Rodrigo, M. M. T. et al. (Eds.) (2021). Proceedings of the 29th International Conference on Computers in Education. Asia-Pacific Society for Computers in Education

Comparison of English Comprehension among Students from Different Backgrounds using a Narrative-centered Digital Game

May Marie P. TALANDRON-FELIPE[ab*], Kent Levi A. BONIFACIO[c], Gladys S. AYUNAR[c] & Ma. Mercedes T. RODRIGO[a]
[a]*Ateneo Laboratory for the Learning Sciences, Ateneo de Manila University, Philippines*
[b]*University of Science and Technology of Southern Philippines, Philippines*
[c]*Central Mindanao University, Philippines*
*maymarie.talandron-felipe@ustp.edu.ph

Abstract: This paper reports the continuation of the field testing of a narrative-centered digital game for English comprehension called *Learning Likha: Rangers to the Rescue* (LLRR) with a two-fold goal: first, identify the differences in terms of usage, attitudes towards, and perceptions of the English language between students from southern Philippines and the National Capital Region, and second, to determine how the LLRR in-game performance, post-test comprehension scores, engagement, and motivation of students differ between the groups . The participants who are grade school students from a province in southern Philippines answered questionnaires about their attitude towards and perception of English, played LLRR, answered the English comprehension post-test, and assessed their engagement and motivation using the adapted game-based learning engagement (GBLE) and intrinsic motivation inventory (IMI) questionnaires, respectively. Responses and interaction logs were compared to the data collected from NCR. Findings showed no significant difference between the groups in terms of the usage of English whether at home or with friends. However, NCR-based students were more receptive in terms of their perception and attitude towards the language, had better LLRR in-game performance, and obtained higher English comprehension post-test ratings. These findings are consistent with the results of the Programme for International Students Assessment (PISA) in 2018 where students from the southern regions have lower English reading literacy compared to those from NCR. In terms of GBLE and IMI responses, the gap is consistent as self-reports of participants from the south indicated lower behavior and emotion engagement, enjoyment, effort exerted, and perceived competence while playing LLRR.

Keywords: English comprehension, Philippines, game-based learning, mobile games, mobile-assisted language learning, narrative-centered digital game

1. Introduction

The Philippines is considered as one of the largest English-speaking countries in the world with about two-thirds of the population capable of speaking in the language. The country recognizes that mastery of English is beneficial in preparing globally competitive individuals as it is regarded as the world's lingua franca and the primary medium of communications for various global industries (Shobikah, 2017). The Philippines' English proficiency has led to the nation's leadership as a business process outsourcing (BPO) industry destination (Mariñas, 2021). The BPO industry in the Philippines is valued at US$23 billion, providing 1.15 million jobs (Lema, 2017). Further, the prevalence of English in higher education in the Philippines has attracted students from other non-English speaking countries like China and South Korea to study in the Philippines for undergraduate and postgraduate degrees (Romero, 2018).

However, in the recent Education First English Proficiency Index (2020), a noticeable decline has been observed as the Philippines dropped to 27th in the overall ranking out of 100 countries compared to being the 20th out of 100 in 2019 and 14th out of 88 in 2018 (EF EPI, 2020). Similarly, in its first year of participation in the Programme for International Students Assessment (PISA) in 2018,

the Philippines ranked last among the 79 nations in reading proficiency. Only 19% of the students attained at least Level 2 proficiency in reading which means they can identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex criteria, and can reflect on the purpose and form of texts when explicitly directed to do so. Unfortunately, almost no student (only 0.05%) attained level 5 in the PISA reading test which expects the student to comprehend lengthy texts, and to infer which information in the text is relevant even though the information of interest may be easily overlooked. This is relatively very low compared to15 other countries from the Organization for Economic Co-operation and Development (OECD) that have more than 10% of students who attained levels 5 and 6 (OECD, 2019).

The report indicated that 94% of the students in the Philippines who participated in the test do not speak the test language (i.e. English) at home. This led the test proponents to ask whether the choice of language affected the test performance. They also noted that expenditure per student in the Philippines was the lowest amongst all PISA-participating countries and 90% lower than the OECD average. Socio-economically advantaged students outperformed disadvantaged students in reading by 88 score points and students from private schools performed better than those from public schools by 62 points. Geographically, the National Capital Region's (NCR) mean score of 372 is 20 to 80 points higher than all other regions in the country while only the Central Mindanao Region in southern Philippines (Region 12) obtained a mean score lower than 300 (Philippine Department of Education, 2019). Given these findings, the government challenges the academe to review current curricula to improve English education and the engagement of all stakeholders particularly to support the learning of students from disadvantaged backgrounds (Romero, 2018).

The Ateneo Laboratory for the Learning Sciences with a grant from the Philippines' Commission on Higher Education and the British Council had undertaken a research project that developed various mobile applications to address the need for additional learning materials that could help students with English language learning (Ocumpaugh, Rodrigo, Porayska-Pomsta, Olatunji, & Luckin, 2018). Among the applications developed is a narrative-centered digital game for English comprehensions called *Learning Likha: Rangers to the Rescue* (LLRR). It exercises the skill of attention to details and understanding of instructions. LLRR has been initially tested on students from the NCR and findings show that the participants thought the game is interesting and fun, they were motivated to understand the content and complete the game tasks, and the comprehension scores were generally good (Agapito et al., 2020). Considering the findings in the PISA report, we hypothesize that (1a) students from the southern region do not use English as much as those in NCR and (1b) have a different attitude towards and perception of the language, (2a) that in-game performance and (2b) comprehension scores of south-based students are not as good as that of NCR students, but due to the prevalence of mobile games, students from both groups would have the same reception of the game in terms of their (3a) game-based learning engagement and (3b) intrinsic motivation.

This paper reports the testing of the mobile game *Learning Likha: Rangers to the Rescue* on students from southern Philippines and aims to answer the following questions:

1) What are the differences in terms of usage, attitudes towards, and perceptions of the English language between students from southern Philippines and NCR?
2) How will the LLRR in-game performance, post-test comprehension scores, engagement, and motivation of students differ between the groups?

2. Narrative-Centered Digital Games and Learning Likha: Rangers to the Rescue

Narrative-Centered Digital Games (NCDGs) leverage interactive story scenarios through the use of characters and immersive plots combined with digital game environments to deliver educational content and problem-solving activities (Rowe, Shores, Mott, & Lester, 2010). The Narrative-Centered Learning Theory states that there are two ways in which a narrative can help motivate the learners: first, narrative text transports learners to another time and place that becomes real to them; and second, as learners interact with the material, they themselves become part of the narrative. What makes narrative an appealing approach is its capability to give meaningful structure where pedagogical objectives can be embedded into a coherent form that serves as a powerful motivating force for learners (Lester, Rowe, & Mott, 2013).

We attempt to use NCDGs for language learning (Williamson, 2009). To navigate through a narrative game, the player needs to listen to spoken instructions, read texts, and interpret visual cues. *Learning Likha: Rangers to the Rescue* (LLRR) (Agapito et al., 2020) is an NCDG that practices learners' ability to notice and understand details through written and oral language. Its secondary goals is to expose the learners to a variety of endangered species in the Philippines (Agapito et al., 2020). As the game starts, the player is introduced to the game's setting, gameplay, and objectives. The player is invited by Likha and her friend Taro the Tarsier to the Rescue Center in their town, Hiraya. The player is introduced to four other volunteer rangers, namely Tala, Chesko, Yano, and Cora, who need help to rescue endangered animals (see Figure 1).

After the player selects a ranger to help, spoken and written dialogues between Likha, Taro, and the ranger communicate what needs to be accomplished. These include a description of the endangered animal to be rescued or instructions of task(s) that the player needs to perform (see Figure 2). Feedback is given when the player makes an incorrect action and depending on the scenario, further instructions are provided for the player to complete the tasks successfully.

Figure 1. Hiraya's Rescue Center's Holding Area where player selects one of the rangers.

Figure 2. Sample dialogue that describes the one of the tasks.

The player needs to complete one or more tasks for a selected ranger to rescue a particular endangered animal. After which, the game gives a short explanation about the animal using both text and audio (see Figure 3). A full description of this game and its initial test results are available from Agapito et al., (2020).

Figure 3. Description of the Visayan Warty Pig shown after the tasks have been completed.

3. Urban vs Rural English Language Learning in Other Countries

A study on Malaysian urban and rural students' attributions for success and failure in learning English as a second language (Gobel, Thang, Sidhu, Oon, & Chan, 2013) showed that urban and rural students had different attribution ratings for the success and failure for learning English as a second language. The urban group being more willing to attribute success to their own ability, effort, and study skills than students from the rural group. The rural group seems to attribute the failure more to the task they are given. Based on the data, the researchers hypothesized that the students in the urban group are more study-wise and confident as they have a greater belief in their own ability to take control of their successes in the language classroom.

In Indonesia, the work of Lamb (2012) offers strong evidence for the existence of regional differences in junior high school students' motivation to learn English, and in their progress. As an example, a young Indonesian's chance of achieving mastery of English depends mostly on where (s)he lives, as those who live in the central area of a city having a significant advantage over those from rural areas. They are also more likely to be motivated to learn English than their rural counterparts, in almost all aspects. Nevertheless, rural learners have shown to still have positive attitudes towards the language.

If these differences are not addressed, the gap between "the English-speaking 'have's" and the "non-English-speaking 'have-nots'" will continue to widen with the former living mainly in the urban areas, and the latter in the rural areas (Phillipson, 2012). If rural learners continue to get frustrated in their efforts to learn English, they may not be able to contribute to, or benefiting from, sectors of the local economy influenced by globalization.

4. Data Collection

Learning Likha: Rangers to the Rescue was tested on elementary students (grades 4, 5, and 6) from rural and urban public schools in Bukidnon, a province in southern Philippines. The mother tongue of these students is Cebuano. Since there were no face-to-face classes due to the pandemic, a field staff member was assigned to go to each of the participant's house to deliver the questionnaires and the mobile device for testing while observing the required safety protocols. The researcher then communicated with the participants over the phone for orientation and instructions.

The participants were given a demographics questionnaire to assess their level of access to mobile devices, their usage, attitude towards, and perceptions of the English language. They were given statements like "I speak English with my friends" and "I feel nervous when I need to speak English in class" and they indicated their level of agreement using a five-point Likert scale (1=Strongly Disagree to 5=Strongly Agree).

After playing LLRR, the participants were asked to answer a post-test on the different tasks and details of the endangered animals covered in the game to test their comprehension. They also answered the Game-Based Learning (GBL) Engagement Metric (Chew, 2017) adapted for LLRR to determine how engaged the students were with the game. They were given statements like "While playing *Learning Likha: Rangers to the Rescue*, I try my best to identify the details of the story" and they indicated their level of agreement using a five-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). Next, they were given the Intrinsic Motivation Inventory (IMI) (Ryan, 1982) questionnaire with statements like "It was important for me to do well in *Learning Likha: Rangers to the Rescue*" and they indicated their level of agreement using a seven-point scale (1=Not at all true to 7=Very true).

The NCR data used in this study for the purposes of comparison is the same data from Agapito et al., (2020) which was earlier collected using the same protocol and questionnaires but in a face-to-face setting.

5. Results and Discussion

5.1 Profile of Participants and Attitude towards English

Out of the 90 participants from the south, only 36 (40%) have their own cellphone but 55 (61%) played mobile games by borrowing mobile phones from family and friends and 43 (48%) of them played educational games (see Table 1 for comparison with NCR).

Table 1. *Participants' Profile*

	Southern Region	NCR
Sex	Female = 43, Male= 47	Female = 14, Male = 13
Average age	10.79	10.30
Had their own mobile phone	36 (40%)	16 (59%)
Played mobile games	55 (61%)	23 (85%)
Played mobile educational games	43 (48%)	20 (74%)

The southern group had the smaller percentage of respondents who speak English at home (29%) and with their friends (34%) compared to NCR with 41% on both circumstances. When individual ratings were compared, no significant difference was found in terms of English usage between the groups which leads the researchers to reject hypothesis 1a. However, participants from NCR expressed more desire and enjoyment in learning and reading in English and they also have a higher perception on the importance of learning the language. More participants from the southern region find the language difficult to learn and that they feel nervous when they need to speak English in class (see Table 2). These findings support the hypothesis 1b that students from the south have a different attitude towards and perception of the language.

Table 2. *Attitude towards English: Southern Region and NCR Comparison*

Questions	South		NCR		t-value	p-value
	mean	sd	mean	sd		
1. I speak English at home.	2.74	1.14	3.04	1.26	1.130	0.260
2. I speak English with my friends.	2.88	1.16	3.07	1.30	0.741	0.460
3. I enjoy learning English.	3.76	1.08	4.26	0.93	2.177	0.031
4. I enjoy reading in English.	3.36	1.36	4.30	0.94	3.333	0.001
5. I find English difficult to learn.	3.26	1.26	2.59	1.06	-2.459	0.015
6. I feel nervous when I speak English in class.	3.48	1.25	2.70	1.24	-2.804	0.006
7. I want to learn to speak and read in English.	3.98	1.05	4.52	0.88	2.405	0.018
8. Learning English is important.	3.96	1.11	4.52	1.07	2.304	0.023

5.2 In-game Performance and Post-test Comprehension Scores

The in-game tasks in LLRR are performed by tapping on specific parts of the screen based on the given instructions. The player will not be able to proceed to the next scenario unless the task had been successfully performed. For each scenario, there is an ideal minimum tap count to perform the task (i.e. the player was able to perform the task with just the first instruction) and an ideal maximum tap count (i.e. the player had to reveal all the tips on how to perform the task). For example, in the Eagle 1 scenario, the minimum tap count is 4 composed of 1 tap on the eagle right after reading the displayed dialogue plus 3 taps required for the succeeding dialogues as the game transitions to the next scenario. The ideal maximum tap count is 7 composed of 3 taps on the dialogue arrow to reveal all hints for the task, then 1 tap on the eagle, then the 3 required arrow taps before the game transitions to the next scenario. To account for in-game performance, the players' tap count for each scenario was compared against the ideal maximum tap count. In this same context, the excess taps are considered as incorrect moves. It was also noted that no player has a tap count lower than the ideal maximum tap count for all scenarios.

To get a standardized in-game performance, we divided the ideal maximum tap count by the total number of the player's tap count (e.g. 74 ideal maximum tap count over the player's 135 taps results to a 54.81% in-game performance rating).

Comparing the in-game performance of the students from the southern region (M = 58.76%, SD=19.71%) to NCR students (M = 68.83%, SD = 15.99%) yields a significant difference, t (115) = -2.396, p = 0.009. This result supports hypothesis 2a as the in-game performance of students from the south are not as good as those from NCR.

The comprehension test given after the participants played the game was composed of 14 multiple-choice questions and 5 open ended questions for a total of 25 points. Only 42% of the students from the south while there were 85% from the NCR group who obtained a comprehension rating of 50% and above. A comparison of the post-test performance showed that NCR-based students (M = 72%, SD = 17%) had significantly higher comprehension ratings than those from the southern region (M = 45%, SD = 16%), t (115) = -7.535, p < .00001. This result is consistent with the hypothesis 2b as comprehension scores of south-based students are not as good as the NCR group.

5.3 Engagement and Intrinsic Motivation

The features for the analysis of engagement and motivation (see Table 3a and 3b) are adapted from the work of Moreno et al. (2019) on *Learning Likha: Music for the Fiesta*, the predecessor of LLRR.

Table 3a. *Description of engagement features from the GBL Engagement Metric (Moreno et al., 2019)*

Feature	Description
Behavior Engagement (BE)	Behavior engagement is a subcomponent of the GBL Engagement Metric. It refers to the actions a learner does which signals attentiveness to the game and engagement. This includes listening to instructions and problem solving.
Cognitive Engagement (CE)	Cognitive engagement is a subcomponent of the GBL Engagement Metric. It refers to the learners' experience of conceiving strategies and linking the activity to prior knowledge and skills.
Emotion Engagement EE)	Emotion engagement is a subcomponent of GBL Engagement Metric. It refers to the learner's physiological state, e.g. bored or having fun, while playing the game.

Table 4b. *Description of motivation features from Intrinsic Motivation Inventory (Moreno et al., 2019)*

Feature	Description
Enjoyment (En)	Enjoyment is a subcomponent of the IMI. It is the sustained interest of the learner while playing the game.
Effort (Ef)	Effort is a subcomponent of the IMI. It refers to the learner's self-reported estimate of how much effort and importance was placed in completing the game.

Perceived Competence (PC)	Perceived competence is a subcomponent of the IMI. It refers to the learner's perception of their own competence in completing in-game tasks.

The value for each feature was obtained from responses to the GBLE (scale of 1 to 5) and IMI (scale of 1 to 7) self-report questionnaires. The first analysis was a comparison of these features between the NRC and southern groups (see Table 5). There was no significant difference in cognitive engagement between the two groups as 93% of NCR-based participants and 91% from the southern group self-reported that they tried to use and apply what they have learned in class while playing the game, they considered asking questions when they didn't know what to do, and considered the game to have enough difficulty to challenge them. However, for all the other GBL and IMI features, there was a significant difference between the groups. The participants in the NCR group have significantly higher self-report ratings for the following: 1) behavior engagement, i.e. they tend to be more attentive, listened to instructions and tried their best to identify details of the story, 2) emotion engagement, i.e. they felt interested while playing, they look forward to finish the LLRR tasks, 3) enjoyment, i.e. they enjoyed and had fun and found the game interesting and not boring, 4) effort, i.e. they tried very hard to perform the tasks and it was important for them to do well, and 5) perceived competence, i.e. they thought they played LLRR pretty good and satisfied with their performance.

Table 5. *Engagement and Motivation: Southern Region and NCR Comparison*

Questions	South		NCR		t-value	p-value
	mean	sd	mean	sd		
Behavior Engagement (BE)	3.94	0.87	4.65	0.79	3.77	<0.001
Cognitive Engagement (CE)	4.08	0.74	3.96	0.72	-0.688	0.492
Emotion Engagement (EE)	3.99	0.83	4.65	0.79	3.627	<0.001
Enjoyment (En)	5.11	1.16	6.38	0.78	5.310	<0.001
Effort (Ef)	5.47	1.47	6.70	0.58	4.243	<0.001
Perceived Competence (PC)	3.43	1.48	6.27	0.66	9.602	<0.001

These differences in their GBL and IMI self-report ratings reject hypotheses 3a and 3b as their reception towards the game in terms of their (3a) game-based learning engagement and (3b) intrinsic motivation are different.

The second analysis was to investigate which features exhibited significant relationships with their post-test comprehension ratings, this was done for each group. The relationships between the GBL features, IMI features, and in-game ratings were checked using a series of Pearson's product-moment correlation coefficient (r). For the NCR data, results showed that only the GBL features (BE, CE, and EE) are highly correlated with each other, hence, the overall average engagement rating was instead used for a multiple linear regression. Using M5 Prime for feature selection, the regression result is shown in Table 5, effort had a slightly significant inverse relationship with comprehension while the overall engagement had a strong positive relationship with their English post-test comprehension rating.

Table 6. *NCR Group Comprehension Ratings: Multiple Linear Regression Coefficients*

	Coefficient	Std. Error	t-Stat	p-Value
Overall Engagement	0.118	0.039	3.035	0.006
Effort	-0.119	0.048	-2.500	0.020
Intercept	0.992	0.354	2.803	0.010

For the south group data, Pearson's product-moment correlation coefficient (r) showed that all engagement and motivation features were significantly correlated with each other. When the overall engagement average was tested with the overall motivation average, the relationship was still significant (r (88) = 0.409, $p < 0.001$). Thus, instead of doing a multiple linear regression for this group, we explored the relationship of comprehension ratings with their in-game performance, the remaining independent variable with no significant relationship with the other features. Result showed a significant correlation between comprehension and in-game performance, r (88) = 0.354, p<0.001.

These findings show that the relationships observed between engagement and motivation features, in-game performance, and the post-test comprehension ratings are different for each group.

6. Summary and Conclusion

It was expected that NCR-based participants use English more but results revealed that only less than half of the NCR group do so compared to about a third of the southern group and the difference was not significant. When it comes to their attitude towards the language, participants from NCR expressed more desire and enjoyment in learning and reading in English. They also have a higher perception on the importance of learning English. More participants from the southern group find the language difficult to learn and that they feel nervous when they need to speak English in class. These findings support the hypothesis that students from the south have a different attitude towards and perception of the language.

Learning Likha: Rangers to the Rescue received different responses from the two groups in terms of their in-game performance, game-based learning engagement and intrinsic motivation and these differences were reflected in the English comprehension post-test ratings.

The in-game performance of the participants in LLRR was measured by the maximum number of correct tap count over their total tap count. Result of the comparison showed that in-game performance of NCR-based participants are significantly higher than those from the south. This supports the hypothesis that the in-game performance of students from the south are not as good as those from NCR. The same gap was observed in the English comprehension post-test where NCR-based participants obtained significantly higher ratings which also supports the hypothesis that comprehension scores of southern-based students are not as good as the NCR group.

The differences are also consistent in terms of their engagement and motivation. For all the GBL and IMI features, except for cognitive engagement, the NCR group have significantly higher self-report ratings such that: they tend to be more attentive, listened to instructions and tried their best to identify details of the story; they felt interested while playing, they look forward to finish the LLRR tasks; they enjoyed and had fun and found the game interesting and not boring; they tried very hard to perform the tasks and it was important for them to do well; and they thought they played LLRR pretty well and were satisfied with their performance. These results lead the researchers to reject the hypothesis that reception of the game in terms of engagement and motivation are the same.

Finally, it was found that for the NCR group, comprehension rating had no significant relationship with their in-game performance but had a slightly significant inverse relationship with self-report effort exerted and a strong positive relationship with overall engagement. For the southern group, the participants' comprehension ratings were highly correlated with their in-game performance.

The differences between NCR and southern province students is representative of socio-economic differences between these groups. As English language proficiency can be a gateway skill that affects access to economic opportunities, improving English proficiency is one step towards improving socio-economic equity. Games such as LLRR are one of many materials that can potentially help educators reach these ends.

Acknowledgements

We thank the Ateneo de Manila University Research Council for the post-doctoral grant of MMPTF that made this study possible; the Ateneo Laboratory for the Learning Sciences of Ateneo de Manila University for the *Learning Likha: Rangers to the Rescue* game and for the mobiles phones used in the field test; and the students of the public schools in Bukidnon, Philippines who participated in this study.

References

Agapito, J. L., Manahan, D. M. A., Moreno, M. M. L., Beraquit, J. I., Herras, I. Y., Mora, K. A. C., … Rodrigo, M. M. T. (2020). Development and field testing of a narrative-centered digital game for english

comprehension. *28th International Conference on Computers in Education, ICCE 2020*, 164–172. Asia-Pacific Society for Computers in Education.

EF EPI. (2020). *Education First English Proficiency Index*. Florida, USA. Retrieved from https://www.ef.com/wwen/epi/regions/asia/philippines/

Gobel, P., Thang, S. M., Sidhu, G. K., Oon, S. I., & Chan, Y. F. (2013). Attributions to success and failure in English language learning: A comparative study of urban and rural undergraduates in Malaysia. *Asian Social Science*, *9*(2), 53.

Lamb, M. (2012). A self system perspective on young adolescents' motivation to learn English in urban and rural settings. *Language Learning*, *62*(4), 997–1023.

Lema, K. (2017, November 9). Rise of the machines: Philippine outsourcing industry braces for AI. *Reuters*. Retrieved from https://www.reuters.com/article/us-philippines-economy-outsourcing-idUSKBN1D90BH

Lester, J. C., Rowe, J. P., & Mott, B. W. (2013). Narrative-centered learning environments: A story-centric approach to educational games. In *Emerging Technologies for the Classroom* (pp. 223–237). Springer.

Mariñas, J. (2021, March 2). 3 Reasons Why The Philippines is One of the Top English-Proficient Countries for Business. Retrieved April 28, 2021, from IT Outsourcing website: https://cloudemployee.co.uk/blog/it-outsourcing/why-philippines-for-business/

Moreno, M., Manahan, D., Fernandez, M., Banawan, M., Beraquit, J., Caparos, M., … Rodrigo, M. M. T. (2019). Development and Testing of a Mobile Game for English Proficiency Among Filipino Learners. *Proceedings of the 27th International Conference on Computers in Education*. Presented at the 27th International Conference on Computers in Education, Taiwan.

Ocumpaugh, J., Rodrigo, M. M., Porayska-Pomsta, K. K., Olatunji, U., & Luckin, R. (2018). Becoming Better Versed: Towards Design of Popular Music-based Rhyming Game for Disadvantaged Youths. *Proceedings of the 26th International Conference on Computers in Education*. Asia-Pacific Society for Computers in Education.

OECD. (2019). *Philippines—Country Note—PISA 2018 Results*.

Philippine Department of Education. (2019). *PISA 2018 National Report of the Philippines* [Department of Education Complex, Meralco Avenue, Pasig City Philippines]. Retrieved from https://www.deped.gov.ph/wp-content/uploads/2019/12/PISA-2018-Philippine-National-Report.pdf

Phillipson, R. (2012). Linguistic imperialism. *The Encyclopedia of Applied Linguistics*, 1–7.

Romero, P. (2018, February 22). Senate to probe declining English proficiency. *The Philippine Star*. Retrieved from https://www.philstar.com/other-sections/education-and-home/2018/02/22/1790069/senate-probe-declining-english-proficiency

Rowe, J. P., Shores, L. R., Mott, B. W., & Lester, J. C. (2010). Integrating learning and engagement in narrative-centered learning environments. *International Conference on Intelligent Tutoring Systems*, 166–177. Springer.

Shobikah, N. (2017). The Importance of English Language in Facing Asean Economic Community (AEC). *At-Turats*, *11*, 85–93.

Williamson, B. (2009). *Computer games, schools, and young people: A report for educators on using games for learning*. Futurelab Bristol.

Yiakoumetti, A., Evans, M., & Esch, E. (2005). Language awareness in a bidialectal setting: The oral performance and language attitudes of urban and rural students in Cyprus. *Language Awareness*, *14*(4), 254–260.