Effectiveness Of Total Physical Response (TPR) Method in Enhancing Vocabulary Among Grade 1 Learners

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ABSTRACT

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| Persistent vocabulary difficulties among Grade 1 learners have contributed to language learning delays and limited comprehension abilities. This study aimed to examine the effectiveness of the Total Physical Response (TPR) method in enhancing vocabulary among first-grade learners. The research employed a one-group pre-test–post-test experimental design conducted through tutorial sessions. A total of 15 learners from Judge Ernesto Nombrado Memorial School participated in the intervention. Aiken’s V coefficient method and Cronbach’s alpha were utilized to establish the validity and reliability of the researcher-made test. The instrument achieved a validity score of 0.91 and a reliability index of 0.776, indicating that the tool was both valid and reliable for vocabulary assessment. The pre-test results showed a mean score of 6.87, with a transmuted grade of 71, interpreted as “Did Not Meet Expectations.” After the implementation of the TPR intervention, the post-test mean score increased to 12.53, with a transmuted grade of 89, categorized as “Very Satisfactory.” A t-value of 9.338 and a p-value of 0.001 indicated a statistically significant improvement. The Cohen’s d coefficient of 2.411 further confirmed a large effect size. These outcomes affirm the effectiveness of the TPR method in enhancing vocabulary among Grade 1 learners. Therefore, it is recommended that educators integrate Total Physical Response into early-grade instruction to support kinesthetic and participatory learning. The strategy aligns with young learners’ developmental needs and has demonstrated strong potential for improving vocabulary performance in primary education. |

*Keywords: Total Physical Response, vocabulary development, kinesthetic learning, Grade 1 learners, language acquisition*

1. INTRODUCTION

Vocabulary is the set of words known and used by a person in communication (Susanto, 2017). It plays a crucial role in literacy development, as vocabulary knowledge influences reading comprehension, writing, and the ability to express thoughts effectively (Majeed, 2023). However, many learners struggle to fully understand the meaning, context, and proper usage of words (Behrens, 2018). This gap in vocabulary knowledge hinders their academic success and cognitive development, particularly in the early years of schooling (Green & McLachlan, 2024).

Global studies consistently point to significant challenges in vocabulary among primary-grade learners (OECD, 2019). A study by the National Center for Education Statistics (2022) in the United States results showed that the fourth and eighth graders tested were able to recognize the correct meaning of only around half the words selected from the test's reading comprehension passages, students' performance on vocabulary questions closely tracked their performance in reading comprehension. In India, nearly 50% of Grade 1 students are unable to read a simple paragraph, highlighting a significant gap in early literacy (Chiplunkar et al., 2023). These findings underscore the critical need for effective vocabulary instruction to address the significant learning gaps that hinder academic success across diverse contexts (Moody et al., 2018).

In the 2022 PISA rankings, the Philippines ranked low in reading, mathematics, and science, with the reading score increasing from 340 in 2018 to 347 but still below the global average of 476. Several studies also support the claim that Filipino learners have poor English proficiency, with most students performing at the instructional level in literal taxonomy (Larioque, 2019). This issue was evident at Paaralang Elementarya ng Tipas, where the DepEd's Philippine Informal Reading Inventory (PHIL-IRI) showed that Grade Five pupils struggled with vocabulary, frequently mispronounced and repeated English words, and fell into the "frustration" category. Similarly, in our observations at Judge Ernesto Nombrado School, Grade 1 learners struggled to understand and use new vocabulary, further highlighting the communication gap between teachers and learners that hinders the teaching and learning process.

Inciman Celik et al. (2018) highlight that while several vocabulary teaching strategies have been explored in the literature, few studies have specifically examined the effectiveness of Total Physical Response (TPR) in enhancing vocabulary among Grade 1 learners. TPR, developed by James Asher, is a method that combines physical movement with language learning (Cheng, 2019). By associating words with corresponding actions, TPR helps students retain and understand vocabulary more effectively (Sumarni et al., 2022). This approach has been demonstrated to support the language development of young learners (Xie, 2021).

Given the challenges students face with traditional vocabulary teaching methods, our role as researchers is to investigate the potential of TPR as an intervention to improve vocabulary among Grade 1 learners. We aim to explore how TPR can enhance students' ability to learn and retain new words. Our research will contribute to the growing body of knowledge on the effectiveness of TPR as a dynamic and engaging tool for early education.

2. OBJECTIVES

This study aimed to attain the following objectives:

1. Determine the level of pre-test scores in terms of vocabulary development among Grade 1 learners in Judge Ernesto Nombrado Memorial School.
2. Determine the level of the post-test scores in terms of vocabulary development among Grade 1 learners in Judge Ernesto Nombrado Memorial School.
3. Determine the significant difference between the pre-test and post-test results of the Grade 1 learners in Judge Ernesto Nombrado Memorial School.

3. MATERIALS AND METHODS

Research Design

This study employed an experimental research design, specifically a one-group pre-test–post-test model, which is commonly used to evaluate the effect of an intervention on a single group without a control group (Cohen, Manion, & Morrison, 2018). This design was employed to evaluate the effectiveness of the Total Physical Response (TPR) method in improving vocabulary among Grade 1 learners by comparing their vocabulary scores before and after the intervention. This study is appropriate as it enables researchers to measure learners' improvement over time and determine the instructional impact of TPR within a real classroom setting. The pre-test provided baseline data, while the post-test measured learning gains after the TPR-based instruction. This design is both practical and ethically suitable for educational settings involving young children, as it ensures that all participants receive the intended learning experience while allowing researchers to objectively evaluate the outcome.

**Research Instrument**

The The primary research instrument used in this study was a researcher-designed vocabulary test developed to assess the effectiveness of the Total Physical Response (TPR) method in enhancing vocabulary among Grade 1 learners. The test was specifically developed to align with the learning competency "give the meaning of words through clues", as outlined in the curriculum standards.

Initially, the instrument consisted of 20 test items. However, after aligning the assessment with the actual competencies covered per lesson, the number of items was reduced to 15. This adjustment ensured that each item matched the specific vocabulary content and instructional scope delivered during the intervention, improving the instrument's curricular alignment and construct validity.

The test underwent a rigorous content validation process involving three education experts who evaluated its relevance, clarity, and alignment with intended learning outcomes. The validation process yielded an Aiken V coefficient of 0.91, indicating excellent content validity. Furthermore, a pilot test was conducted at Sta. Filomena Elementary School yielded a Cronbach's alpha coefficient of 0.776, indicating a high level of internal consistency and overall reliability.

**Respondents of the Study**

 This investigated the effectiveness of the Total Physical Response (TPR) method in enhancing vocabulary among Grade 1 learners through a one-group pre-test–post-test experimental design. A total of fifteen (15) Grade 1 learners from Judge Ernesto Nombrado Memorial School served as the research respondents. The respondents were selected based on their enrollment status, developmental appropriateness for TPR activities, and availability throughout the study duration. Only students who completed both the pre-test and post-test were included in the final analysis. To maintain the reliability of the results, those who were absent during the post-test were excluded. Parental or guardian consent was obtained for all participants in adherence with ethical research standards for studies involving minors.

**Data Gathering**

The researchers followed the following procedures in conducting the research action:

1. **Obtaining Research Ethical Clearance.** The first step in the data-gathering process was to secure ethical clearance from the UREB. This involved submitting a research proposal that outlined the study's goals, methods, and how participant confidentiality would be protected. The UREB reviewed the proposal to ensure it met ethical standards. Once approved, any feedback was addressed, allowing the research to proceed with the necessary ethical safeguards in place.
2. **Content Validity of Questionnaires.** The vocabulary test underwent expert review by three specialists in early childhood education using a standardized evaluation tool. Their assessments yielded an Aiken’s V coefficient of 0.91, which signifies excellent content validity, confirming that the test was clear, relevant, and well-aligned with the DepEd learning competency: “Give the meaning of words through clues.”
3. **Pilot Testing to Test Reliability.** To ensure the reliability of the vocabulary test, a pilot test was conducted at Sta. Filomena Elementary School with a comparable group of Grade 1 learners. The analysis of learners’ responses produced a Cronbach’s alpha of 0.776, indicating an acceptable level of internal consistency for an instrument used with early primary-level students.
4. **Asking Permission from the Parents.** Recognizing the ethical considerations involved in research with minors, the researchers obtained informed consent from the parents or legal guardians of all participants. The purpose, procedures, and voluntary nature of the study were communicated, along with assurances of confidentiality and the participant's right to withdraw at any time.
5. **Administering of Pre-test Questionnaires.** The researchers administered the pre-test questionnaires to the students to assess their baseline vocabulary knowledge related to the stated objectives. This pre-test served as an initial evaluation to preview the upcoming activities and identify areas where the students needed to focus their learning.
6. **Retrieving the Pre-test Questionnaire.** After the learners completed the pre-test administered by the researchers, the questionnaires were collected. The data gathered from the pre-test were then tallied, encoded, analyzed, and interpreted.
7. **Conducting the Intervention.** The research was conducted personally, and the respondents were able to participate in the activities. Before the proper course of action, the researchers first introduced themselves and explained the rationale of the activity, which included vocabulary activities using the TPR method. This explanation ensured that the participants could follow through smoothly.
8. **Administering of Post-test questionnaire.** After completing the series of TPR-based instructional sessions, a post-test was administered using the same validated vocabulary instrument. This post-intervention assessment measured any improvement in learners' vocabulary performance, allowing the researcher to evaluate the effectiveness of the TPR method. Only learners who completed both the pre-test and post-test were included in the final analysis to ensure data integrity and accuracy.
9. **Retrieving Post-test Questionnaire.** After the learners completed the post-test, the questionnaires were collected. The post-test data were tallied, encoded, analyzed, and interpreted. As for the administration of the pre-test and post-test, they were conducted for at least forty-five (45) minutes to one (1) hour and were administered during the allocated time for their reading habit.
10. **RESULTS AND DISCUSSION**

**Level Of Pre-Test Scores**

Table 1 presents the results of the pre-test scores. The learners obtained a mean score of 6.87 out of a total possible score of 15, with a standard deviation of 1.77. Based on the Department of Education's K to 12 transmutation guidelines, this score corresponds to a transmuted grade of 71, which falls under the interpretation "Did Not Meet Expectations." This outcome suggests that, prior to the intervention, the learners exhibited limited vocabulary proficiency, indicating difficulty in identifying word meanings.

This observation is supported by Mohd Tahir et al. (2020), who emphasized that such challenges often arise when learners are not equipped with strategies that facilitate deep vocabulary processing, making it harder for them to internalize and recall word meanings. Furthermore, Palermo (2024) emphasized that limited exposure to vocabulary, both in and out of the classroom, hinders learners from fully grasping the use and meaning of new words. Supporting this, Hibatullah (2019) noted that insufficient language exposure in early educational environments significantly contributes to young learners' difficulties in recognizing and understanding vocabulary. These observations confirm the pre-test results and underscore the importance of adopting methods that foster meaningful engagement with language.

Moreover, these findings are consistent with Palermo’s (2024) assertion that early-grade learners require rich and meaningful exposure to vocabulary for successful acquisition. The limited pre-test performance may reflect the continued reliance on rote memorization and passive instructional approaches, which Zoch (2017) criticized for failing to support students in retaining or applying new vocabulary in a meaningful way.d be placed below the table with superscript lowercase letters. Sample table format is given below.

Table 1. Level of Pre-test Scores

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Total Score** | **Mean** | **Std. Deviation** | **Transmuted Grade** | **Interpretation** |
| Pre-test | 15 | 6.87 | 1.77 | 71 | Did Not Meet Expectation |

**Levels of Post-test Scores**

Table 2 presents the results of the post-test scores. The learners achieved a mean score of 12.53 out of 15 in the post-test, with a standard deviation of 2.00. When transmuted to the Department of Education’s K to 12 grading scale, this score corresponds to an 89, classified as “Very Satisfactory.” This result indicates a significant improvement in vocabulary acquisition following the implementation of the Total Physical Response (TPR) method.

This outcome is supported by numerous studies highlighting the effectiveness of TPR in fostering vocabulary development through movement and multisensory engagement. Amalia Putri (2024) and Crandall (2022) emphasized that TPR is particularly suitable for young learners due to their strong kinesthetic learning preferences. When children physically enact the meaning of words, they build stronger memory associations, as demonstrated by Rambe (2019) and Dongsanniwas and Sukying (2024). These multisensory connections make vocabulary not only easier to understand but also more likely to be retained over time.

Moreover, the high post-test performance aligns with the findings by Kara and Eveyik-Aydın (2019), who noted that TPR enhances both receptive and expressive language skills by linking motor activity with linguistic input. Rahmadani (2019) further observed that this method reduces cognitive load, helping young learners absorb new words more efficiently. The learners’ improved scores in this study reflect these cognitive benefits, showing that TPR not only engages students but also scaffolds their language processing.

Additionally, researchers such as Yuquilema Mullo (2024) and Magnussen & Sukying (2021) emphasized that TPR facilitates meaningful use of vocabulary by embedding words in contextually relevant, physical scenarios. This was especially evident in the present findings, where learners demonstrated the ability to understand and use vocabulary with greater accuracy and fluency after repeated TPR activities.

In conclusion, the substantial increase in post-test scores confirms the effectiveness of TPR in improving vocabulary performance among Grade 1 learners. The approach’s interactive, sensory-rich, and developmentally aligned nature created an engaging learning environment that significantly supported students’ language growth.

Table 2. Level of Post-test Scores

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Total Score** | **Mean** | **Std. Deviation** | **Transmuted Grade** | **Interpretation** |
| Post-test | 15 | 12.53 | 2.00 | 89 | Very Satisfactory |

**Difference Between the Pre-test Scores and Post-test Scores**

The results in Table 3 show the difference between the pre-test scores and the post-test scores. It reveals a statistically significant improvement in the vocabulary scores of Grade 1 learners following the Total Physical Response (TPR) intervention. Specifically, mean scores increased from 6.87 (pre-test) to 12.53 (post-test), with a t-value of 9.338 and a p-value of 0.001, which is well below the standard 0.05 threshold for significance. Consequently, this strong statistical result implies that the gains in vocabulary were not due to chance but were meaningfully linked to the instructional strategy used.

Previous studies support this finding. For instance, Sholikha (2018) reported an increase in vocabulary scores from 81.07 to 96.05, accompanied by a significant t-value. Similarly, Sabban and Wahid (2021) found that learners exposed to TPR exhibited enhanced vocabulary retention and greater engagement. These results, supported by Putri (2024), align with the core premise of kinesthetic learning, where physically acting out vocabulary terms reinforces both comprehension and memory. Thus, the present study's findings are consistent with a broader body of evidence demonstrating the effectiveness of TPR in vocabulary acquisition.

Moreover, Dongsanniwas and Sukying (2024) emphasized that physical movement significantly enhances multisensory engagement, thereby improving vocabulary retention. In a similar vein, Rambe (2019) noted that students who physically enact vocabulary develop stronger semantic connections, which aid both immediate comprehension and long-term memory. Furthermore, Crandall (2022) highlighted that kinesthetic strategies are particularly effective for young learners whose cognitive development is driven by sensory and experiential input.

Further reinforcing the effectiveness of TPR is Cohen's d value of 2.411, representing a very large effect size. According to Cohen (1988), a value above 0.8 already indicates a large effect, making this result particularly noteworthy. Supported by comparative findings, Al Firdaus and Rahmawati (2024) also observed a Cohen’s d of 2.197 in a study that utilized kinesthetic digital tools to support vocabulary learning.

Correspondingly, the study's findings align with Piaget's Cognitive Development Theory, particularly the pre-operational stage (ages 2–7), which emphasizes learning through symbolic play, sensory experiences, and physical interaction. As McLeod (2024) posits, children in this developmental phase construct knowledge through active engagement with their environment. TPR supports this process by linking language learning with motor actions, thereby making abstract vocabulary concepts more concrete and tangible. Therefore, the use of TPR not only enhances vocabulary learning but also aligns developmentally with how young learners naturally acquire and process new information.

Table 3. Mean Comparison Between Pre-test and Post-test Scores

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **Mean** | **Std. Deviation** | **t-value** | **Degrees of freedom (df)** | **p-value** | **Cohen’s d coefficient** |
| Pretest | 6.87 | 1.77 | 9.338 | 14 | 0.001 | 2.411 |
| Posttest | 12.53 | 2.00 |

**Implications for Vocabulary Development**

This study demonstrated that Total Physical Response (TPR) is a powerful strategy for enhancing vocabulary learning among Grade 1 learners. Through physical movement and active participation, learners were able to connect new words with concrete actions, making it easier to understand and remember meanings. Instead of relying on memorization or passive drills, TPR transforms vocabulary instruction into an engaging and playful experience that keeps young learners motivated and involved.

The use of gestures, routines, and repetition helped reinforce word associations and improved students’ confidence in using language. Many students who typically struggle with attention or verbal participation were more responsive during lessons when movement was included. TPR also proved to be an inclusive approach, benefiting learners with different styles, whether they learn best by seeing, hearing, or doing. The positive outcomes suggest that vocabulary instruction in the early grades can be significantly improved by integrating physical activity and interactive strategies.

Teachers can apply TPR with little to no technology, making it an accessible and cost-effective method, especially in schools with limited resources. Overall, this approach offers a straightforward yet impactful way to enhance early vocabulary development, making it more meaningful, enjoyable, and effective in any classroom setting.

5. Conclusion

Conclusion

1. The Grade 1 learners' pre-test performance in vocabulary was below the expected level, with a mean score of 6.87, corresponding to a transmuted grade of 71, interpreted as “Did Not Meet Expectations.” This indicates that before the intervention, learners had limited ability to determine word meanings using clues, underscoring the need for an alternative, more effective instructional strategy.
2. After receiving vocabulary instruction through five tutorial sessions using the Total Physical Response (TPR) method, the learners' performance showed significant improvement. The mean post-test score rose to 12.53, with a transmuted grade of 89, falling within the "Very Satisfactory" category. This demonstrates that TPR successfully enhanced learners' ability to understand and recall vocabulary words by associating them with physical actions, in alignment with cognitive development principles that support learning through active engagement and multisensory input.
3. Statistical analysis using an independent samples t-test revealed a t-value of 9.338 and a p-value of 0.001, indicating a statistically significant difference between the pre-test and post-test scores. Additionally, a Cohen’s d effect size of 2.411 reflects a very large educational impact of the intervention. These findings confirm that the improvement in vocabulary scores was not due to random chance but a direct result of the TPR-based instruction. The method’s integration of physical movement and verbal cues created meaningful learning experiences, making it an effective strategy for vocabulary acquisition in early primary learners.

**RECOMMENDATIONS**

1. It is recommended that teachers conduct initial diagnostic assessments to determine the learners' baseline vocabulary level at the start of each quarter. This can help identify those who are struggling and may benefit from early intervention or focused vocabulary reinforcement. Teachers may also consider limiting traditional drill-based approaches and instead exploring interactive strategies that cater to the developmental needs of young learners, such as games, visual aids, and integrating verbal context.
2. It is recommended that the Total Physical Response method be incorporated into regular vocabulary instruction, especially for primary-grade learners. Teachers may use movement-based activities, such as acting out verbs or demonstrating word meanings through gestures, to make vocabulary learning more engaging and memorable. Schools may also offer in-service training to equip teachers with practical ways to apply TPR techniques that align with DepEd competencies, particularly the standard "Give the meaning of words through clues."
3. Given the strong statistical significance and large effect size of the intervention, it is recommended that TPR be explored for wider implementation in remedial reading, vocabulary enrichment, and tutorial programs. Schools may consider designating regular slots for TPR-based instruction during reading periods or in pull-out support classes. Additionally, future researchers are encouraged to replicate this study across multiple grade levels, subjects, or school contexts to validate the effectiveness of the TPR approach further and expand its applications in early education.

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