. Regression Results on the Influence of L2 Exposure on Tagalog Spelling

n = 100	Regression Summary for Dependent Variable: Spelling (20) (Data-Gathering) $R = 0.03$ $R^2 = 0.00$ Adjusted R^2 = ----- $F(1, 98) = 0.09$					
	β	Std.Err. of β	b	Std.Err. of b	$t(98)$	p
Intercept			17.91	0.81	22.14	0.00
L2 Exposure (%)	-0.03	0.10	-0.61	2.05	-0.30	0.77

The results indicate that L2 exposure does not predict Tagalog spelling ($F(1, 98) = 0.09$; $p = 0.77$). Additionally, calculation of model fit accrued an error maybe because L2 exposure has almost no relation with L1 spelling at all at least in this study.

Unlike Tagalog vocabulary use and Tagalog grammar, L2 exposure was found to be an insignificant variable to the development of L1 spelling. Spelling is a more advanced task that children tackle as they get older. Often, this is also influenced by non-verbal stimuli rather than verbal ones (Guimaraes and Parkins 2019). To learn spelling, bilingual children must pay attention to print such as books, signs, and the various texts that surround them. Bilingual children process these visual elements of written language as they grow up. L2 exposure in this study was measured based on exposure from family, peers, and the community. It does not in any way include forms of media and writing. Due to this, the researchers suspect that the L2 exposure was found to be insignificant to L1 spelling development, because L2 exposure here was measured more predominantly oral, while spelling is an activity mostly demonstrated and learned through written text.

5. Conclusion

Despite the rich potential for new information that bilingualism research can generate from bilingual countries in the Global South, such as the Philippines, very few bilingualism studies come from these contexts. Hence, this study attempted to address this gap by examining how exposure to a second language (L2) impacts proficiency on the first (L1) among 100 Tagalog-English bilingual children aged 4 to 7 years in the Philippines. Findings showed L2 exposure does not influence overall L1 proficiency scores. However, the researchers found that the independent variable influenced Tagalog vocabulary use and Tagalog grammar, but not Tagalog spelling. Consistent with claims made within the literature on bilingual acquisition, the researchers found that cumulative L2 exposure, which pertains to oral exposure from relatives, peers, and the environment, can be damaging to Tagalog-English bilingual children's development of L1 vocabulary and grammar, but not spelling. Finally, on the matter whether early L2 exposure is beneficial or harmful to L1 acquisition, the present study provides evidence from Tagalog-English bilingual children that L2 exposure negatively impacts constituents of L1 proficiency. This study demonstrated that such negative influence is manifested in specific L1 measures of skill, i.e., Tagalog vocabulary use and Tagalog grammar, rather than a conflation of many different skills summed as an overall proficiency score.

References

Bainbridge, H. 2020. *How do children learn language?* Very Well Family. https://www.verywellfamily.com/how-do-children-learn-language-1449116

Bassetti, B. and E. Nicoladis. 2016. Research on grammatical gender and thought in early and emergent bilinguals. *International Journal of Bilingualism* 20(1), 3-16, DOI: 10.11177/1367006915576824

Ledesma, H. M. L. and R. D. Morris. 2005. Patterns of language preference among bilingual (Filipino-English) boys. *International Journal of Bilingual Education and Bilingualism* 8(1), 62–80. https://doi.org/10.1080/jBEB.v8.i1.pg62

Byers-Heinlein, K. and C. Lew-Williams. 2013. Bilingualism in the Early Years: What the Science Says. *Learning Landscapes* 7(1), 95–112. https://doi.org/10.36510/learnland.v7i1.632

Castillo, J. C. D., J. N. J. Pinugu, A. L. Q. Bernabe and S. J. M. M. Pasay. 2020. Achievement goal orientation, self-efficacy, and classroom climate as predictors of writing performance of Filipino senior high school students. *Asian EFL Journal* 27(3.2), 83–107.

Chureson, O. 2013. The impact of English as a global language on Filipino language practices. *International Forum* 16(42), 22–36, DOI: 10.2307/3588214

D'Souza, D., D. Brady, J. X. Haensel and H. D'Souza. 2020. Is mere exposure enough? The effects of bilingual environments on infant cognitive development. *Royal Society Open Science* 7(2). https://doi.org/10.1098/rsos.180191

DeAnda, S., L. Bosch, D. Poulin-Dubois, D., P. Zesiger and M. Friend. 2016. The language exposure assessment tool: Quantifying language exposure in infants and children. *Journal of Speech, Language, and Hearing Research* 59, 1346–1356, DOI: 10.1044/2016_JSLHR-L-15-0234

Dita, S. N. 2009. The metalinguistic awareness of Filipino bilingual children. *The Philippine ESL Journal* 3, 1–146.

Espinosa, L. M. (2015). Challenges and Benefits of Early Bilingualism in the United States' Context. *Global Education Review* 2(1), 14–31.

Guimaraes, S. and E. Parkins. 2019. Young bilingual children's spelling strategies: A comparative study of 6-to 7-year-old bilinguals and monolinguals. *International Journal of Educational Psychology* 8(3), 216–245, DOI: 10.17583/ijep.2019.4099

Haman, E., Z. Wodniecka, M. Marecka, J. Szewczyk, M. Białecka-Pikul, A. Otwinowska, K. Mieszkowska, M. Łuniewska, J. Kołak, A. Miękisz, A. Kacprzak, N. Banasik and M. Foryś-Nogala. 2017. How does L1 and L2 exposure impact l1 performance in bilingual children? Evidence from Polish-English migrants to the United Kingdom. *Frontiers in Psychology* 8, 1444. https://doi.org/10.3389/fpsyg.2017.01444

Hoff, E., C. Core, S. Place, R. Rumiche, M. Señor and M. Parra. 2012. Dual language exposure and early bilingual development. *Journal of Child Language* 39(1), 1–27. https://doi.org/10.1017/S0305000910000759

Lattin, J. M., J. D. Carroll and P. E. Green. 2003. *Analyzing Multivariate Data.* Thomson Learning: CA, USA

Ledesma, H. M. L. and R. D. Morris. 2005. Patterns of language preference among bilingual (Filipino-English) boys. *International Journal of Bilingual Education and Bilingualism* 8(1), 62–80. https://doi.org/10.1080/jBEB.v8.i1.pg62

Lofranco, L. A. L., E. D. Peña and L. M. Bedore. 2006. English language narratives of Filipino children. *Language, Speech, and Hearing Services in Schools* 37(1), 28–38, DOI: 10.1044/0161-1461(2006/004)

Lucas, R. I. G., A. B. I. Bernardo and M. A. Rojo-Laurilla. 2016. Amotivation in Filipino ESL learners: Exploring Some Correlates. *Porta Linguarum* 26, 109–119.

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Macayan, J. V., E. J. M. Quinto, J. C. Otsuka and A. B. S. Cueto. 2018. Are Filipino students' L2 learning goals performance- or mastery-oriented? An explanatory sequential analysis. *GEMA Online Journal of English Language Studies* 18(1), 51–68.

Macayan, J. V., E. J. M. Quinto, J. C. Otsuka and A. B. S. Cueto. 2018. Influence of Language Learning Anxiety on L2 Speaking and Writing of Filipino Engineering Students. *3L: The Southeast Asian Journal of English Language Studies* 24(1), 40–55.

McKenzie, R. 2010. *The social psychology of English as a global language. (1st ed.).* Springer. DOI: 10.1007/978-90-481-8566-5

Paradis, J. A. Kirova. 2014. English second-language learners in preschool: Profile effects in their English abilities and the role of home language environment. *International Journal of Behavioral Development* 38(4), 342–349, DOI: 10.1177/0165025414530630

Pecho, S. R. 2018. *How is Tagalog grammar like.* Quora. https://www.quora.com/How-is-Tagalog-grammar-like

Polinsky, M. 1995. American Russian: Language Loss Meets Language Acquisition. In *Formal Approaches to Slavic Linguisitics. Cornell Meeting*. Michigan Slavic Publications.

Quinto, E. J. M. and J. V. M. Macayan. 2019. Exploring English speaking anxiety among Filipino engineering students: Its influence on task performance and its sources. *GEMA Online Journal of Language Studies* 19(3), 57–74. https://doi.org/10.17576/gema-2019-1903-04

Quinto, E. J. M. and J. V. M. Macayan. 2020. Interactive Influence of Anxiety and Goal Orientation in Predicting Language Task Performance of Filipino Engineering Students. *The Asian ESP Journal* 16(2.1), 335–359.

Quinto, E. J. M. and Y. P. Velasco. 2013. Emotion-Related Language Choice among Filipino and English Bilinguals. *SLHS Review* 2(1), 47–82.

Ronquillo, S. H. 2015. Interference of English L2 in the acquisition of Tagalog L1 word order. *Linguistic Research* 32(1), 61–90, DOI: 10.17250/khisli.32.1.201504.003

Samut-samot. 2021. *Samut-samot: Free worksheets for Filipino kids.* Samut-samot. https://samutsamot.com/about/

Tongco, M. C. 2007. Purposive sampling as a tool for informant selection. *Ethnobotany Research & Applications* 5, 147-158, DOI: 10.17348/era.5.0.147–158

Examples in: English
Applicable Languages: English
Applicable Level: Basic Education