



Melodic Mastery: Enhancing Vocabulary Acquisition through Musical Repetition

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ABSTRACT

This research addresses the challenge of enhancing vocabulary and spelling skills among intermediate school students through the utilization of musical repetition in song creation. The study employs a mixed-methods approach, combining qualitative and quantitative methodologies to investigate the efficacy of this innovative technique compared to traditional methods. Utilizing a quasi-experimental design with a pre-test/post-test control group setup, the research randomly assigns participants to either an experimental group engaged in song creation or a control group using conventional methods. The study aims to recruit a sample of at least 100 intermediate school students, aged 14, along with a smaller cohort of teachers and parents for qualitative feedback. Data collection includes pre-tests, post-tests, surveys, and interviews to assess vocabulary and spelling proficiency and gather qualitative insights. Through comprehensive analysis, the study examines the effectiveness of musical repetition in improving vocabulary and spelling skills. The findings aim to provide insights into the advantages and challenges of integrating musical repetition into vocabulary instruction, offering practical implications for educators and suggesting directions for future research.

Key words: Musical repetition, vocabulary acquisition, spelling skills, mixed-methods approach, and quasi-experimental design.

1. Introduction:

In the past decade, much research has focused on addressing the shortcomings of traditional methods of vocabulary instruction, which heavily rely on rote memorization techniques such as flashcards and worksheets. These approaches often struggle to engage students effectively and fail to foster lasting retention of word meanings.

Recognizing the limitations of these conventional methods, educators have increasingly explored innovative approaches to enhance vocabulary acquisition, emphasizing active engagement and multisensory learning experiences. One such approach gaining traction is the integration of music and musical repetition into language instruction, capitalizing on music's mnemonic properties to aid memorization and retention.

Research in music education has consistently underscored the efficacy of musical repetition in improving memory and learning outcomes among diverse learner populations (Hallam, 2010). Music engages cognitive processes such as auditory processing, rhythm perception, and emotional involvement, thereby facilitating learning and memory consolidation (Schellenberg, 2012).

Moreover, the use of music as a mnemonic device has shown promise in educational settings, bolstering memory retention and recall (Chan et al., 1998). By associating words and concepts with melodic patterns and rhythms, students forge meaningful connections that enhance their ability to recall and apply vocabulary within contextual frameworks (Simmonds et al., 2018).

However, despite the potential benefits of musical repetition in vocabulary acquisition, empirical research is necessary to examine its effectiveness and practical implementation in educational settings, particularly among intermediate school students. This study seeks to address this gap by investigating the impact of musical repetition on vocabulary and spelling skills, contributing to a deeper understanding of effective instructional methodologies for language acquisition and academic success.

It remains unclear why some educators remain hesitant to adopt innovative methods such as musical repetition in vocabulary instruction, despite evidence suggesting its efficacy. This study aims to explore the role of musical repetition in enhancing vocabulary and spelling skills among intermediate school students, analyze the effectiveness of integrating musical repetition into language instruction, and provide practical insights for educators seeking innovative approaches to enhance vocabulary acquisition.

The purpose of this study was to examine the impact of musical repetition on vocabulary and spelling skills among intermediate school students, thereby offering a comprehensive understanding of the topic and its implications for language learning.

2. Literature Review

The acquisition of vocabulary stands as a foundation in language learning, crucial for effective communication and academic success across disciplines. Traditional methods like rote memorization and flashcards have limitations in engaging students and ensuring lasting retention of word meanings.

Educators are increasingly turning to innovative approaches, recognizing the importance of active engagement and multisensory experiences in effective pedagogy. Among these approaches, integrating music and musical repetition into language instruction has garnered attention. Music's mnemonic properties facilitate memorization and retention, supported by empirical evidence from scholars like Fisher (2001), Ettlinger et al. (2011), and Ha Thi Kim Linh et al. (2020).

Music engages cognitive processes such as auditory processing and emotional engagement, enhancing learning and memory consolidation. Research by Schellenberg (2012) underscores music's effectiveness in improving learning outcomes.

Studies, including those by Chan et al. (1998) and Simmonds et al. (2018), explore music's role as a mnemonic device, establishing associations between words and melodic patterns to enhance memory retrieval and application within specific contexts.

Murad et al. (2023) examined the impact of listening to English songs on incidental vocabulary acquisition among EFL Arab students in Israel. Their study found that English songs not only motivate vocabulary acquisition but also improve English language skills and enhance attitudes toward learning English. Conducted with 31 10th-grade students from various locations in Israel, their findings contribute to the growing evidence supporting the use of music in language learning and may encourage Arab EFL teachers to integrate English songs into classroom instruction to enhance vocabulary mastery.

Despite recognized advantages, there's a need for empirical research to assess the practical implementation and effectiveness of musical repetition, especially among intermediate school students. This study aims to bridge this gap by investigating the impact of musical repetition on vocabulary and spelling skills, contributing to our understanding of effective instructional methodologies for language acquisition and academic achievement.

Regarding the claim about music's benefits in language learning, it aligns with the findings of Fisher (2001), Ettlinger et al. (2011), and Ha Thi Kim Linh et al. (2020), who highlight music's role in enhancing pronunciation and facilitating natural skill development. Supported by a study involving university students, these scholars underscore music's effectiveness in language acquisition.

3. Rationale for the Study:

Efficient vocabulary acquisition stands as a pivotal determinant of academic achievement and linguistic proficiency, as extensively noted in scholarly literature (Nation, 2001; Nagy & Anderson, 1984). Nonetheless, conventional educational approaches, characterized by repetitive memorization and vocabulary drills, often fail to consistently engage students or foster enduring retention of lexical items and their meanings (Pressley et al., 1989). Given the paramount importance of lexical knowledge across various academic disciplines and practical communication contexts (Beck et al., 2002), there exists a compelling need for innovative pedagogical strategies aimed at enhancing vocabulary attainment among learners.

The impetus for this study emanates from an appreciation of music's mnemonic properties and its potential to bolster memory and learning outcomes (Schellenberg, 2005; Jäncke, 2008). Through its engagement of multiple cognitive processes such as auditory processing, rhythm perception, and emotional engagement, music holds promise in facilitating learning and consolidating memory (Kraus & Chandrasekaran, 2010; Patel, 2014).

The integration of musical repetition into vocabulary instruction offers a novel approach to creating multisensory learning experiences tailored to diverse learning styles, thereby enhancing retention of vocabulary words (Moreno & Bidelman, 2014; Bolduc et al., 2003). What's more, this study underscores the innovative aspect of empowering students to compose musical renditions of the target vocabulary, leveraging music's inherent mnemonic properties to encode and retain vocabulary words in a melodic format, thereby bolstering recall and mastery of the material.

The research venture is motivated by a noticeable gap in empirical literature regarding the worth of musical repetition in vocabulary acquisition, particularly among intermediate school students. While extant research

has explored music's influence on memory and learning (Slevc & Miyake, 2006; Schellenberg et al., 2015), limited attention has been directed specifically towards its application in enhancing vocabulary and spelling skills within this demographic.

Therefore, the study strives to address this scholarly void by examining the impact of musical repetition on vocabulary and spelling skills among intermediate school students. Through the adoption of a mixed-methods approach, encompassing qualitative and quantitative data collection and analysis methods, the research seeks to furnish comprehensive insights into the effectiveness of musical repetition as a pedagogical tool for vocabulary instruction.

In summation, the rationale underpinning this study resides in the potential of musical repetition to augment vocabulary acquisition, surmount the shortcomings of traditional instructional methodologies, and contribute to the formulation of effective strategies for language learning and academic attainment among intermediate school students.

4. Research Question:

What is the effect of employing musical repetition, particularly through the creation of songs, on the acquisition and retention of vocabulary and spelling skills among intermediate school students within the Arab community in Galilee, Israel?

5. Methodology

Employing a mixed-methods approach, this study integrated both qualitative and quantitative data collection and analysis methodologies. The selection of this methodological framework was influenced by seminal works proposed by distinguished scholars such as Creswell (2009) and Greene (2007).

The research adopted a quasi-experimental design, incorporating a pre-test/post-test control group arrangement to assess the comparative effectiveness of the musical repetition technique against conventional vocabulary learning methods. Participants were randomly allocated to either the experimental group, where they participated in song creation for vocabulary and spelling reinforcement, or the control group, where they utilized conventional methods like flashcards and worksheets.

Data collection procedures encompassed pre-tests and post-tests to evaluate vocabulary and spelling proficiency. Moreover, surveys and interviews were conducted to elicit qualitative feedback from students, teachers, and parents regarding their experiences with the employed technique.

5.1 Number of Participants:

The research recruited a minimum of 100 intermediate school students, aged 14, from a comprehensive school in Majd Al-Kurum. Additionally, a smaller group comprising approximately 10 teachers and 10 parents participated in the qualitative aspect of the study. The determination of the sample size was informed by recommendations such as those discussed by Barkhuizen (2014), which underscored the importance of adequate participant numbers in language teaching research.

5.2 Participants Background:

The participants in the study comprised intermediate school students representing diverse backgrounds and varying levels of academic proficiency. Educators responsible for instructing vocabulary and spelling to these students were also included in the research cohort. Moreover, the parents of the participating students were invited to offer insights and feedback regarding their children's engagement with the musical repetition technique.

5.3 Design of the Study

In the inquiry into the effects of musical repetition on the vocabulary and spelling skills of intermediate school students, the temporal sequencing of the pre and post-tests assumes paramount importance in assessing the effectiveness of the intervention. Within the context of a quasi-experimental design featuring a pre-test/post-test control group, meticulous attention was paid to determining the duration of the intervention phase and the optimal interval between assessments (Schilling, 2006; Strauss & Corbin, 1990).

The administration of the pre-test in mid-October 2021, approximately six weeks after the start of the academic year, was deliberate. This timing allowed students a period to acclimatize to their academic setting and establish a foundational level of vocabulary and spelling proficiency before the intervention commenced. Additionally, conducting the pre-test during this phase ensured that students were not unduly influenced by the initial adjustment period of the academic term, thereby yielding a more accurate baseline assessment.

Following the pre-test, the intervention phase unfolded over a few weeks, providing ample time for students in the experimental group to actively engage in the prescribed activities involving the creation of songs for vocabulary and spelling enhancement. This duration was carefully selected to facilitate meaningful participation and potentially elicit observable improvements in vocabulary and spelling competencies.

The post-test was scheduled for mid-March, 2022, allowing for an interval of approximately six to eight weeks following the pre-test. This timeframe was chosen judiciously, considering factors such as the duration of the

intervention, the anticipated pace of learning and retention among intermediate school students, and logistical constraints within the academic calendar. By administering the post-test in mid-March, the study aimed to capture any discernible alterations in vocabulary and spelling proficiency before the conclusion of the academic year.

The temporal arrangement of the pre and post-tests in the research design was meticulously orchestrated to strike a balance between the imperative for a substantial intervention period and the exigencies of students' academic schedules, while concurrently considering the potential trajectories of learning and retention in vocabulary and spelling skills over time.

5.4 Procedures

5.4.1 Pretest Assessment of Vocabulary Acquisition

Both the experimental and control groups, each comprising 50 students, underwent a pretest to evaluate their proficiency in vocabulary and spelling (See Appendix A). The examination aimed to assess their comprehension and application of 20 predetermined vocabulary terms within contextually appropriate sentences.

Prior to the assessment, both groups received uniform preparation, encompassing in-class vocabulary drills, interactive learning engagements, and review sessions concentrating on the specified lexical items. Educators guided students in elucidating the meaning of each term and illustrating its contextual usage, with an emphasis on comprehension and practical application. Participants were duly informed that the examination constituted part of an academic research effort.

5.4.2 Pre-experiment Test Scores for Sample and Controlled Groups

The pre-experiment test scores of both the sample and control groups offer insights into the initial levels of vocabulary and spelling proficiency among intermediate school students.

Similarities:

- Both groups display a moderate average score, approximately 13.22 out of 20 for the sample group and 12.04 out of 20 for the control group, indicating comparable proficiency levels.
- A wide range of scores is evident in both groups, ranging from 7 to 16 out of 20, with the majority falling between 10 and 15 out of 20.

Differences:

- The control group exhibits a slightly higher prevalence of lower scores, including students with scores as low as 7 out of 20, in contrast to the sample group where the lowest score is 8 out of 20.
- Conversely, the sample group comprises a few students with higher scores, up to 16 out of 20, indicating a smaller proportion of students with exceptionally high scores compared to the control group.

Thus, while both groups demonstrate similar average scores and distributions, differences in the prevalence of lower and higher scores suggest initial disparities in vocabulary and spelling proficiency levels. These findings serve as the foundation for assessing interventions aimed at improving these skills among intermediate school students.

5.4.3 Post-experiment Test Scores for Sample and Controlled Groups

The post-experiment assessment of vocabulary acquisition within the sample group (See Appendix B) highlights the individual progressions observed among the students. With an average score of 16.12 out of 20, the evaluation demonstrates significant advancement compared to the pre-experiment assessment, indicating the effectiveness of the educational intervention implemented during the study period.

Each student's score serves as a gauge of their proficiency in vocabulary acquisition, with higher scores indicative of improved mastery in vocabulary and spelling skills. Notably, several students achieved scores approaching or surpassing the maximum possible score, signifying substantial growth in their spelling abilities. The observed increase in the average score of the post-experiment assessment suggests a positive impact of the intervention on the sample group's spelling proficiency, thereby affirming the efficacy of the instructional approach adopted.

Furthermore, the variance in individual scores underscores the diverse learning trajectories and areas of improvement within the cohort. This variability presents an opportunity for educators to tailor instructional strategies to address the specific strengths and weaknesses of each student, facilitating continued growth and development in spelling proficiency.

Regarding the controlled group, post-experiment test scores reveal a moderate level of improvement overall, with the average score slightly increasing from the pre-experiment assessment to approximately 12.70 out of 20. While some students demonstrated an increase in scores, others experienced minor declines, resulting in a balanced distribution across the group. This diversity reflects the range of abilities within the controlled group.

The observed changes in scores are within the normal range, indicating reasonable progress across the cohort. Further analysis is necessary to explore factors contributing to these changes and to identify areas for targeted intervention aimed at supporting students in enhancing their spelling proficiency.

5.4.4 Paired Test for the Sample Group: Procedure, Findings and Analysis

Following established pedagogical research methodologies, a paired t-test was utilized to assess the effectiveness of an educational intervention on the vocabulary acquisition test within the sample group consisting of 50 students. This statistical approach was chosen due to its aptness for comparing the means of two related groups, specifically the pre-experiment and post-experiment test scores within the same cohort (David & Gunnink, 1997).

The paired t-test is well-suited for evaluating changes in vocabulary acquisition over time within a single group, making it a suitable choice for examining the impact of educational interventions (Rahardja et al., 2016). By analyzing the differences between paired observations, such as pre-test and post-test scores, the paired t-test offers a robust statistical method for determining whether there is a significant improvement in vocabulary acquisition within the sample group.

Furthermore, employing this statistical test aligns with best practices in educational research, ensuring rigorous analysis and interpretation of results. By considering individual differences within the sample group and controlling for potential confounding variables, the paired t-test enables researchers to draw reliable conclusions regarding the effectiveness of educational interventions on vocabulary acquisition.

The null hypothesis (H_0) stated no significant difference between the pre-experiment and post-experiment test scores, while the alternative hypothesis (H_1) proposed a notable disparity. With a significance level of 0.05, the paired t-test aimed to determine whether observed differences in means were statistically significant.

Analysis commenced by calculating the mean difference, obtained by summing the discrepancies between corresponding pre- and post-experiment scores and dividing by the total number of observations. The resulting mean difference was 3.08, indicating an average increase in vocabulary acquisition following the intervention. Subsequently, the standard deviation of the differences was computed to measure the variability of the observed data points around the mean difference. Utilizing the formula for sample standard deviation, the value was approximately 0.9140, indicating variation among improvement levels across the sample group.

The t-statistic, essential for hypothesis testing, was then calculated to assess the magnitude of the difference between the sample mean and the hypothesized population mean in terms of standard error. The computed t-statistic yielded a value of approximately 23.78, confirming a notable improvement in spelling proficiency post-intervention.

Moreover, the degrees of freedom were established as 49, corresponding to the number of paired observations minus one. Referring to the t-distribution table facilitated identification of the critical value for a two-tailed test, approximately ± 2.680 at the 0.05 significance level.

Comparison with the critical value indicated that the calculated t-statistic significantly exceeded it, leading to rejection of the null hypothesis. This provided strong statistical evidence supporting a significant difference between pre- and post-experiment test scores, affirming the efficiency of the educational intervention in enhancing spelling proficiency among the sample group.

These meticulously derived findings contribute substantively to the literature on educational interventions and underscore the importance of evidence-based practices in fostering improved student learning outcomes.

5.4.5 The Paired T-Test for the Controlled Group: Procedure, Findings and Analysis

In assessing the effectiveness of an intervention program designed to enhance vocabulary acquisition among intermediate school students, a paired t-test was employed to examine the difference between pre-experiment and post-experiment test scores within the controlled group. The paired t-test was selected for its ability to identify statistically significant disparities in students' spelling abilities before and after the intervention.

The study aimed to investigate the impact of the intervention on spelling skills by closely analyzing variations in individual student performance. Through a thorough examination of test score differentials within the controlled group, the effectiveness of the intervention program in fostering tangible improvements in spelling proficiency was sought, thus contributing to a deeper understanding of effective educational interventions in language learning contexts.

The paired t-test conducted on pre-experiment and post-experiment test scores for the controlled group revealed a statistically significant difference ($p < 0.05$), with a calculated t-statistic of approximately 11.67. This significant finding indicates a noticeable change in spelling proficiency following the implementation of the intervention program.

Initially, the average pre-experiment test score for the controlled group was approximately 12.04 out of 20, indicating a moderate level of proficiency. After the intervention, the average post-experiment test score showed a slight increase to approximately 12.70 out of 20. While some students demonstrated improvements in their scores, others experienced minor declines, resulting in a balanced distribution of scores.

The observed variability in scores within the controlled group highlights the diverse range of abilities among students, illustrating the heterogeneous nature of academic performance. Despite individual fluctuations, the overall increase in the average score suggests a commendable level of progress across the group, indicating the intervention program's effectiveness in promoting incremental advancements in spelling proficiency among intermediate school students.

These findings validate the usefulness of the intervention program and warrant further investigation into the specific factors contributing to the observed changes. Such exploration could inform targeted intervention

strategies aimed at sustaining and enhancing progress in spelling skills, thereby enriching the educational landscape and improving student outcomes in language learning contexts.

5.4.6 Qualitative Insights from Teachers and Parents: Procedure, Findings and Analysis

In addition to the quantitative analysis of the experimental data, a qualitative study was conducted to gather insights through an open-ended survey administered to ten parents and ten teachers who participated in the experiment.

To support this approach, Singer and Couper (2017) explored various methodological uses of responses to open questions and other verbatim comments in quantitative surveys. Their research explored the significance of incorporating qualitative data alongside quantitative analyses, highlighting the value of capturing nuanced insights from participants' perspectives.

And, Smyth et al. (2009) investigated the effectiveness of open-ended questions in web surveys, exploring strategies such as increasing the size of answer boxes and providing extra verbal instructions to enhance response quality. Their findings offer practical insights into optimizing the design of open-ended survey questions, which can be instrumental in eliciting detailed and meaningful responses from participants.

5.4.6.1 Teachers' Responses: Findings and Analysis

In analyzing the survey responses aimed at gauging participants' perspectives on the implementation of musical repetition techniques in vocabulary and spelling instruction, several thematic categories emerged among teachers. These categories provide valuable qualitative data to complement the statistical findings (See Appendix C). Let's delve into each category along with corresponding analysis and sample quotations:

1. Positive Attitudes towards Musical Repetition:

- This category encompasses teachers expressing enthusiasm and optimism regarding the integration of musical repetition techniques into vocabulary and spelling instruction.

- Recognizing the potential benefits of using music to engage students and enhance learning outcomes, these educators perceive it as a creative and enjoyable approach.

For instance, a teacher remarked, "Incorporating music into language learning can make the process more enjoyable and memorable for students. It adds a fun and creative element to our lessons, which I think can really boost their motivation and retention of vocabulary and spelling."

2. Skepticism or Uncertainty:

- Teachers in this category harbor reservations or uncertainty about the efficacy of musical repetition techniques.

- They raise concerns about practicality and question the impact of such methods on student learning.

As one teacher expressed, "While I'm open to exploring new teaching approaches, I'm not entirely convinced that musical repetition will significantly improve students' vocabulary and spelling skills. I worry that it might be more of a distraction than a helpful tool."

3. Experience with Unconventional Methods:

- Educators with prior experience in using unconventional or innovative methods in vocabulary and spelling instruction fall into this category.

- Their past experiences with alternative teaching approaches make them more receptive to incorporating musical repetition techniques.

For instance, a teacher stated, "I've experimented with various creative strategies in my classroom. Incorporating music is just another way to keep students engaged and make learning more dynamic."

4. Practical Challenges and Implementation Issues:

- Teachers highlighting practical challenges or difficulties associated with implementing musical repetition techniques belong here.

- They acknowledge barriers such as limited resources, time constraints, or curriculum alignment issues.

- A teacher pointed out, "While I see the potential benefits of using music in our lessons, it's not always easy to find the time or resources to create and incorporate songs into our curriculum. There are also challenges in ensuring that the content aligns with our learning objectives."

5. Focus on Student Engagement and Motivation:

- This category emphasizes the importance of student engagement and motivation in language learning.

- Teachers view musical repetition as a valuable tool for fostering enthusiasm and active participation among students.

- As one teacher observed, "When we incorporate music into our vocabulary and spelling activities, students are more eager to participate and genuinely excited about learning. It's a great way to capture their interest and keep them motivated throughout the lesson."

By categorizing teachers' responses in this manner, we can discern common themes and perspectives regarding the utilization of musical repetition techniques in vocabulary and spelling instruction. These insights offer valuable guidance for further research and educational practices in this domain.

5.4.6.2 Parents' Responses: Findings and Analysis

After analyzing the qualitative insights provided by teachers, attention now turns to the perspectives of parents regarding the implementation of musical repetition techniques in vocabulary and spelling instruction. Parents were asked to respond to a series of questions (outlined in **Appendix D**), aimed at eliciting their views, observations, and experiences with their child's language learning journey. The responses obtained from parents have been categorized into distinct thematic areas, offering valuable insights into the impact of musical repetition on their child's learning experience. By organizing parents' feedback into identifiable categories, we can discern common themes and perspectives that contribute to a holistic understanding of the effectiveness and acceptability of innovative teaching methods from the parental standpoint.

Here are five categories of answers based on the responses of the parents, along with analysis and sample quotations:

1. Observations of Positive Impact on Child's Learning:

- This category encompasses parents who observe positive changes in their child's attitude, engagement, or performance in vocabulary and spelling since the introduction of musical repetition techniques.

- These parents recognize the potential benefits of incorporating music into their child's learning experience. For instance, a parent noted, "Ever since my child started using musical repetition techniques for vocabulary and spelling, I've noticed a significant improvement in their enthusiasm for learning. They seem more motivated and confident when practicing their words."

2. Support for Creative and Innovative Approaches:

- Parents in this category express support for incorporating creativity and music into their child's educational experiences.

- They value the use of innovative teaching methods that make learning enjoyable and engaging for their child.

A parent expressed, "I think it's wonderful that teachers are exploring creative ways to teach vocabulary and spelling. Music has always been a big part of our family, so I'm thrilled to see it being integrated into my child's education."

3. Concerns about Effectiveness and Academic Rigor:

- Parents here express reservations or doubts about the effectiveness of musical repetition techniques in promoting academic rigor and mastery of vocabulary and spelling.

- They may prioritize traditional teaching methods or question the educational value of incorporating music into learning activities.

A parent voiced concern, stating, "While I appreciate the effort to make learning more fun, I worry that musical repetition might not be as effective as traditional methods for building a strong foundation in vocabulary and spelling. I want to ensure that my child is academically challenged and prepared for future academic endeavors."

4. Desire for Clarity on Learning Outcomes:

- Parents in this category seek clarity on the specific learning outcomes and objectives associated with the use of musical repetition techniques.

- They value transparency and understanding regarding their child's educational experiences and progress.

One parent expressed, "As a parent, I want to make sure that my child's time and efforts in learning vocabulary and spelling are productive and meaningful. I would appreciate more information on how musical repetition contributes to their overall learning goals."

5. Interest in Supporting Language Learning at Home:

- These parents express interest in supporting their child's language learning outside of school and inquire about ways to reinforce vocabulary and spelling practice at home.

- They recognize the importance of parental involvement in their child's education and seek guidance on how to complement classroom instruction.

One parent expressed, "I'm excited to see my child engaged in learning through music, and I want to continue supporting their language development at home. Are there any specific activities or resources you would recommend for practicing vocabulary and spelling outside of school?"

By categorizing parents' responses in this manner, we can identify common themes and perspectives regarding the use of musical repetition techniques in vocabulary and spelling instruction from the parental standpoint. These insights offer valuable qualitative data to complement the quantitative findings and inform future educational practices.

5.4.6.3 Comparative Analysis: Teachers vs. Parents Perspectives

The insights gathered from both teachers and parents offer valuable perspectives on the implementation and effectiveness of musical repetition techniques in vocabulary and spelling instruction. Through a comparative analysis of these perspectives, we uncover areas of agreement as well as points of divergence, providing a nuanced understanding of this educational approach.

1. Alignment on the Potential Benefits:

Both teachers and parents acknowledge the potential benefits of integrating music into language learning activities. Teachers highlight increased student engagement and motivation, while parents observe positive shifts in their child's attitude towards learning.

2. Differences in Concerns and Perspectives:

While teachers may express practical concerns about implementation challenges and curriculum alignment, parents may prioritize worries related to academic rigor and learning outcomes. This divergence reflects the distinct roles and responsibilities each group holds within the educational context.

3. Emphasis on Student Engagement:

Both teachers and parents underscore the importance of student engagement and enjoyment in the learning process. Teachers note heightened participation and enthusiasm among students, while parents observe increased interest and motivation in their children.

4. Desire for Clarity and Communication:

Both groups express a desire for clarity and effective communication regarding the educational objectives and outcomes associated with musical repetition techniques. Teachers aim to articulate the pedagogical rationale behind these methods, while parents seek transparency and understanding about their child's learning experiences.

5. Importance of Supportive Learning Environments:

Both teachers and parents stress the significance of fostering supportive and nurturing learning environments conducive to creativity and engagement. Teachers strive to cultivate dynamic and inclusive classrooms, while parents labor to support their child's learning journey both at home and in school.

6. Recognition of Student Progress:

Both groups recognize the importance of acknowledging and celebrating student progress and achievements. Teachers aim to assess and monitor student learning outcomes, while parents value tangible evidence of their child's growth and development.

By juxtaposing the perspectives of teachers and parents, we gain deeper insights into the implications of musical repetition techniques in vocabulary and spelling instruction. Understanding the shared goals and concerns of both stakeholders can inform collaborative efforts aimed at optimizing educational practices and enhancing student learning outcomes.

6. Discussion of Findings

The culmination of both the paired t-tests conducted for the sample group and the controlled group, alongside the qualitative insights gleaned from teachers and parents, offers a holistic perspective on the efficacy and implications of integrating musical repetition techniques into vocabulary and spelling instruction.

6.1 Statistical Analysis:

The paired t-tests administered for both the sample and controlled groups unveiled statistically significant results, indicating a substantial difference in spelling proficiency post-intervention. In the sample group, the mean difference of 3.08 and the calculated t-statistic of approximately 23.78 provide compelling evidence of enhanced vocabulary acquisition following the intervention program. Similarly, the controlled group displayed a significant disparity in pre- and post-intervention test scores, as reflected by the calculated t-statistic of approximately 11.67. These statistical findings affirm the effectiveness of the intervention program in bolstering spelling proficiency among intermediate school students.

6.2 Qualitative Insights:

The qualitative perspectives shared by teachers and parents complement the quantitative outcomes by offering nuanced insights into the implementation and perceived effectiveness of musical repetition techniques. Teachers showcased varied attitudes towards integrating these techniques, with some expressing enthusiasm for the potential benefits in enhancing student engagement and learning outcomes. Conversely, others voiced skepticism or uncertainty, citing practical challenges and doubts regarding effectiveness. Notably, teachers with prior experience in alternative teaching methods appeared more open to incorporating musical repetition techniques, highlighting the importance of pedagogical adaptability. Similarly, parents' responses depicted a

spectrum of viewpoints, with some noticing positive changes in their child's learning attitude and others expressing reservations about academic rigor. However, there was overarching support for innovative instructional approaches, underscoring the value of engaging learning experiences.

6.3 Comparative Analysis:

A comparative examination of teachers' and parents' perspectives revealed both converging and diverging points. While both cohorts acknowledged the potential benefits of musical integration and stressed the significance of student engagement, their concerns and priorities varied. Teachers tended to focus on practical challenges and alignment with curriculum objectives, whereas parents emphasized academic rigor and learning outcomes. Nonetheless, both groups emphasized the importance of fostering supportive learning environments and acknowledging student progress.

6.4 Implications:

The findings from statistical analysis and qualitative insights carry several implications for educational practice. They underscore the importance of evidence-based interventions in improving student learning outcomes and highlight the necessity of collaboration between educators and families to optimize instructional strategies. Furthermore, they underscore the value of pedagogical flexibility and innovation in catering to diverse student needs. Future research projects could delve deeper into identifying specific factors contributing to observed changes and devising targeted intervention strategies to sustain progress in spelling skills, thereby enriching educational practices and enhancing student outcomes in language learning contexts.

7. Conclusions

The culmination of findings from both my research and the studies cited provides robust evidence supporting the effectiveness and impact of integrating musical repetition techniques into vocabulary and spelling instruction. The notable enhancements observed in spelling proficiency post-intervention, as evidenced by the statistical analysis employing paired t-tests, affirm the pivotal role of educational intervention programs in improving student learning outcomes. This aligns with the conclusions drawn from Fisher (2001), Ettlinger, Margulis, and Wong (2011), and Ha Thi Kim Linh et al. (2020), all of which emphasize the significant role of music in enhancing language learning skills.

Moreover, the diverse perspectives articulated by both teachers and parents, as highlighted in my research and echoed by the cited studies, underscore the multifaceted nature of this educational approach. This emphasizes the importance of collaboration and adaptability in addressing the diverse needs of students, a sentiment reinforced by Fisher (2001) and Ha Thi Kim Linh et al. (2020). By fostering cooperative relationships between educators and families and optimizing instructional practices, educators can effectively support student growth and enhance learning outcomes, as emphasized in my research and supported by Ettlinger, Margulis, and Wong (2011).

Moving forward, it is imperative to continue research efforts aimed at delving deeper into the specific factors contributing to the observed improvements and exploring targeted intervention strategies, as suggested by Fisher (2001) and Ha Thi Kim Linh et al. (2020). By embracing evidence-based practices and nurturing collaborative partnerships between educators and families, we can continue to enhance the educational experience and elevate student outcomes in language learning contexts, a sentiment echoed by all cited studies.

8. Limitations of the Study:

While this research provides valuable insights, it is essential to acknowledge several limitations. Firstly, the study's reliance on a specific intervention program and a relatively small sample size may constrain the generalizability of the findings to broader educational settings. Additionally, utilizing self-reported data from teachers and parents introduces the potential for response bias, which could impact the accuracy and reliability of the qualitative insights. Also, the duration of the intervention and the follow-up period might not have been adequate to capture long-term effects on student learning outcomes comprehensively. Lastly, external factors such as socio-economic background, prior academic performance, and individual learning styles were not fully considered in the analysis, potentially influencing the interpretation of results.

9. Suggestions for Future Research:

To address the limitations identified in this study and further advance our understanding of effective educational interventions in language learning contexts, several avenues for future research merit exploration. Firstly, longitudinal studies with larger and more diverse samples could provide deeper insights into the sustained impact of intervention programs on spelling proficiency over time. This would allow researchers to better understand the long-term effects of such programs and their potential implications for student learning outcomes.

Additionally, incorporating objective measures of student performance, such as standardized tests or direct assessments, would enhance the robustness and validity of findings. By utilizing more objective measures,

researchers can ensure a more accurate assessment of the effectiveness of intervention programs in improving spelling proficiency.

Moreover, investigating the differential effects of intervention programs across various demographic groups could elucidate disparities in educational outcomes and inform targeted intervention strategies. Understanding how these programs may impact different student populations can help educators tailor interventions to better meet the needs of all students.

Furthermore, exploring the role of teacher training and professional development in implementing innovative teaching methods, including musical repetition techniques, could help optimize instructional practices and support teacher efficacy. Providing teachers with the necessary training and resources to effectively implement these techniques can enhance their ability to foster student learning.

Finally, leveraging emerging technologies, such as educational apps or online platforms, to deliver intervention programs remotely could extend access to effective educational interventions and facilitate personalized learning experiences for students. This would enable educators to reach a wider audience and provide students with opportunities for self-paced learning and individualized instruction.

By addressing these research gaps and building upon the insights gained from this study, future research endeavors can contribute to the ongoing refinement of evidence-based practices in language education and ultimately enhance student learning outcomes.

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