The Effectiveness of a Digital Audio Writing Podcast Based on *Imla'* in Teaching Basic Arabic *Nahwu*

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Abstract

Learning Arabic grammar (*nahwu*) is often perceived by secondary school students as difficult and abstract due to its rule-based nature and the predominance of teacher-centered instructional approaches, which frequently limit student engagement and meaningful practice. This study investigates the effectiveness of an imlā'-based digital audio podcast in improving students' mastery of basic Arabic grammar (*nahwu*). This study aims to examine the effectiveness of a digital audio writing podcast based on *imlā'* in improving students' mastery of basic *nahwu*, specifically in classifying Arabic word categories (*ism*, *fi'l*, and *ḥarf*). The scope of this research focuses on evaluating learning outcomes and students' learning experiences when using podcast-based instruction compared to conventional teaching. Using a quantitative quasi-experimental design with a non-equivalent control group, the research involved 44 tenth-grade students divided into an experimental class that used podcast media and a control class that received conventional instruction. Students completed pre- and post-tests that assessed their ability to classify Arabic word categories *ism, fi'l*, and *ḥarf* supported by an interview questionnaire exploring their learning experience. As most datasets failed to meet normality assumptions based on the Shapiro–Wilk test, the Wilcoxon Signed Rank and Mann–Whitney U tests were employed. The findings show significant improvement in both groups; however, the experimental group demonstrated a stronger gain, increasing from a mean score of 62 to 87, compared with the control group's increase from 71 to 85. Despite this improvement, the Mann–Whitney analysis indicated no significant difference between the two groups at pretest ($p = 0.280$) or posttest ($p = 0.133$), suggesting comparable score distributions. These findings demonstrate that imlā'-based podcast media significantly enhances students' grammatical mastery and offers a flexible digital learning alternative. This study contributes empirically by demonstrating that integrating *imlā'*-based podcast media can effectively support Arabic grammar learning in digital contexts. Future research is recommended to explore long-term learning effects and apply this model to broader *nahwu* topics and larger sample populations.

Keywords: Arabic Learning, Digital Learning, Imla' Method, Podcast Learning

ملخص

غالباً ما يُنظر إلى تعلم قواعد اللغة العربية (النحو) لدى طلاب المرحلة الثانوية على أنه مادة صعبة ومجردة؛ نظراً لطبيعتها القائمة على القواعد واستمرارية المناهج التعليمية المتمحورة حول المعلم، مما يحد من تفاعل الطلاب والممارسة الفعلية. تهدف هذه الدراسة إلى استقصاء فعالية البودكاست الصوتي الرقمي القائم على الإملاء في تحسين إتقان الطلاب لقواعد النحو الأساسية، وبالتحديد في تصنيف الكلمة العربية (اسم، فعل، حرف). ويركز نطاق البحث على تقييم مخرجات التعلم وتجارب الطلاب عند استخدام التعليم القائم على البودكاست مقارنة بالتعليم التقليدي. اعتمدت الدراسة المنهج الشبه التجريبي الكمي بتصميم المجموعة الضابطة غير المتكافئة، وشارك فيها ٤٤ طالباً من الصف العاشر، تم تقسيمهم إلى مجموعة تجريبية استخدمت وسائط البودكاست، ومجموعة ضابطة تلقت تعليماً

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تقليدياً. خضع الطلاب لاختبارات قبلية وبعدية لتقييم قدرتهم على تصنيف الكلمات، بالإضافة إلى استبانة مقابلة لاستكشاف تجاربهم التعليمية. ونظراً لعدم استيفاء معظم البيانات لافتراضات التوزيع الطبيعي وفقاً لاختبار "شابيرو–ويلك" (Shapiro–Wilk)، تم استخدام اختباري "ويلكوكسون" (Wilcoxon) و"مان ويتني" (Mann–Whitney U). أظهرت النتائج تحسناً ملحوظاً في كلتا المجموعتين؛ ومع ذلك، أظهرت المجموعة التجريبية مكاسب أقوى، حيث ارتفع متوسط الدرجات من ٦٢ إلى ٨٧، مقارنة بارتفاع المجموعة الضابطة من ٧١ إلى ٨٥. وبالرغم من هذا التحسن، أشار تحليل "مان ويتني" إلى عدم وجود فروق ذات دلالة إحصائية بين المجموعتين في الاختبار القبلي ($p = 0.280$) أو الاختبار البعدي ($p = 0.133$)، مما يشير إلى تقارب في توزيع الدرجات. وتثبت هذه النتائج أن وسائط البودكاست القائمة على الإملاء تعزز بشكل كبير الإتقان النحوي لدى الطلاب وتقدم بديلاً رقمياً مرناً للتعلم. تساهم هذه الدراسة تجريبياً في إثبات أن دمج البودكاست يمكن أن يدعم بفعالية تعلم النحو في السياقات الرقمية. وتوصي الدراسة بإجراء بحوث مستقبلية لاستكشاف آثار التعلم طويلة المدى وتطبيق هذا النموذج على موضوعات نحوية أوسع وعينات أكبر.

الكلمات المفتاحية: تعلم اللغة العربية، منهج إملا، التعلم الرقمي، التعلم عبر البودكاست

Introduction

The basis of this research stems from the fundamental role of *nahwu* in Arabic language learning, particularly for Indonesian students who study Arabic as a foreign language. Mastery of basic *nahwu* is essential for understanding sentence structure, interpreting meaning accurately, and producing correct spoken and written Arabic.[1] Nevertheless, classroom practices reveal that *nahwu* instruction is often perceived as difficult and abstract due to its rule-based nature and the dominance of teacher-centered, memorization-oriented teaching methods.[2] These conditions frequently result in low student engagement and limited opportunities to apply grammatical knowledge in meaningful contexts, thereby hindering students' overall language development.[3]

Nahwu knowledge forms a fundamental foundation for learning Arabic, especially for

[1] Nafisah, J., Akmansyah, M., & Mukhlishin, A, *Development of Nahwu Learning Module for Students of Madrasah Diniyah Wali Songo Sukajadi Lampung*, Mantiqu Tayr: Journal of Arabic Language 3 2 (2023): 90-101. DOI: https://doi.org/10.25217/mantiqutayr.v3i2.3274

[2] Izzati, R., Lubis, R. H., Fuadi, N., & Widad, S, *The Relevance of Arabic Language Learning According to Rusydi Ahmad Thu'aimah with Modern Education Strategies*, Mantiqu Tayr: Journal of Arabic Language, *5* (1), (2025): 41-55. DOI: https://doi.org/10.25217/mantiqutayr.v5i1.5127

[3] Afrianingsih, B. I., Azizah, N. L., Sanah, S., &Ramadlan, M. A. A, *Characteristics of Arabic Language Learning in Indonesia Era 4.0*, Mantiqu Tayr: Journal of Arabic Language, *5* (1), (2025): 1-23. DOI: https://doi.org/10.25217/mantiqutayr.v5i1.5098

Indonesian learners who study it as a second foreign language after Indonesian.[4] Within the national education context, mastery of nahwu contributes not only to understanding sentence structure but also to the development of accurate language use in both spoken and written communication.[5] However, classroom realities show that nahwu instruction remains challenging due to low student engagement, limited multimedia resources, and teacher-centered, memorization-based pedagogy.[6]

Such instructional limitations hinder students' ability to apply *nahwu* rules in reading, comprehension, and writing. This underscores the need for pedagogical innovation that integrates basic *nahwu* principles with interactive and contextual methods suited to contemporary technological and societal developmentsparticularly within Indonesia, where reliance on mobile devices continues to grow.[7] Digital platforms therefore present an emerging opportunity to modernize Arabic language instruction and optimize learning time.[8]

Rapid technological advancement has transformed learning environments, making digital tools such as computers and the internet indispensable in schools.[9] The accelerated shift to online learning during the COVID-19 pandemic further exposed gaps in teacher readiness and highlighted the need for adaptive digital learning tools.[10] In response, new intelligent learning tools have emerged to support flexible, convenient, and lifelong learning experiences,[11] enabling students to develop higher-order skills such as communication, problem-solving, and collaborative creativity.[12]

Technology is rapidly changing, and new lifestyles and working methods are born. Digital tools such as computers, the internet use of digital technology such as child media in schools is now essential more so than ever before. These technologies provide assistance for better learning and to be with the world.[13] This status quo was reinforced by the rush digitalization during 2021-2022 (Covid-19 crisis), which forced the education system to convert from traditional F2F towards online

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[4] Pratama, B., Setiyawan, A., Purnama, B. B., & Harahap, K. A, *The Effectiveness of Arabic Language Learning using the PAIKEM Method for Class V Students at MI Al-Ma'had An-Nur Bantul Yogyakarta Academic Year 2023/2024*, al Mahāra: Jurnal Pendidikan Bahasa Arab 10 (2), (2024): 244-258. DOI: https://doi.org/10.14421/almahara.2024.0102-03

[5] Alfalah, A., & Sopian, A, *Simplifikasi I'rab Nahwu Imam Sibawaih Perspektif Nahwu Modern Ibrahim Mustafa /Simplification of I'rab Nahwu Imam Sibawaih According to Perspective of Ibrahim Mustafa's Modern Nahwu*, Loghat Arabi: Jurnal Bahasa Arab dan Pendidikan Bahasa Arab, 5 (1), (2024): 1-20. DOI: https://doi.org/10.36915/la.v5i1.93

[6] Abdurrohman, M. A., & Ulinnuhaa, M, *Problematika Pembelajaran Nahwu*, AL-MIKRAJ Jurnal Studi Islam dan Humaniora *4* (02), (2024): 1768-1772. DOI: https://doi.org/10.37680/almikraj.v4i02.5350

[7] Mustofa, M. A, *Analisis Penggunaan WhatsApp Sebagai Media Pembelajaran Bahasa Arab di Era Industri 4.0*, Arabiyatuna: Jurnal Bahasa Arab, *4* (2), (2020): 333. DOI: https://doi.org/10.29240/jba.v4i2.1805

[8] Syamlan, A. C., & Mufidah, Z. *Penggunaan Podcast sebagai Media Alternatif dalam Pembelajaran Bahasa Arab*, Journal of Practice Learning and Educational Development, *4* (4), (2024): 294-299. DOI: https://doi.org/10.58737/jpled.v4i4.315

[9] Sanusi, A., Ainin, M., Muassomah, M., Maulana, D., & Maimunah, I., *Exploring Planning for Teaching Arabic as a Foreign Language at Senior High School: Teacher's Didactical Competencies*, Arabiyatuna: Jurnal Bahasa Arab, *6* (2), (2022): 439-464. DOI: https://doi.org/10.29240/jba.v6i2.5166

[10] Hutabarat, P. M, *Pengembangan Podcast Sebagai Media Suplemen Pembelajaran Berbasis Digital pada Perguruan Tinggi*, Jurnal Sosial Humaniora Terapan, *2* (2), (2020): 107-116. https://scholarhub.ui.ac.id/cgi/viewcontent.cgi?article=1056&context=jsht

[11] Khuluq, M., Hasanah, M., Muassomah, M., & Imamah, N., *Mobile-Assisted Language Learning Apps: The Analysis of Duolingo's Content Using ACTFL Standarization*, Al-Ta'rib: Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya, 12 (2), (2024): 229-246. DOI: https://doi.org/10.23971/altarib.v12i2.8806

[12] Fuadi, F., &Nurmala, M., *Strategi Pengembangan Buku Digital Interaktif Bahasa Arab Berbasis Lumi Education*, Al-Lahjah: Jurnal Pendidikan, Bahasa Arab, dan Kajian Linguistik Arab, *8* (2), (2025): 1046-1054. DOI: https://doi.org/10.32764/lahjah.v8i2.5847

[13] Roji, F, *Nahwu Concept According to Imam Sibawaih and Ibrahim Mustafa in Arabic Linguistics (Comparative Studies of Syntax)*, Mantiqu Tayr: Journal of Arabic Language, *4* (1), (2024): 105-122. DOI: https://doi.org/10.25217/mantiqutayr.v4i1.4025

practices.[14] This condition led to new problems especially for educators who were not really ready and used to the realm of life so that major changes occurred.[15] This has lead to the creation of new digital educational tools. Intelligent learning tools enable flexible and convenient learning experience which make your preparation easier and help you get lifelong benefit.[16] Computers and the internet provide digital media to enable students to learn more complex thinking skills. Those skills are ability to communicate and share thoughts with others multiple problem solving and creating new ideas, working as a team.[17] One intriguing mode of digital learning media the podcast, which provides varied and exciting content that counteracts student burnout, can address listening and writing skills. While still tapping into technology being used in second language acquisition today.[18] Hence the use of podcasts in the teaching of basic nahwu-material could help to mediate between theory learning and communicative, context-embedded language practice. Furthermore, with the wonderful benefits of being time and place-independent, podcasts are alternative approach to other learning types for students based on their individual differences, which makes them appropriate in this modern digital era.[19]

Among various digital media options, podcasts have become increasingly relevant due to their engaging, varied content and their ability to support both listening and writing skills, aligning with recent developments in second-language acquisition technology.[20] Integrating podcasts into basic *nahwu* instruction may therefore bridge the gap between theoretical grammar learning and communicative, context-rich practice. Their time- and place-independent nature also makes them suitable for learners with diverse needs in today's digital era.[21]

Podcasts function as publicly accessible audio resources that can be played across multiple digital platforms, offering flexibility and affordability for educational use.[22] Their portability on

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[14] Firdaus, D., Ibrahim, F. M. A., Arifa, Z., Bahruddin, U., & Umam, Z. I., *Optimising Composition Writing Learning through Constructivism-Based Teaching Materials: A Needs Analysis of Writing Skill*, ALSUNIYAT: Jurnal Penelitian Bahasa, Sastra, dan Budaya Arab, 8 (1), (2025): 240-254. DOI: https://doi.org/10.17509/alsuniyat.v8i1.80806

[15] Priantiwi, T. N., & Abdurrahman, M., *Analisis Konten Pembelajaran Bahasa Arab pada Media Tiktok*, Jurnal Ilmiah Profesi Pendidikan, 8 (3), (2023): 1365-1371. DOI: https://doi.org/10.29303/jipp.v8i3.1502

[16] Khuluq, M., Hasanah, M., Muassomah, M., & Imamah, N., *Mobile-Assisted Language Learning Apps: The Analysis of Duolingo's Content Using ACTFL Standarization*, Al-Ta'rib: Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya, 12 (2), (2024): 229-246. DOI: https://doi.org/10.23971/altarib.v12i2.8806

[17] Rosyadi, F. I., & Ilmi, M. U., *E-Learning: An Implementation for Arabic Learning During the Covid-19 Pandemic, ALSUNIYAT:* Jurnal Penelitian Bahasa, Sastra, dan Budaya Arab, 4 (1), (2021): 47–57. DOI: https://doi.org/10.17509/alsuniyat.v4i1.32259

[18] Sa'adah, H., Nurhadi, N., Hilmi, D., & Ni'mah, L., *Indonesian Arabic Teachers Must be Solutive in the Era of Society 5.0*, Ta'lim al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban, 6 (2), (2022): 155-168. DOI: https://doi.org/10.15575/jpba.v6i2

[19] Ramadona, E., & Fitria, A., *Digital Literacy in Arabic Language Learning in Madrassas Aliyah 2 Tanah Datar: Literasi Digital dalam Pembelajaran Bahasa Arab di Madrasah Aliyah 2 Tanah Datar*, al Mahāra: Jurnal Pendidikan Bahasa Arab, 9 (2), (2023): 227-238. https://scispace.com/papers/digital-literacy-in-arabic-language-learning-in-madrassas-sjnn503rp1b8

[20] Sa'adah, H., Nurhadi, N., Hilmi, D., & Ni'mah, L., *Indonesian Arabic Teachers Must be Solutive in the Era of Society 5.0*, Ta'lim al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban, 6 (2), (2022): 155-168. DOI: https://doi.org/10.15575/jpba.v6i2

[21] Ramadona, E., & Fitria, A., *Digital Literacy in Arabic Language Learning in Madrassas Aliyah 2 Tanah Datar: Literasi Digital dalam Pembelajaran Bahasa Arab di Madrasah Aliyah 2 Tanah Datar*, al Mahāra: Jurnal Pendidikan Bahasa Arab, 9 (2), (2023): 227-238. https://scispace.com/papers/digital-literacy-in-arabic-language-learning-in-madrassas-sjnn503rp1b8

[22] Mumtaz, F., Khalid, S. M., Supriadi, R., & Sari, T. I., *Development of Spotify Podcast as an Arabic Listening Media for 11th-Grade Madrasah Aliyah Students*, Mantiqu Tayr: Journal of Arabic Language, 4 (2), (2024): 501-516. DOI: https://doi.org/10.25217/mantiqutayr.v4i2.4663

devices such as smartphones and MP3 players further enhances accessibility, making them a practical and cost-efficient medium for digital learning.[23] These characteristics highlight the potential of podcast-based approaches to enhance *nahwu* learning and address persistent instructional challenges.

Based on these challenges, this research aims to investigate the effectiveness of an *imlā'*-based digital audio podcast in improving students' mastery of basic Arabic *nahwu*, particularly in classifying Arabic word categories (*ism*, *fiʿl*, and *ḥarf*). This study seeks to compare the learning outcomes of students who receive instruction through podcast-based media with those who are taught using conventional instructional methods. In addition to measuring grammatical achievement, this research also aims to examine students' learning experiences when engaging with podcast-based instruction, including their focus, engagement, and perceived usefulness of the media in supporting their understanding of *nahwu*.

To strengthen this research, several relevant and valuable studies were reviewed, although some differences were found. Through the search process, five articles with strong scientific value were identified and deemed appropriate to be used as references in this study.[24] The first article is by de la Peña, Irene Acevedo, and Cassany, Daniel,[25] this study focuses on the use of podcasts for learning Spanish at the university level. This study investigates the enhancement of students' Spanish language skills in speaking, reading, and writing, and it concludes that podcasts significantly improve students' abilities in these areas. Listening to podcasts provides an alternative learning approach that is considered more engaging and helps enrich vocabulary.

The work titled by Beatriz Chaves-Yuste and Cristina de-la Peña,[26] their study explores the use of podcasts as a teaching tool for English language instruction in secondary schools located in Madrid, Spain. It examines the improvement of students' listening and speaking skills in English, and the findings show that podcasts significantly enhance these skills among secondary school students. Engaging with genuine English via podcasts enhances students' confidence in both speaking and comprehending conversations.

Yang, Pei Ling,[27] This article examines how effective podcasts are as a medium for learning English at the university level, focusing on students at Fu Jen Catholic University in Taiwan. The utilization of podcasts aids students in cultivating an interest in learning English while enhancing their speaking skills. The research indicates that listening to podcasts boosts students' motivation and fortifies their English-speaking capabilities. By engaging in podcast-related activities, students become more self-directed and involved, as this approach promotes active participation in their educational journey.

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[23] Koderi, K., Aridan, M., & Muslim, A. B., *Pengembangan Mobile Learning untuk Penguasaan Mufrodat Siswa MTs,* Arabiyatuna: Jurnal Bahasa Arab, *4* (2 November 2020): 265-278. DOI: https://doi.org/10.29240/jba.v4i2.1769

[24] Hanifansyah, N., & Mahmudah, M., *Enhancing Arabic Vocabulary Mastery Through Communicative Strategies: Evidence from Malaysia*, Al-Ta'rib: Jurnal Ilmiah Program Studi Pendidikan Bahasa Arab IAIN Palangka Raya, 12 (2), (2024): 263-278. DOI: https://doi.org/10.32332/ijalt.v6i02.9920

[25] de la Peña, I. A., & Cassany, D., *Student Podcasting for Foreign Language Teaching-Learning at University,* Journal of Technology and Science Education, *14* (1), (2024): 123-141. DOI: https://doi.org/10.3926/jotse.2509

[26] Chaves-Yuste, B., & De-La Peña, *Podcasts' Effects on the EFL Classroom: a Socially Relevant Intervention,* Smart Learning Environments, 10 (1), (2023): 20. DOI: https://doi.org/10.1186/s40561-023-00241-1

[27] Yang, P. L., *The Role of Podcast Creation in Supporting Motivation and Self-Directed Learning Among EFL College Students: An Action Research Study*, *Tesl-Ej*, 28 (4), (2025): n4. DOI: https://doi.org/10.55593/ej.28112a9

The next work is by Muhamad Fahmi Saepuloh et al,[28] This article examines the utilization of podcasts as a medium for teaching poetry writing. In the referenced study, the participants were tenth-grade high school students who were instructed on the fundamental elements of poetry. The findings show that podcasts are effective in helping high school students understand intrinsic poetic elements, leading to improved poetry-writing skills. Students reported that the learning process was more engaging compared to conventional methods.

The fifth article is Fairuza Mumtaz,[29] This research and development have produced a product in the form of a Spotify podcast forlearning Arabic listening comprehension. The findings of this research involve developing Spotify podcasts as a media for learning Arabic listening comprehension. As a recommendation, future research could investigate or develop Spotify podcasts as a learning media for other Arabic language skills. These research specifically exploring the use of *imlā'*-based podcast activities for Arabic grammar instruction remains scarce, particularly within the Indonesian secondary school context. Moreover, earlier studies generally did not integrate podcast listening with *imlā'* transcription as a dual-modality approach that can reduce cognitive load and reinforce grammatical understanding.

The novelty of this research lies in the integration of digital podcast media with *imlā'* activities as a unified instructional approach for teaching basic *nahwu*. While previous studies have explored the use of podcasts in foreign language learning, most have focused on listening, speaking, or general language skills, particularly in English and other European languages.[30] Research that specifically applies podcast-based learning combined with *imlā'* transcription to Arabic grammar instruction remains scarce, especially within the Indonesian secondary school context. By combining listening and writing through an *imlā'*-based podcast model, this study introduces a dual-modality learning strategy that reinforces grammatical awareness while aligning with students' digital learning habits. Consequently, this research contributes both theoretically and practically by offering an innovative and adaptable alternative for enhancing nahwu instruction in contemporary Arabic language education.

To address this gap, the present study investigates the effectiveness of a digital audio writing podcast based on *imlā'* in improving students' mastery of basic nahwu rules, especially their ability to classify *ism, fi'l,* and *ḥarf*. By combining listening and transcription, this learning model aims to create a more interactive and adaptive learning environment aligned with students' digital learning habits. Specifically, this research seeks to: determine whether an *imlā'*-based podcast significantly improves students' grammatical performance compared with conventional instruction.

[28] Saepuloh, M. F., Nurwahidah, L. S., & Kartini, A., *Media Pembelajaran Podcast untuk Meningkatkan Keterampilan Menulis Puisi,* Caraka: Jurnal Pendidikan Bahasa dan Sastra Indonesia serta Bahasa Daerah, *10* (2), (2021): 107-116. https://www.academia.edu/download/117428558/480661054.pdf

[29] Mumtaz, F., Khalid, S. M., Supriadi, R., & Sari, T. I., *Development of Spotify Podcast as an Arabic Listening Media for 11th-Grade Madrasah Aliyah Students*, Mantiqu Tayr: Journal of Arabic Language, 4 (2), (2024): 501-516. DOI: https://doi.org/10.25217/mantiqutayr.v4i2.4663

[30] Rosyadi, F. I., & Ilmi, M. U., *E-Learning: An Implementation for Arabic Learning During the Covid-19 Pandemic,* ALSUNIYAT: Jurnal Penelitian Bahasa, Sastra, dan Budaya Arab, 4 1 (2021): *47–57*. DOI: https://doi.org/10.17509/alsuniyat.v4i1.32259

Method

This study employed a quantitative method using a quasi-experimental design with a non-equivalent control group. This design measures the effect of an intervention on pre-existing groups that cannot be randomly assigned and typically uses a pretest–posttest structure to compare differences between groups.[31] This study employed a quantitative approach using a quasi-experimental design with a non-equivalent control group. This design was selected because the classes had been predetermined by the school and could not be randomly assigned. Two tenth-grade classes at SMA IT Fithrah Insani participated in the study: Class X-A as the experimental group and Class X-C as the control group, with a total sample of 44 students drawn from a population of 136 students.

1. Instruments
   a. Written Test

      The test consisted of short Arabic texts containing *ism, fi'l*, and *ḥarf*. Students were required to classify each word according to its grammatical category. A scoring rubric was applied, awarding 10 points for each correct answer, while deductions were given for incorrect or incomplete responses. The test was validated by two experts: a specialist in learning evaluation and a lecturer in *nahwu*. Both concluded that the items were appropriate and aligned with the research objectives.

   b. Interview Questionnaire (Support Instrument)

      A follow-up questionnaire was administered to obtain students' perceptions of the podcast-based *imla'* activities. The items explored their engagement, clarity of the audio materials, and the perceived usefulness of the method in supporting their understanding of *nahwu*. The responses provided complementary qualitative insights to strengthen the interpretation of the test results. This Instrument not the main instrument for the research because of the impact of written test more impactful for the output of the research.
2. Method Concept

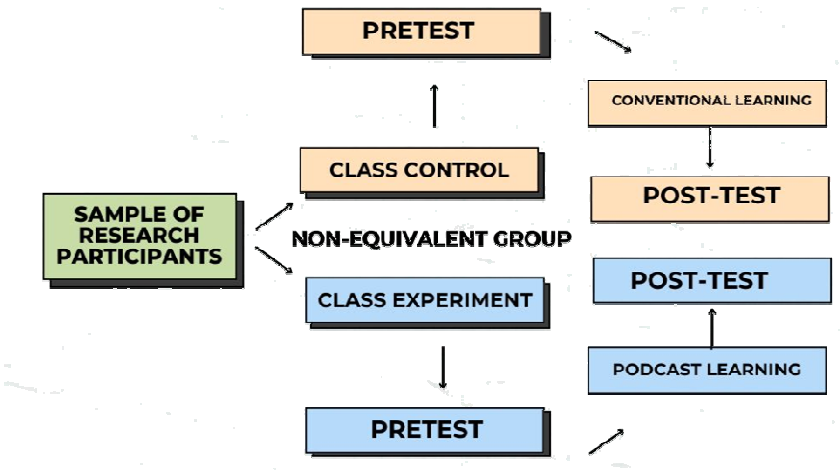

Figure 1. Concept of Research Method

[31] Abdurahman, M., Muhidin, S. A., & Somantri, A., *Dasar-Dasar Metode Statistika untuk Penelitian*, (Bandung: Pustaka Setia, 2011), hlm. 50-57.

Based on figure 1 it is found that a pretest was administered to both classes to measure students' initial understanding of *nahwu*. Next, the experiment class received treatment in the form of instruction through an audio podcast, while the control class received lecture-based instruction. Afterward, a post-test was conducted in both classes to measure the development of students' understanding of basic *nahwu*.[32]

The podcast learning media was designed in the form of audio recordings containing basic *nahwu* material presented in a narrative and communicative manner. Students were instructed to listen to the recordings and transcribe them into written text as an *imlā'* exercise. This process aimed to simultaneously enhance students' listening and writing skills while reinforcing their understanding of *nahwu* rules in a contextual manner.

The data were processed using Microsoft Excel and SPSS. The analysis involved handling the pretest and post-test results, followed by conducting a normality check with the Shapiro-Wilk test, as the sample size was under 50. For data that met the normality assumption, parametric procedures specifically the independent samples t-test were applied. In contrast, when the data did not meet normality assumptions, non-parametric techniques such as the Mann-Whitney test and the Wilcoxon Signed Rank test were employed.

According to the Shapiro-Wilk test, a dataset is considered non-normal when its significance value falls below 0.05, and normally distributed when the value exceeds this threshold .[33] For non-normal paired data, the Wilcoxon Signed Rank test is used to compare pretest and post-test scores, with significant change indicated when Sig. < 0.05.[34] Meanwhile, the Mann-Whitney U test evaluates differences between two independent groups using ranked data and is appropriate when normality assumptions are violated. A significance level below 0.05 indicates a meaningful difference between groups, whereas values above this threshold reflect no significant difference.[35]

In this study, Wilcoxon and Mann–Whitney were chosen because three out of four datasets failed the normality test, meaning parametric alternatives such as the paired t-test or independent t-test were unsuitable.[36] Additionally, the sample size was relatively small (n = 22 per class), increasing the likelihood of non-normal distributions. Non-parametric tests like Wilcoxon and Mann–Whitney do not require normality and are more robust for small samples, ranked data, and heterogeneous learning outcomes typical in classroom-based experiments.[37] Therefore, these tests provide more reliable and valid statistical conclusions for evaluating the effectiveness of the *imlā'*-based podcast intervention.

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[32] Araham, I., & Supriyati, Y, *Desain Kuasi Eksperimen Dalam Pendidikan Literatur,* Jurnal Ilmiah Mandala Education, 8 3 (2022): 55. DOI: http://dx.doi.org/10.58258/jime.v8i3.3800

[33] Sari, A. P., Hasanah, S., & Nursalman, M., *Uji Normalitas dan Homogenitas dalam Analisis Statistik*, Jurnal Pendidikan Tambusai, 8 (2012): 51329-51337. https://jptam.org/index.php/jptam/article/view/24059

[34] Indah, N. I. S., & Ahmad, F., *Exploring the Wilcoxon Test in Science Education: A Literature Review of Empirical Research,* Indonesian Journal of Educational Science *(IJES)*, *7* (2), (2025): 158-169. DOI: https://doi.org/10.31605/ijes.v7i2.4712

[35] Chicco, D., Sichenze, A., & Jurman, G., *A simple Guide to the Use of Student's T-test, Mann-Whitney U Test, Chi-Squared Test, and Kruskal-Wallis Test in Biostatistics*, Bio Data Mining, 18 (1), (2025): 56. DOI: https://doi.org/10.1186/s13040-025-00465-6

[36] Indah, N. I. S., & Ahmad, F., *Exploring the Wilcoxon Test in Science Education: A Literature Review of Empirical Research*, Indonesian Journal of Educational Science (IJES), *7* (2), (2025): 158-169. DOI: https://doi.org/10.31605/ijes.v7i2.4712

[37] Thakkar, B., *Continuous Variable Analyses: Student's T-test, Mann–Whitney U Test, Wilcoxon Signed-Rank Test,* In Translational Cardiology (2025): 165-167. DOI: https://doi.org/10.1016/B978-0-323-91790-2.00052-6

The data will subsequently be examined and displayed through tables, diagrams, and detailed explanations to facilitate readers' comprehension of the study's findings. These results not only show numerical changes, but will also be further discussed to explain how the podcast media contributes to improving students' understanding of basic *nahwu* rule.

A. Realiability Statistical Test

Table 1. Result of Realibility Test in SPSS

Cronbach's Alpha	N of Items
.741	10

Based on table 1 it is found that reliability test the 25 respondents who passed the test in reliability which can be found in the SPSS output for this research instruments and questionnaire with 10 total statement items. All data are valid cases because no casewise deletion of missing values was carried out, as indicated by Case Processing Summary (25 100%)-the number of valid data is sufficient. In order to verify the usability of Cronbach's alpha value for research, the researcher refers some range of values in interpreting this statistic as based on book George & Malerry Paul entitled 'IBM SPSS Statistics 29 Step by Step: A Simple Guide and Reference' is as follows.[38]

Table 2. Categories of Interpretating Values Cronbach's

Cronbach's Alpha	Categories of Internal Consistent
$\alpha > 0.9$	Very Good
$\alpha > 0.8$	Good
$\alpha > 0.7$	Fair
$\alpha > 0.6$	Questionable
$\alpha > 0.5$	Poor
$\alpha < 0.5$	Rejected

Based on table 2, which presents the categories for interpreting Cronbach's alpha values, the obtained score is 0.741. According to the general criteria for assessing reliability, an alpha value above 0.70 indicates that the research instrument falls into the category of being sufficiently reliable. In other words, each item in the instrument demonstrates good internal consistency and can be trusted to reliably measure the research variables.

[38] George, D., & Mallery, P., *IBM SPSS Statistics 29 Step by Step: A Simple Guide and Reference*, Routledge (2024): 55-57. DOI: https://doi.org/10.4324/9781032622156

Result and Discussion

A. Students Ability Before Using Podcat Media *Imla'* Based

Figure 2. Implementing Podcast Learning

Based on figure 2 above, there is several students paying attention on their phone to listen the *nahwu* lesson in podcast spotify. Each student focuses on her own device using earphones, indicating an individualized learning process where students independently access the instructional audio. The classroom atmosphere appears more orderly and conducive, as students concentrate on the podcast content rather than engaging in off-task interactions. In the image, students are simultaneously listening and taking notes in their notebooks, reflecting the integration of listening and writing activities characteristic of the *imlā'*-based learning approach. This learning setting illustrates how podcast media facilitates focused attention, minimizes classroom noise, and allows students to control their learning pace by replaying the material as needed. Overall, the figure visually supports the effectiveness of podcast-assisted instruction in promoting student engagement and active participation in basic *nahwu* learning.

The discussion analyzes the effectiveness of the *imlā'*-based podcast learning media in a systematic and scientific way, evaluated with 10th-grade students at the senior high school level. This study explores the students' comprehension of *nahwu* rules, specifically their capacity to categorize words in Arabic, which consist of *ism*, *fi'l*, and *ḥarf*.

To examine how podcast-based learning influences students' understanding of basic Arabic grammar, the table below presents the pretest results from both classes. The figures in the table are organized into score groups based on their performance those are very good, good, fair, poor, and very poor.[39] to give a preliminary look at the students' skills before the intervention.

[39] Kirkpatrick, J. D., & Kirkpatrick, W., K. *Kirkpatrick's Four Levels of Training Evaluation*, Association for Talent Development Alexandria, (2016), hlm. 70-74.

Table 3. Pretest Results of the Experimental Class and the Control Class

Group	N	Mean	Standard Deviation	Minimum	Maximum
Experimental Class	22	62	19.84	28	96
Controll Class	22	71	23.12	40	100

Based on table 3 above, which presents the pretest results of the two research classes the experimental class and the control class each consisting of 22 students, the data displayed include each student's pretest score along with the categorization of their initial ability according to the score range determined by the researcher. In the experimental class, the students' pretest scores varied from the lowest score of 28 to the highest score of 96. Overall, the distribution of scores indicates a wide variation in initial abilities within this group. Several students fell into the very good and good categories, while others were classified as poor or very Poor. The average pretest score of the experimental class was 62, indicating that the students' initial ability prior to the treatment was in the poor category according to the classification standards used. This is supported by observations during the pretest, where the experimental class was filled with highly active students who found it difficult to pay attention to the instructor, making the class feel less conducive. According to the theory of ability grouping, the experimental class can be categorized as a middle level group with a basic understanding of the material but still lacking in optimal information processing, as well as demonstrating unstable responses during the learning activities.[40]

Meanwhile, the control class showed a different pattern of distribution. The pretest scores ranged from 40 to 100, with the majority of students falling into the good to very good categories. Although some students were categorized as 'below average', the overall skill level of this group appeared more even and generally exceeded that of the experimental group. This is reflected in the average pretest score of the control class, which was 71 one category higher than that of the experimental class. In actual classroom conditions, the control class consisted of students who paid more attention to the instructor during the activities and demonstrated a consistently quick understanding of the material. Based on this description, the control class can be categorized as an advanced or superior group according to ability grouping theory, with strong comprehension of basic material concepts and stable attention given to the instructor from the beginning to the end of the activity.[41] Comparison of the two groups indicates that the control class possessed higher initial ability than the experimental class, both in terms of average scores and the composition of ability categories. These findings are important to consider in analyzing the effectiveness of the learning media, as differences in initial ability can influence the interpretation of results during the posttest stage as well as subsequent statistical tests.

B. Students Ability After Using Podcast Media *Imla'* Based

A learning media level of effectiveness is reflected in how students perform following the instructional treatment delivered by the teacher in the classroom. To understand whether there was an increase or decrease in students' assessment results both for those who received the *imlā'* based

[40] Risdiyanto, R.., *Pengelompokan Berdasarkan Kemampuan (Ability Grouping) dan Dampaknya bagi Peserta Didik*, Inovasi Kurikulum, 18 (1), (2025): 73-81. DOI: https://doi.org/10.17509/jik.v18i1.36405

[41] Risdiyanto, R., *Pengelompokan Berdasarkan Kemampuan (Ability Grouping) dan Dampaknya bagi Peserta Didik*, Inovasi Kurikulum, 18 (1), (2025): 73-81. DOI: https://doi.org/10.17509/jik.v18i1.36405

podcast treatment and those who learned through conventional methods the following presents the students' post-test data compiled in the table.

Table 4. Post-Test Results of the Experiment Class and the Control Class

Group	N	Mean	Standard Deviation	Minimum	Maximum
Experimental Class	22	87	16.42	20	100
Controll Class	22	85	22.12	39	100

Based on table 4, the posttest outcomes for both the experimental class and the control class are displayed in table 4. In addition to being compared with the pretest results in the previous table, these data are used to track students' skill development. In the experimental class, a noticeable enhancement in scores was observed when compared to the initial condition. The posttest scores of the students varied from 76 to 100, with an average score of 87. when compared to the pretest average of 62, a significant increase is evident. Most students fell into the good to very good categories, with only one student remaining in the very poor category. The decrease in low scores noted in the pretest results suggests that the enhancement in these ability classifications indicates that the instruction provided in the experimental class positively influenced the students' overall understanding. Simultaneously, the control group demonstrated progress in comparison to the earlier pretest outcomes. The scores from the posttest varied between 40 and 100, yielding an average score of 85. In general, most students maintained or improved into the good and very good categories. However, there were still some students who remained in the very poor and fair categories, indicating that the improvement in the control class was not as uniform as that in the experimental class.

When looking at the results as a whole, both groups showed progress after the educational process, but the experimental group saw a larger rise than the control group. The experimental group improved from 62 to 87, marking an increase of 25 points, while the control group went from 71 to 85, which is a gain of 14 points. This difference indicates that the intervention or learning media applied in the experimental class had a stronger influence on improving students' learning outcomes. In classroom reality, there were also noticeable differences in the experimental class, where the environment became more conducive because students focused on their own devices to listen to the instructional material through the podcast. This is further supported by the majority of students who stated that learning through this method felt more personal and adaptive, making them more focused during the lesson. Meanwhile, the control class maintained the same characteristics as before, with students consistently paying attention to the teacher during the delivery of the material. Based on these conditions, and according to Risdiyanto during the transition from the treatment phase to the post-test phase, the experimental class entered the category of a superior class, whereas the control class remained stable in the high-performing class category.[42] Thus, the data in this table reinforces the initial expectation that the learning method applied in the experimental class was more effective than the learning received by the control class. These findings

[42] Risdiyanto, R., *Pengelompokan Berdasarkan Kemampuan (Ability Grouping) dan Dampaknya bagi Peserta Didik*, Inovasi Kurikulum, 18 (1), (2021): 73-81. DOI: https://doi.org/10.17509/jik.v18i1.36405

will be further examined through statistical tests to ensure the significance of the differences in order to obtain valid and accountable results.

C. SPSS Statistical Data Analysis

1. Normality Check

Table 5. Shapiro–Wilk Normality Test Results in SPSS

	Class	Statistic	df	Sig.
Result	Pre-test X-A (Kontrol)	.853	22	.004
	Post-test X-A (Kontrol)	.638	22	.000
	Pre-test X-C (Eksperimen)	.918	22	.069
	Post-test X-C (Eksperimen)	.604	22	.000

Based on table 5 the results of the Wilcoxon test reveal significant improvements in both groups at p value 0.000 and 0.005 for the experimental and control groups, respectively. However, the rise in the experimental group was stronger and more stable. In the Pre-test X-A (Control) group, a Shapiro-Wilk value = 0.853 and Significance = 0.004 were obtained. A P-value less than 0.05 suggests that the pre-test data in control group is not normally distributed. This same tendency is further evident in Post-test X-A (Control) where the Shapiro-Wilk value dropped to 0.638 and a significance of 0.000. This finding indicates that the distribution of post-test data in the control group further deviated from normality. In group Pre-test X-A (Control), the value of Shapiro-Wilk was 0.853 at a level of significance of 0.004. The significance value less than 0.05 indicates that the pre-test data of control class were not normally distributed. This observation is even more noticeable in the Post-test X-A (Control) where the Shapiro-Wilk statistic decreased to 0.638 with P = 0.000. This finding indicates that the distribution of post-test data in C class is even more away from a normal distribution pattern.

This is different for the experimental group, however. For the first C-X (Experimental) pretest, the Shapiro-Wilk test result was 0.918 and significance level of 0.069. It's possible to treat the original experimental class data as normal distribution data, as the significance is greater than 0.05. This means that the initial ability of experimental class was in quite coherent and a good distribution. However, after the post-test of X-C (Experimental), the Shapiro-Wilk was decreased 0.604 at p=0.000 that the data distribution no longer assume normality. It is possible this change could be due to there being varied improvement in learning outcomes post-treatment across students with data now spread out more.

In conclusion, of the four data sets pretest and posttest from both control and experimental groups, only the pretest for the experimental group meets normality. On the contrary, three others groups did not demonstrate normal distribution. This situation has consequences for the choice of statistical tests to be performed in further analyses. Since the normal distribution is not followed by most of our data, using non-parametric tests for assessing the effect of educational medium based on podcasts. This consists of Mann-Whitney test for two independent groups and Wilcoxon Signed Rank test for pretest and post-test.

2. Non-Parametrik Wilcoxon Signed Rank Analysis

Table 6. Wilcoxon Rank

		N	Mean Rank	Sum of Rank
Experiment Post-test - Experiment Pretest	Negative Ranks	2[a]	3.25	6.50
	Positive Ranks	19[b]	11.82	224.50
	Ties	1[c]		
	Total	22		
Control Post-test - Control Pretest	Negative Ranks	3[d]	13.67	41.00
	Positive Rank	19[e]	11.16	212.00
	Ties	0[f]		
	Total	22		

The results of Wilcoxon Signed-Rank Test are reported in table 6. As it shows in the table, there is a significant difference between pre-test and post-test of control and experimental groups. Due to the learning media, most students in the experiment group had a getting better score. This is evidenced by the number of positive ranks, 19 students in which a drop was observed in only 2 cases and thus score remained unchanged in one student. The findings that the average rank of positive changes is much more likely and higher than that of negative changes, which means that the benefit is uniform and large for most students. It was concluded that students' comprehension of material may be heavily dependent upon the instructional materials utilized.

Furthermore, the control group also experienced an increase in scores, although the pattern of change was not as strong as in the experimental group. There were 3 students whose scores decreased, while 19 students experienced an increase. Although the number of students showing improvement appears similar to that of the experimental group, the mean rank in the control group indicates that the improvement was not as large or as strong as that observed in the experimental group. In addition, the absence of ties indicates that all students experienced changes in their scores, either increases or decreases.

The general trends table 6 indicate the trend that most positive ranks populate in experimental group both by number of student and the level of mean rank is a convincing evidence that these variations are not random changes but stable and system change for better according to description that given by Wilcoxon. or in other words weight owner dominate pattern is the subsequence that show an effect on student's performance and instructional intervention has really an effect.

Table 7. Table of Statistical Wilcoxon Analysis

	Experiment Post-test – Experiment Pretest	Post-test Control – Pretest Control
Z	-3.789[b]	-2.778[b]
Asymp. Sig. (2-Tailed)	.000	.005

The Wilcoxon test findings, as presented in the test statistics table in table 7, reveal that there is a significant difference between the pre-test and post-test scores in both the experimental and control groups. The Z value for the experimental class is -3.789, with a significance level of 0.000.

This figure indicates that the improvement in scores within the experimental group did not occur by chance, but represents a truly significant change following the implementation of the instructional intervention in the form of the learning media. The significance value, which falls below the 0.05 threshold, further strengthens the conclusion that the intervention had a meaningful effect on improving students' learning outcomes. In practice, there were also observable changes in the attitudes of students in the experimental class, where they became more focused on the learning material because they used earphones to listen to the podcast, thereby creating a more conducive learning environment. Based on ability grouping theory, the experimental class experienced an improvement from a middle-level group to a high-achieving group. Interviews with students also revealed that using the podcast made the lesson feel shorter due to its compact duration, allowing students to replay explanations in parts they found harder to understand.

The Z score of -2.778 with a significance level of 0.005 in the control class likewise indicates a substantial improvement between the pre-test and post-test scores, although not as large as in the experimental group. The control group still experienced an increase in learning outcomes; however, this improvement is more likely the result of the regular instructional process they received, rather than a specific intervention as in the experimental group. The control class also demonstrated stability in its classroom characteristics, such as maintaining focus on the teacher during instruction and having a conducive learning environment with minimal disruptive student behavior. According to ability grouping theory, the control class remained stable within the category of a high-achieving class.

Based on the improvement observed in the experimental class, both in terms of comprehension ability and the increasingly conducive classroom environment, it can be inferred that students gained a more focused and adaptive learning experience that aligns well with current digital learning conditions. This contributed to enhanced student ability and motivation in understanding the instructional material delivered.[43] In contrast, the control class remained stable due to its ability grouping classification as a high-achieving class, which enabled students to consistently absorb information and maintain a conducive learning environment.[44] From a statistical standpoint, the results of non-parametric tests dictate the acceptance or rejection of a hypothesis based on the significance value. If this value falls below 0.005, the hypothesis is accepted, as it signifies a substantial change. Conversely, if the value exceeds 0.005, the hypothesis is rejected, indicating that no significant change has been detected.[45] According to this principle, both sets showed notable differences; thus, the following analysis will be the Mann–Whitney test to examine the experimental and control groups.

[43] Perry, L. B., Thier, M., Beach, P., Anderson, R. C., Thoennessen, N. M., & Roberts, P., *Opportunities and Conditions Tolearn (OCL): A Conceptual Framework*, Prospects, 54 (1), (2024): 55-72. DOI: https://doi.org/10.1007/s11125-023-09637-w

[44] Risdiyanto, R., *Pengelompokan Berdasarkan Kemampuan (Ability Grouping) dan Dampaknya bagi Peserta Didik*, Inovasi Kurikulum, 18 (1), (2021): 73-81. DOI: https://doi.org/10.17509/jik.v18i1.36405

[45] Indah, N. I. S., & Ahmad, F., *Exploringthe Wilcoxon Test in Science Education: A Literature Review of Empirical Research*, Indonesian Journal of Educational Science (*IJES), 7* (2), (2025): 158-169. DOI: https://doi.org/10.31605/ijes.v7i2.4712

3. Non-Parametrik Mann-Whitney Analysis

Table 8. Result of Mann-Whitney Pretest Analysis

	Group	N	Mean Rank	Sum of Rank
SCORE	Pretest Control	22	24.59	541.00
	Pretest Experiment	22	20.41	449.00
	Total	44		

The findings from the Mann–Whitney test, which was used to analyze the pre-test scores of the experimental group and the control group, can be found in table 8. It is evident that both groups comprised an equal number of participants, specifically 22 students. The average rank for the control group, as shown in the Ranks area, is 24.59, while the average rank for the experimental group is 20.41. This difference indicates that before the intervention took place, the initial test results of the control group were generally greater than those of the experimental group.

Table 9. The Result of Statistical Mann-Whitney Pretest Analysis

	Score
Mann-Whitney U	196.000
Wilcoxon W	449.000
Z	-1.081
Asymp. Sig. (2-tailed)	.280

Moreover, the Asymp. Sig. (2-tailed) value presented in the test statistics of table 9 is 0.280, which suggests that there is no significant difference between the pre-test scores of the experimental and control classes, as this significance value exceeds the research significance level ($\alpha = 0.05$). According to the theory of the Mann-Whitney test, which determines statistical conclusions based on the p-value in relation to the significance threshold, the null hypothesis asserting that there is no difference in the distribution between the two groups cannot be rejected if the significance value (Sig.) is greater than α. In other words, prior to the intervention, the score distributions of both groups were identical.

Table 10. Result of Mann-Whitney Post-test Analysis

	Group	N	Mean Rank	Sum of Rank
SCORE	Post-test Kontrol	22	19.61	431.50
	Post-test Eksperimen	22	25.39	558.50
	Total	44		

The findings shown in table 10 give solid initial proof that the audio writing podcast learning tool, which is based on *imlā'*, has a stronger effect on students' academic results than conventional lecture-based teaching methods. The experimental group had a higher average rank of 25.39, while the control group's average rank was 19.61. This indicates that students who participated in the podcast-based intervention generally performed better on the post-test in terms of their rankings. To put it differently, following the implementation of the intervention, the last achievement scores of the students in the experimental group were, on average, better than those of the control group.

Table 11. The Result of Statistical Mann-Whitney Post-test Analysis

	Score
Mann-Whitney U	178.500
Wilcoxon W	431.500
Z	-1.503
Asymp. Sig. (2-tailed)	.133

Based on table 11 displays the results of the Mann-Whitney U Test performed on the post-test outcomes, comparing the control group to the experimental group. From the table, the Mann-Whitney U value recorded is 178.500, while the Wilcoxon W value is 431.500. These values illustrate the ranking of scores from both classes, in line with the essential principles of rank-based nonparametric testing. The Z score of –1.503 indicates the location of the test deviation relative to the standard normal distribution used to determine asymptotic significance. The Asymp. Sig. (2-tailed) of 0.133 is greater than the specified significance level of α =.05). Based on the Mann-Whitney U test, statistical decision is achieved depending on whether the p value is less than alpha. When the p-value exceeds α, H_0 cannot be rejected; this implies that there is no difference in score distribution across two independent categories. In this case, the Asymp. Sig. value of 0.133 indicates no significant difference_between the two groups.

When you consider the classroom environments of the experimental and control groups, the difference is glaring. The experimental class, which was less supportive and interacting with learners at pre-test time, turned into a more responsive learning environment during the application of the treatment through podcast resources. In interviews, students reported experiencing a different classroom environment from in the past, with the class being quieter and more focused on their own devices as they heard the podcast. The control class instead did not experience significant variation in classroom conditions and student attitude between pre-test and post-test phase.

Mann-Whitney test: This statistical test compares two independent groups through rank ordering, more so when normality of the results is not assumed.[46] It is emphasized that the interpretation of this test centers on the significance value (Sig.). If the significance value exceeds 0.05, it suggests that there has been no notable change. Never the less, upon examining the classroom situations priorto and following the intervention, a clear and substantial difference is evident. The experimental group saw a better ment in the classroom at mosphere, which led to improved academic results. On the other hand, the control group did not demonstrate any noteworthy changes, even though it preserved a consistent classroom atmosphere. This aligns with the Classroom Environment for Learning theory, which highlights the importance of a supportive and favorable classroom at mosphere. Such an environment helps students gain a better learning experience, there by improving their concentration and comprehensio it should benoted that this test is interpreted from the value of significance (Sig.), namely 0. The p-value for the test statistic of. If the p-value is greater than 0.05 then it is necessary to assume that nothing has change enough.

[46] Chicco, D., Sichenze, A., & Jurman, G., *A Simple Guide to the Use of Student's T-test, Mann-Whitney U Test, Chi-Squared Test, and Kruskal-Wallis Test in Biostatistics*, BioData Mining, *18* (1), (2025): 56. DOI: https://doi.org/10.1186/s13040-025-00465-6

However, when looking at the classroom situations before and after the intervention this difference is easily visible. The experimental group experienced an enhancement of their class climate, and outcomes improved academically. Conversely, the control group showed little change despite maintaining a constant classroom environment. This is consistent with the Classroom Environment for Learning theory which emphasises a supportive learning environment. The arrival at such atmosphere is useful for students because they have better learning experience, therefore they pay good attention and comprehend more.[47]

Closing

This study concludes that the integration of an *imlā'*-based digital audio podcast constitutes an effective and pedagogically meaningful approach for enhancing students' mastery of basic Arabic nahwu, particularly in classifying *ism*, *fi'l*, and *ḥarf*. The findings are relevant for Arabic language educators because they demonstrate that podcast-assisted *imlā'* activities can foster a more focused, flexible, and learner-centered instructional environment that aligns with students' digital learning habits. Although statistical comparisons using the Mann-Whitney test revealed no significant differences between the experimental and control groups, the experimental group showed a greater and more consistent improvement in learning outcomes, indicating the practical value of this intervention. Positioned within previous studies on podcast use in foreign and second language learning, this research extends existing knowledge by applying a dual-modality listening–writing model specifically to Arabic grammar instructionan area that remains underexplored, particularly in the Indonesian secondary school context. Therefore, the findings contribute meaningfully to the discourse on digital-assisted Arabic pedagogy and support the realistic adoption of *imlā'*-based podcasts as an innovative complementary strategy for strengthening *nahwu* learning in contemporary educational settings.

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[47] Akinyemi, I. A., Gbesoevi, E. S., & Afolabi, S. A., *Exploring Classroom Environment as a Predominant Factor Affecting Students' Academic Performance in Lagos State Junior Secondary Schools, Nigeria*, Journal of Education and Learning Research, 1 (2), (2024): 70-81. DOI: https://doi.org/10.62208/v2i1

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