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Modern pedagogical approach in teaching phonology (Makabagong Pagdulog sa Pagtuturo ng Palatunugan)

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Abstract

This study investigates the effectiveness of modern pedagogical approaches, particularly gamification and digital tools, in teaching phonology within the Filipino subject at Villahermosa National High School. Traditional methods of instruction often render Filipino classes repetitive and disengaging, leading to diminished student motivation and learning outcomes. Recognizing this challenge, the research explores how innovative strategies such as Duolingo, a gamified language-learning platform can enhance students' phonological competence. Anchored in theories of constructivism, behaviorism, and social interactionism, the study emphasizes the role of technology in fostering active, collaborative, and meaningful learning experiences. Using a quasi-experimental design, the research employed pre-tests and post-tests, surveys, and criterion-referenced assessments to measure changes in students' knowledge and skills. Twenty Grade 7 students under the ARAL Program participated, with purposive sampling ensuring relevance to the study's objectives. Findings are expected to demonstrate that gamification increases engagement, collaboration, and retention of phonological concepts compared to traditional methods. The study also highlights the alignment of innovative teaching strategies with the K-12 Curriculum and Republic Act No. 10533, which mandate the integration of 21st-century skills and modern pedagogical practices. Ultimately, this research contributes to the growing discourse on technology-enhanced language learning, offering practical insights for educators seeking to balance cultural identity, communicative competence, and technological adaptation in Filipino education. By situating phonology instruction within interactive and gamified contexts, the study underscores the potential of digital tools to transform abstract linguistic concepts into accessible, engaging, and effective learning experiences.

Keywords: Gamification; Phonology; Technology-Enhanced Learning

1. Introduction

The Filipino subject plays a vital role in shaping students' communicative competence, critical thinking, and cultural identity. However, many learners perceive it as monotonous when taught through traditional, teacher-centered methods. This perception poses a challenge for educators, as student motivation and learning outcomes are directly influenced by instructional strategies. One of the most pressing issues in teaching Filipino, particularly phonology, is the difficulty students face in grasping abstract concepts such as sounds and phonemes when instruction relies solely on conventional approaches.

To address this, educators are encouraged to adopt innovative, student-centered strategies that foster active participation, collaboration, and confidence. Collaborative learning, as emphasized by Vygotsky's social development theory, enables learners to achieve higher cognitive levels through interaction and shared problem-solving. In the 21st century, technological integration has become indispensable in education, offering tools that make learning more engaging and accessible. Gamification, the application of game elements in learning, has emerged as a promising approach to enhance motivation and comprehension. Platforms like Duolingo exemplify this innovation by combining

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interactive tasks, immediate feedback, and adaptive learning pathways, thereby supporting phonological development in a dynamic and enjoyable manner.

Phonology, as a foundational aspect of language, underpins reading, writing, and pronunciation. Yet its abstract nature often hinders student understanding. Gamified digital tools provide concrete, multisensory experiences that bridge this gap, making phonological concepts more tangible. This study, therefore, examines the impact of gamification on Grade 7 students at Villahermosa National High School, focusing on how digital interventions improve learning outcomes compared to traditional methods. Guided by theories of constructivism, behaviorism, and operant conditioning, the research employs a quasi-experimental design with pre-tests, post-tests, and surveys to measure effectiveness.

Aligned with the K-12 Curriculum and Republic Act No. 10533, this study underscores the importance of integrating modern pedagogical approaches to meet the needs of contemporary learners. By situating phonology instruction within gamified contexts, the research aims to demonstrate how technology can transform Filipino education into a more engaging, effective, and culturally relevant experience.

2. Materials

The study utilized a combination of instructional tools and assessment instruments to evaluate the effectiveness of the S.H.Y. (Sinusundang Hakbang sa Yugtong-Palatanugan) approach in teaching phonology. Core materials included game-based digital applications such as Duolingo, audio-visual resources, and interactive exercises designed to reinforce phonological awareness. These tools provided multisensory experiences, enabling students to connect sounds with letters, syllables, and words in a systematic manner.

Assessment instruments comprised pre-tests and post-tests, criterion-referenced evaluations, and survey forms. The pre-test measured baseline knowledge of phonological concepts such as phonemes, tone, clusters, and minimal pairs, while the post-test assessed learning gains after the intervention. Surveys captured student perceptions, motivation, and engagement with the gamified approach. The materials were carefully aligned with the K-12 Curriculum standards and tailored to Grade 7 learners under the ARAL Program. Together, these resources ensured that instruction was both interactive and measurable, providing reliable data for evaluating the impact of modern pedagogical strategies on phonological learning.

2.1. Methods

A quasi-experimental design was employed, specifically the pre-test and post-test model, to measure the effectiveness of the S.H.Y. approach. Twenty Grade 7 students from Villahermosa National High School's ARAL Program were purposively selected as participants. The intervention followed a step-by-step phonological progression: phonological awareness, sound-letter correspondence, syllable formation, word reading, and sentence reading.

Data collection involved administering pre-tests to establish baseline knowledge, implementing the gamified instructional strategy, and conducting post-tests to measure learning outcomes. Surveys and questionnaires were distributed to gather qualitative insights into student experiences, motivation, and perceptions of the digital tools. Statistical analysis included descriptive measures (mean scores) and inferential testing using paired t-tests to determine the significance of differences between pre-test and post-test results.

This methodological framework ensured that both quantitative and qualitative data were captured, allowing for a comprehensive evaluation of the intervention's impact. The design was particularly suited to identifying measurable improvements in phonological competence while also highlighting student engagement and attitudes toward technology-enhanced learning.

3. Results

The results revealed a significant improvement in students' phonological learning after the implementation of the S.H.Y. approach. Pre-test scores indicated low proficiency, with mean scores across phonological aspects—phonemes (8.40), tone (7.90), clusters (8.10), and minimal pairs (7.60)—all categorized as "low." The overall mean score of 8.00 confirmed limited baseline knowledge.

Following the intervention, post-test scores demonstrated substantial gains. Phoneme recognition rose to 15.80, tone identification to 15.20, clusters to 15.60, and minimal pairs to 15.00. The overall mean score increased to 15.40,

reflecting a “high” level of proficiency. Paired t-test analysis confirmed that the differences between pre-test and post-test scores were statistically significant, with p-values below the 0.05 threshold.

These findings indicate that gamification and digital tools effectively enhanced students’ phonological competence. Improvements were consistent across all measured aspects, suggesting that the systematic, step-by-step approach facilitated deeper understanding and retention of abstract phonological concepts. The results validate the effectiveness of technology-enhanced strategies in bridging gaps left by traditional methods.

4. Discussion

The findings highlight the effectiveness of gamification and digital tools in improving phonological learning among Grade 7 students. The significant increase in mean scores across all phonological aspects demonstrates that interactive, multisensory approaches fostered greater engagement and comprehension compared to traditional methods. The S.H.Y. framework provided a structured pathway for learning, ensuring that students progressed from basic sound recognition to more complex tasks such as syllable and sentence reading.

These results align with existing literature. Santiago (2019) emphasized that technology in language instruction enhances clarity and interest, while Luna (2018) noted its role in advancing cognitive development. Similarly, Dela Cruz and Ramirez (2020) reported a 30% improvement in academic performance through digital strategies, and Mendoza (2021) found mobile learning more effective than conventional approaches. The present study reinforces these findings, showing that gamification not only motivates learners but also strengthens retention through reinforcement loops.

Moreover, the study underscores the limitations of traditional instruction, which often struggles to make abstract phonological concepts accessible. By contrast, gamified tools provided concrete, engaging experiences that bridged this gap. Overall, the research confirms that modern pedagogical approaches are essential for fostering communicative competence and cultural identity in Filipino language education.

5. Conclusion

This study demonstrates the significant impact of gamification and digital tools in enhancing phonological learning within the Filipino subject. Traditional methods often fail to sustain student interest, making abstract concepts such as sounds and phonemes difficult to grasp. By integrating platforms like Duolingo, instruction becomes more interactive, adaptive, and learner-centered, allowing students to engage actively and learn at their own pace. The quasi-experimental design revealed that students exposed to gamification showed improved motivation, collaboration, and retention compared to those taught through conventional strategies.

The findings affirm constructivist and behaviorist perspectives, highlighting the importance of reinforcement, discovery learning, and social interaction in language acquisition. Moreover, the study aligns with the K-12 Curriculum and Republic Act No. 10533, which emphasize modern pedagogical practices and 21st-century skills. Ultimately, gamification proves to be a powerful complement to traditional instruction, bridging abstract concepts with engaging digital experiences and fostering communicative competence among Filipino learners.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest should be disclosed.

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