

DEVELOPING BOWLING LETTERS MEDIA THROUGH NHT LEARNING MODEL: A LESSON FROM PRIMARY SCHOOLS LEARNERS

¹Afina Nurfahada, ^{1*}Nugraheti Sismulyasih SB

¹Primary School Teacher Education, Semarang State University, Indonesia

*Corresponding Author Email: nugraheti@mail.unnes.ac.id

Article Info	Abstract
Article History Received: January 2025 Revised: May 2025 Published: July 2025	<i>This research introduces a learning media for javelin letters using wooden boards developed with the Number Head Together (NHT) model to interpret new vocabulary for grade 1 elementary school students. This problem occurs due to low concentration and mastery of understanding in grade 1 elementary school students, thus encouraging researchers to develop effective learning media. This study aims to develop, validate, and test the effectiveness of javelin letters media in interpreting new vocabulary. This study uses a development approach that combines product design stages, feasibility validation by expert validators, and effectiveness testing through small-scale and large-scale trials involving 17 male students and 8 female students in grade 1 of AL HIKMAH Elementary School, Semarang City. The feasibility assessment conducted by experts showed a high level of suitability for the use of the media, with a significant increase in student learning outcomes during the trial. The small-scale trial showed an increase in the average pretest score to the posttest from 52.5 to 77.5 with a significant difference of 25. The large-scale trial showed an increase in the average from 60.2 to 81 with a difference of 20.8. The results of the N-Gain test showed a moderate effect, with a value of 0.5356 for small-scale testing and 0.5437 for large-scale testing. This study concludes that the letter throwing media through the Number Head Together (NHT) model is a very important learning medium for improving understanding of new vocabulary. Positive feedback from teachers and students confirms its effectiveness in generating student engagement to improve learning outcomes in the classroom to be more optimal.</i>
Keywords Bowling letters media; Teaching media; NHT learning model; vocabulary; Language learning;	
How to cite: Nurfahada, A., & Sismulyasih S.B.N. (2025). Developing Bowling Letters Media Through NHT Learning Model in Interpreting New Indonesian Vocabulary: A Lesson from Primary Schools Learners, <i>JOLLT Journal of Languages and Language Teaching</i> , 13(3), 1445-1456. Doi: https://doi.org/10.33394/joltt.v13i3.14447	

INTRODUCTION

Permendikbudristek number 47 of 2023 explains the planning, implementation and supervision of educational activities carried out by educational units at early childhood education, basic education levels and secondary education levels. Each level has a role that has a big influence on student development. However, education has problems, especially regarding students' skills. Teachers can play their role in developing students' skills through familiarization in the classroom. By getting used to it in class, students can form skills that will later become their habits. Language skills can be a means of improving students' talents and interests. A person's ability to speak is related to the language skills he or she has. Language skills are skills that must be possessed by every human being, because language skills are certainly used by humans in everyday life ((Pokhrel, 2024). In language, there are four aspects of interrelated skills, namely listening, speaking, reading and writing. These four language skills really support students' language abilities (Widyantara & Rasna, 2020; Maimunia Rizqi Aulia, 2019). Each of these language skills can shape student development, one of which is reading skills. Reading is a very important skill in human life, especially in

the current era of globalization that requires every individual to have the ability to read. With the rapid and sophisticated advancement of technology, the need for this skill is becoming increasingly urgent. If there are people of productive age who are still illiterate, then they will have difficulty in meeting various aspects of life's needs. Therefore, reading skills cannot be underestimated. In addition to being the basis for meeting information needs, reading is also the key to studying various disciplines. For students, reading skills are vital to developing academic abilities, expertise, and intelligence. Without this skill, achieving achievement and excellence in school will be difficult to achieve (Darsana et al., 2019). While according to (Muhsyanur, 2019: 11; (Nugraha et al, 2018:20) reading is something that is done based on the collaboration of several skills, namely, observing, understanding and thinking. This is very important to master, because reading skills will support students' success in receiving materials and participating in learning activities in class. Reading ability is closely related to students' ability to interpret vocabulary in sentences or readings.

Making sense of new vocabulary is closely related to students' reading ability at the next level. Soedjito and Saryono in (Cindana, 2022) define that "Vocabulary is the vocabulary of a language". Vocabulary develops over time, so that it adapts to the development of the times according to the dynamic nature of language. The purpose of giving meaning to new vocabulary for grade 1 is so that students have the ability to use Indonesian according to language rules properly and correctly, so that students are able to communicate both verbally and in writing properly and correctly. By interpreting new vocabulary, it will make it easier for students to understand vocabulary in everyday life at school and in the surrounding environment. This is like a whole word that is in a person's memory which can cause a reaction when heard or read (Santi Devi, 2023). Understanding the meaning of vocabulary aims for students not only to memorize, but also to be able to understand how to use it in the context of everyday life. In addition, this process also opens up opportunities for students to develop critical thinking, creativity, and collaboration skills, all of which are important elements in mastering vocabulary properly (Tuhfa & Rahayu, 2024). However, in reality the knowledge value of Indonesian language subjects in class 1 of SD AL HIKMAH is in the low category. This is proven by the data that the daily test scores for class 1 are still very low. Of the 25 students, only 30% completed the score above the KKTP. This shows that 70% of students have not yet completed the score above the KKTP.

This happens because students have low concentration when given material by the class teacher, they are engrossed in playing and talking with their classmates, lack of mastery of vocabulary, students are not yet able to read, write and recognize letters due to internal factors such as parents who do not pay attention to their children's development because people old busy with his work. So that class 1 teachers continue to provide good knowledge and skills, especially for class 1 students who are starting to be required to know all kinds of subjects. Grade 1 teachers try to introduce all separate subjects, but problems arise when teachers do not use effective and efficient learning media. The class teacher only uses story cards and provides explanations to students.

To solve this problem, innovation is needed by developing Letter Bowling media through the Number Head Together (NHT) learning model to interpret new vocabulary in Class 1 of AL HIKMAH Elementary School, Semarang City. By creating Letter Bowling media, it is hoped that it can facilitate students when learning is taking place. Letter Bowling media which will later be applied by students like a game. Because the main characteristic of class 1 students is that they like to learn by using real objects and direct experience in the classroom.

The implementation of learning media will later be equipped with the Number Head Together (NHT) learning model which can make the learning process easier for students. Number Head Together (NHT) is a learning strategy that emphasizes student activity in the

learning process, starting from searching for information, processing data, to presenting results in front of their classmates (Apriyani et al., 2019). Number Head Together (NHT) is an alternative strategy used by teachers to actively ask questions by involving all students simultaneously in collaborative discussions about the subject matter. Each student is asked to write down the answer individually, then discuss it in small groups consisting of members with diverse backgrounds, until a common agreement is reached (Sipayung, 2023).

Based on the problems above, research regarding the development of Letter Bowling media through the Number Head Together (NHT) learning model is very important. This research aims to create varied and innovative media to improve grade 1 students' understanding of new vocabulary. This research focuses on developing Letter Bowling media through the Number Head Together (NHT) learning model to interpret new vocabulary in class 1 of AL HIKMAH Elementary School, Semarang City. The use of innovative and varied Letter Bowling learning media can help improve students' ability to master new vocabulary. This is reinforced by the use of the Number Head Together (NHT) model which makes it easier for teachers to create more effective learning in schools. Then, can letter throwing media be used effectively in the learning process?

RESEARCH METHOD

Research Design

This research uses research and development (R&D) methods. According to Sugiyono (2019:752), research and development is a methodological approach that aims to create a specific product and evaluate how effective the product is. This research and development will produce Letter Bowling media to help interpret new vocabulary in grade 1 elementary school Phase A. Researchers modified this research with the ADDIE model. In implementing the ADDIE model, there are five phases that must be carried out in a structured manner, starting from the Analysis process, continuing with Design, Development, Implementation, and ending with Evaluation. The five phases or stages of the ADDIE model are carried out systematically.

Research Participants or Population and Sample

The participants in this research were all 1st grade students at AL HIKMAH Elementary School, Semarang City. The small scale test involved 6 class 1A students at SD AL HIKMAH. Each group consists of 2 students, so only 3 groups are used. Group 1 includes smart students, group 2 includes less smart students, and group 3 includes students who are not smart. Meanwhile, In the large-scale trial, there were 5 groups, each group consisting of 5 students. Each group had a leader to lead the discussion of the learning process according to the teacher's direction. Small-scale tests and large-scale tests are carried out using the Number Head Together (NHT) learning model.

Instruments

According to Sugiyono (2019: 406) The research instrument has two important aspects that must be considered. First, the quality of the instrument is determined by the level of validity and reliability. Second, the quality of the data collection process is assessed from the accuracy of the methods used in collecting and analyzing research data. Collecting data instruments in research is data that is obtained and analyzed quantitatively. To determine the suitability of the learning media, a feasibility questionnaire was given to be assessed by material experts and media experts regarding the suitability of Letter Bowling Media. Learning media is revised based on input and evaluation from experts. After the Bowling Letters media is used in learning, teachers and students are asked to provide feedback by filling out a questionnaire which aims to find out their response to the use of this media. Apart from using questionnaires, this research also used observation and interview methods. So the

instruments used are observation guidelines and interview guidelines. The test technique is carried out twice, namely before (pretest) and (posttest) using letter bowling media so that the instrument used is giving questions.

Testing techniques are tools used to complete tasks that must be done in the form of questions or problems that must be answered by students. The testing technique that will be tested by researchers to students is by giving pretests and posttests. Before providing a new learning media product, a pretest will be conducted first so that researchers can evaluate the initial conditions of students. While the posttest is conducted after providing a new learning media product to students which aims to assess students' final abilities.

Data Analysis

Data analysis was carried out using a student and teacher needs questionnaire. The questionnaire was given before the researcher prepared the learning media. After obtaining the data that will be used to develop Bowling Letters on the material for interpreting new vocabulary, it is continued with media feasibility analysis carried out by expert validators using feasibility questionnaire guidelines. The level of appropriateness of learning media is calculated using a formula based on evaluations from media experts and material experts. The total score obtained is then compared with the maximum score to determine whether the media has reached the eligibility standards or still requires further revision.

The results of the percentage of feasibility data are then converted to the expert validation interpretation criteria as follows.

Table 1
Media Eligibility Criteria

Percentage	Criteria
0% - 20%	Totally Not Worth It
21% - 40%	Not feasible
41% - 60%	Decent Enough
61% - 80%	Worthy
81% - 100%	Very Worth It

(Lestari & Yudhanegara, 2017:334)

The assessment from media experts includes three aspects, namely appearance, presentation and suitability to target users. Meanwhile, material experts assess three other aspects which include the suitability of the material with the Learning Outcomes (CP) and Learning Objectives (TP), the way the material is presented, and linguistic aspects. The level of appropriateness of the Bowling Letters media based on the assessments of the two groups of experts is shown in the following percentage data:

Table 2
Result of Validation of Letter Bowling Media Feasibility

Validator	Value score	%	Criteria
Media	35	87,5%	Very Worth It
Material	37	92,5%	Very Worth It

After carrying out a feasibility test with expert validators, the next step is analyzing teacher and student responses. This analysis was carried out by giving questionnaires to teachers and students after carrying out pretests and posttests on small-scale tests. The applied formula is used to calculate posttest and posttest data on small-scale tests that have been obtained to evaluate the media that has been developed. The scores are then totaled with a maximum score to find out whether the media developed has been effectively used in the learning process

The percentage results of the pretest and posttest data from the small scale test were then converted with the interpretation criteria. While, the effectiveness of Letter Bowling media in learning new vocabulary was measured by comparing pretest and posttest scores on small-scale trials before being applied to a larger group. The effectiveness of using this media can be seen from the comparison of the results of the initial test and final test in the limited trial group. In assessing the pretest and posttest results, the Minimum Completeness Criteria (KKTP) standard of 70 is used as a reference. Complete data regarding teacher and student responses is presented in the following table:

Table 3
Teacher and Student Response Questionnaire

Response	Validation Results	Qualification
Small Scale Test		
Students	92%	Very Positive
Teacher	95%	Very Positive

RESEARCH FINDINGS AND DISCUSSION

Research Findings

The designed learning media was developed based on needs analysis obtained from teacher and student questionnaires. Next, the media is evaluated by two groups of expert validators: media experts and material experts. The evaluation of Bowling Letters media showed very satisfactory results, with an assessment from media experts reaching 87.5% which was included in the very worthy category. This media is considered to be able to be implemented in learning with several adjustments. On the other hand, the assessment from material experts obtained a higher percentage, namely 92.5%, also in the very feasible category. This indicates that the material in the Letter Bowling media which is integrated with the Number Head Together (NHT) learning model for grade 1 students can be applied in learning after the necessary revisions have been made.

After obtaining excellent feasibility validation from experts, the next stage is to measure the effectiveness of the media in learning new vocabulary. Testing the effectiveness of Bowling Letters media using the Number Head Together (NHT) model was carried out in two stages: small scale and large scale trials. To measure improvements in student learning outcomes, evaluation is carried out through pretest and posttest.

Table 4
Small Scale Test Pretest and Posttest Results

No.	Information	Product Trial Class	
		<i>Pretest</i>	<i>Posttest</i>
1.	Number of Students	6	6
2.	Average Value	52,5	77,5
3.	Difference	25	25
4.	Lowest Value	35	60
5.	The highest score	75	90
6.	Number of Completed Students	2	5
7.	Incomplete Number of Students	4	1
Average Classical KKTP (%)		33%	83%
Increase (%)		50%	

The data shows a significant increase in student learning outcomes, where the average score increased from 52.5 on the pretest to 77.5 on the posttest. The level of student learning completeness has increased by 50%, which is reflected in the number of students who reach the Minimum Completeness Criteria (KKTP). Initially, only 2 students met the KKTP during

the pretest, but this number increased to 5 students at the posttest. This proves that the use of Letter Bowling media combined with the Number Head Together (NHT) learning model is effective in improving students' ability to understand new vocabulary.

The data of students' achievement of the use of Letter Bowling media among 25 students has increased. The average score before using Letter Bowling media through the Number Head Together (NHT) learning model (pretest) was 60.2%, while after using Letter Bowling media through the Number Head Together (NHT) learning model (posttest) it was 81%. Apart from showing an increase, the students' posttest scores also fulfilled the KKTP with the KKTP in the Indonesian language subject being 70. The average percentage of class 1 students' learning scores increased by 68%. There were 3 students whose scores did not meet the KKTP in the material on interpreting new vocabulary. Students who have not completed it still have difficulty understanding how to find and interpret new vocabulary.

After getting pretest and posttest data from both trials (small scale and large scale), the next stage is to carry out data normality analysis. This analysis aims to determine whether the data distribution follows a normal pattern or not. In this case, normality calculations were carried out using the Shapiro-Wilk method which was processed using the SPSS version 30 program. The results of the normality analysis for both test scales can be seen in the following table:

Table 5
Small Scale and Large Scale Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
<i>Pretest A</i>	,227	6	,200*	,894	6	,340
<i>Posttest A</i>	,238	6	,200*	,945	6	,700
<i>Pretest B</i>	,162	25	,090	,933	25	,105
<i>Posttest B</i>	,180	25	,036	,924	25	,064

Based on table 5 above, the small scale normality test of students' pretest scores using the Shapiro-Wilk test shows a significant result of 0.340 and the posttest score using the Shapiro-Wilk test shows a significant result of 0.700. The results of the data normality test are said to be normal if sig. >0.05. The results of the pretest trial above show a value of 0.340 > 0.05 and the results of the posttest trial are 0.700 > 0.05. So it can be concluded that through the data from the trial results, the small-scale pretest and posttest scores for grade 1 students at SD AL HIKMAH are normally distributed.

Meanwhile, the large-scale normality test of students' pretest scores using the Shapiro-Wilk test showed a significant result of 0.105 and the posttest score using the Shapiro-Wilk test showed a significant result of 0.064. The results of the data normality test are said to be normal if sig. >0.05. The results of the pretest trial above show a value of 0.105 > 0.05 and the results of the posttest trial are 0.064 > 0.05. So it can be concluded that through the data from the trial results, the large-scale pretest and posttest scores for grade 1 students at SD AL HIKMAH are normally distributed.

After knowing the normality test for normally distributed data, the researcher determined the paired t-test or pretest and posttest average difference test, which is a statistical method used to determine whether there are significant differences between two related samples. The conditions for making paired t-test decisions using the SPSS application are as follows. S. One-Sided p and Two-Sided p > 0.05, so it is said that there is no difference between the pretest and posttest, so Ho is accepted and Ha is rejected. S. One-Sided p and Two-Sided p < 0.05, so it is said that there is a difference between the pretest and posttest, so that Ho is rejected and Ha is accepted. The following are the results of the small scale and large scale paired t-test obtained in the research:

Table 6
Small Scale and Large Scale Paired T-Test

Test type	Significance		Information
	One-Sided p	Two-Sided p	
Small scale	<0.01	<0.01	Ha accepted
Large Scale	<0.01	<0.01	Ha accepted

Referring to the established criteria, the S. One-Sided p and Two-Sided p values <0.05 indicate a significant difference between the pretest and posttest results. Data analysis shows that in the small scale test, the S. One-Sided p and Two-Sided p values are <0.01, confirming that there is a significant difference between the results before and after the application of Letter Bowling media with the Number Head Together (NHT) learning model in vocabulary learning new. Likewise, in the large-scale test, a significant difference was found with the S value of One-Sided p and Two-Sided p <0.01. This proves the effectiveness of the Letter Bowling media combined with the Number Head Together (NHT) learning model in learning Indonesian, especially in understanding new vocabulary material.

The positive results from the paired t-test are the basis for proceeding to the next stage, namely the implementation of the N-Gain Test. This test is intended to further measure the level of effectiveness of using Letter Bowling media which is integrated with the Number Head Together (NHT) learning model.

Table 7
Small Scale and Large Scale N-Gain Test

Test type	Means	Information
Small Scale	0,5356	Currently
Large Scale	0,5437	Currently

Analysis of the N-Gain test results shows increased learning on both test scales. In a small-scale test involving 6 grade 1 students at AL HIKMAH Elementary School, Semarang City, the application of Letter Bowling media with the Number Head Together (NHT) learning model resulted in an increase of 0.5356, which is included in the medium category. Meanwhile, in a large-scale test that included 25 students in the same class, the implementation of similar media and learning models resulted in an increase of 0.5437, which is also classified as medium. These two results show the consistency of the effectiveness of the learning methods applied, both in small and large groups.

Discussion

This research centers on the development and implementation of an innovative educational tool known as Letter Bowling, aimed specifically at supporting first-grade elementary students in learning and interpreting new vocabulary in Indonesian language classes. The need for this learning media arose from the recognition that early learners often struggle with abstract language concepts, especially in vocabulary acquisition, and benefit more from concrete, engaging, and interactive experiences (Sotlikova, 2023; Naqsabandiyah & Dehghanitafti, 2023). To address this challenge, the Letter Bowling media was designed and developed using the Number Head Together (NHT) cooperative learning model. The study focuses on three primary outcomes: the development of the media product, the assessment of its feasibility through validation, and the evaluation of its effectiveness in enhancing vocabulary learning among young learners.

The development process of Letter Bowling was methodical and rooted in an analysis of teacher and student needs, as well as the alignment with the first-grade language curriculum at

SD Al Hikmah Semarang. The initial phase involved extensive observation and curriculum mapping to ensure that the media would meet specific learning objectives. Once the educational goals were clearly defined, researchers moved on to designing a prototype that would embody the collaborative spirit of the NHT model. This model emphasizes active participation through key components like numbering students, posing questions, collaborative thinking, and group-based responses (Maraimah, 2014; Murwanto, 2020). These principles were seamlessly integrated into the design and gameplay of the Letter Bowling media, ensuring that the pedagogical intent was preserved in the physical and interactive aspects of the tool.

The physical design of the Letter Bowling media was created with a deep understanding of the cognitive and motor development stages of first-grade students. Built from wood, the board resembles a traditional bowling alley, infused with vibrant colors and playful design elements that immediately capture young learners' attention. Measuring 85 x 44 centimeters, the board is substantial enough to be used in group activities yet still manageable in a classroom setting. The pins and bowling balls are child-friendly, lightweight, and visually stimulating, contributing to an engaging tactile learning experience. Each pin represents a different letter or a set of letters, and the game encourages students to form and interpret new words or vocabulary items using these elements. It is in line with Jufrida et al. (2021) who inform that the inclusion of protective elements and decorative stickers enhances its aesthetic appeal, making the tool both functional and enjoyable to use.

The educational value of the Letter Bowling media lies not only in its design but also in its implementation strategy, which merges fun with meaningful learning. During its application in the classroom, the media served as both a game and a pedagogical instrument. Teachers introduced story texts that contained new or unfamiliar vocabulary, and students, organized into groups following the NHT structure, were tasked with identifying, interpreting, and using the vocabulary through the gameplay. This cooperative approach encouraged peer interaction, collective reasoning, and shared responsibility, all of which are crucial for language development at this age (Rohani, Yuniar, & Yuliana, 2022; Jufrida et al., 2021). Through throwing the ball and knocking down pins, students were prompted to form words from the letters they hit, connect them with meanings from the story, and discuss them with their peers. The combination of physical movement and linguistic analysis helped cater to diverse learning styles, especially kinesthetic and interpersonal learners.

The feasibility of the Letter Bowling media was confirmed through validation by subject matter experts, including early childhood educators and instructional designers. Their feedback highlighted the alignment of the media with pedagogical standards and student developmental needs. Teachers who tested the media in small classroom trials reported positive reactions from students, noting that the activity not only sparked enthusiasm but also helped students retain vocabulary more effectively (Nofya & Atmazaki, 2024; Diana et al., 2024; Kharade & Peese, 2014). Students displayed heightened motivation, increased participation, and improved focus during lessons involving the media, indicating its potential to transform passive vocabulary instruction into an active, student-centered experience.

In terms of effectiveness, the Letter Bowling media has demonstrated notable impacts on students' language learning. The interactive nature of the game keeps students engaged and reduces the monotony often associated with rote memorization of vocabulary. Moreover, the NHT model fosters a collaborative learning environment, which has been shown to boost confidence and communication skills among young learners. As students work in teams, they share ideas, negotiate meanings, and collectively build understanding, which are key components of language acquisition. Additionally, the media provides immediate, visible feedback—students can see the results of their actions, reflect on their choices, and receive

support from peers and teachers (Rahamawati et al., 2023; Putri et al., 2021). This scaffolding process reinforces vocabulary comprehension and encourages deeper cognitive processing.

Furthermore, the presence of contextual story texts adds a layer of meaning to the vocabulary being taught. Each group is provided with a narrative that contains new vocabulary aligned with the learning objectives. Students are required to extract words from the text, link them with the letters they acquire during the game, and apply their understanding in both oral and written forms. This integration of storytelling with gameplay enhances the relevance of vocabulary learning and situates it within real-life contexts, which is essential for meaningful language development (Putri, 2018; Hussein, 2022). Through these story-based activities, students not only learn isolated words but also understand how they function within sentences and broader narratives.

From a teacher's perspective, the Letter Bowling media offers a valuable tool for classroom management and instructional differentiation. It allows educators to monitor student progress in real time, identify learners who may need additional support, and create inclusive learning experiences that accommodate various learning styles and paces. The use of the NHT model ensures that every student is accountable for their learning and contributes to the group's success, fostering a culture of collaboration and mutual respect. Additionally, the media's adaptability means it can be used to teach different topics beyond vocabulary, such as phonics, syllables, or even basic sentence construction, making it a versatile addition to the instructional toolkit.

Beyond the academic benefits, the Letter Bowling media also promotes affective development among students. It encourages social interaction, turn-taking, empathy, and positive competition, all of which are critical for holistic child development. Students learn to work together, respect others' ideas, and celebrate collective achievements. These social-emotional skills are increasingly recognized as vital for success in school and beyond, and tools like Letter Bowling provide a structured yet playful environment in which they can flourish.

In conclusion, the development and application of the Letter Bowling media through the Number Head Together (NHT) learning model represent a significant step toward innovative and effective language instruction in early childhood education. By merging physical activity, cooperative learning, and contextual vocabulary instruction, this media addresses both cognitive and affective domains of learning. The successful validation and positive reception among teachers and students suggest that Letter Bowling holds promise as a scalable and adaptable educational tool. It not only enriches vocabulary learning experiences but also fosters a dynamic, engaging, and inclusive classroom culture that aligns with the principles of modern pedagogy. As such, it serves as a practical model for future efforts in instructional media development, particularly in early language education settings.

CONCLUSION

The product produced in this research is Bowling Letter media. The media design that the researchers successfully developed was a wooden board designed like a bowling game with attractive colors. The size of the wood for Bowling Letters is 85 x 44 cm. Bowling pins and bowling balls that attract the attention of 1st grade elementary school students. On the back there is a Bowling Letters protector which is equipped with stickers, making the Bowling Letters board even more innovative. Letter Bowling media includes several parts including Letter Bowling displays, Letter Bowling decorations, ball rolling stands, Letter Bowling protectors, Letter Bowling pins, and playing guidebooks from Letter Bowling media. Letter Bowling Media through the Number Head Together (NHT) learning model has passed feasibility validation and is considered very suitable by media experts and material experts to be applied in learning material to interpret new vocabulary and received a positive response from teachers and students. The results of the teacher and student responses gave a positive

response to the Letter Bowling media which can help the learning process in interpreting new vocabulary. The normality test with a normal distribution also shows that the use of Bowling Letters media has a significant influence on improving student learning outcomes. The paired t-test shows the effectiveness of the Bowling Letters media for use in learning Indonesian as a material for interpreting new vocabulary. The N-Gain test results show an increase in results from small-scale tests and large-scale tests with medium criteria. So, this research can be concluded that the Letter Bowling media through the Number Head Together (NHT) learning model is effectively used for the learning process to interpret new vocabulary in grade 1 elementary school.

ACKNOWLEDGEMENT

The author would like to express his deepest gratitude to the supervisors who has provided continuous guidance and support. The author would like to express his deepest gratitude to the 1st grade teachers and 1st grade students of AL HIKMAH Elementary School, Semarang City, as well as to family, friends and all parties who have provided support during the research and preparation of this final report. Without prayers, help and support from all parties, this research would not have been completed successfully.

REFERENCES

- Agustina, D., Tarbiyah, F., Keguruan, D. A. N., Negeri, U. I., Intanlampung, R., Ngreni, L., Yilmaz, Inengsih, M., Samad, A., Sugiyono, Aprilia, Susanti., S. H., Taufiqoh, A. R. O., Putra, N. A., Pertiwi, P. W., & Sa'diah, A. (2022). Development of Indonesian Language Serial Picture Media for Class Ii Sd / Mi Learners Indonesian Language Learners. *Creative Tadulako Online*, 2(4), 72. <http://dx.doi.org/10.1186/s13662-017-1121>
- Apriyani, P., Margiati, K., & Anasi, P. T. (2019). The Effect of PBL Model Application on Student Learning Outcomes of Class X IPS MAN 2 Pontianak. *Katulistiwa Journal of Education and Learning*, 8(1), 1-9.
- Ardiansah, F., & Miftakhi, D. R. (2020). Development of Textbooks with Addie Model in Educational Technology Management Course. *Journal of Education and Instruction (JOEAI)*, 3(2), 247-258. <https://doi.org/10.31539/joeai.v3i2.1550>
- Baiq Sumarni, Dharma Dev Bhatta, & Kho, S. F.-C. (2022). The Use of Total Physical Response in Teaching Vocabulary Integrated with Meaningful Classroom Interaction. *Journal of Language and Literature Studies*, 2(1), 23-32. <https://doi.org/10.36312/jolls.v2i1.710>
- Cindana, S. (2022). An analysis of Indonesian vocabulary usage among the alpha generation. *Ability: Journal of Education and Social ...*, 3(3), 43-54. <https://pusdikra-publishing.com/index.php/jesa/article/view/680%0Ahttps://pusdikra-publishing.com/index.php/jesa/article/download/680/590>
- Darsana, I. M. P., Putra, I. K. A., & Kristiantari, M. R. (2019). The Effect of Group Investigation Type Cooperative Learning Model Assisted by Picture Media on Reading Comprehension Skills. *Journal of Education Technology*, 3(3), 210. <https://doi.org/10.23887/jet.v3i3.21828>
- Diana, P. Z., Indriyani, I. P., Sulistiyono, R., Wulandari, P. A., & Prafitra, R. A. (2024). Developing Website-Based Gamification Learning Media on Debate Texts in Indonesian Language Learning. *Journal of Languages and Language Teaching*, 12(1), 296. <https://doi.org/10.33394/jollt.v12i1.9744>
- Hidayatullah, H., Munir, S., & Tawali, T. (2022). Enhancing Vocabulary Mastery through Applying Visual Auditory Kinesthetic (VAK): A Classroom Action. *Journal of Language and Literature Studies*, 2(1), 43-52. <https://doi.org/10.36312/jolls.v2i1.721>

- Hussein, K. (2022). Timothy G. Pollock: How to use storytelling in your academic writing: techniques for engaging readers and successfully navigating the writing and publishing processes. Edward Elgar Publishing: Cheltenham, 2021, 200 pp. ISBN: 9781839102820 (eBook). *WMU Journal of Maritime Affairs*, 21(3), 421–423. <https://doi.org/10.1007/s13437-022-00288-w>
- Jufrida, J., Astalini, A., Darmaji, D., Tanti, T., Kurniawan, D. A., Erika, E., Hayi, R., & Sukarni, W. (2021). Student Responses to The Application of The Number Head Together Learning Model in Physics Subjects. *Jurnal Pendidikan Fisika Indonesia*, 17(2), 151–159. <https://doi.org/10.15294/jpfi.v17i2.24083>
- Kharade, K., & Peese, H. (2014). Problem-based learning: A promising pathway for empowering pre-service teachers for ICT-mediated language teaching. *Policy Futures in Education*, 12(2), 262–272. <https://doi.org/10.2304/pfie.2014.12.2.262>
- Maimunia Rizqi Aulia, N. S. S. (2019). The Effectiveness of the Structure Numbered Head Model With Zig-Zag Media on The Skills of Writing Pantun Students Grade V Maimunia Rizqi Aulia , Nugraheti Sismulyasih Sb Faculty of Pen Science. *Primary: Journal of Primary School Teacher Education journal of Primary School Teacher Education*, 8 (April), 1-6.
- Mariamah, M. (2014). Penerapan Pembelajaran Kooperatif Number Head Together (NHT) Untuk Meningkatkan Kemampuan Komunikasi Matematika Siswa Kelas VIII SMP IT Suhadah Yogyakarta. *Prisma Sains: Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, 2(1), 83. <https://doi.org/10.33394/j-ps.v2i1.1058>
- Murwanto, S. (2020). Implementasi Model Pembelajaran Kooperatif Tipe NHT (Numbered-Head-Together) untuk Meningkatkan Hasil Belajar IPA Siswa Kelas IX B SMP Negeri 4 Alla Enrekang. *Sainsmat: Jurnal Ilmiah Ilmu Pengetahuan Alam*, 9(1), 14. <https://doi.org/10.35580/sainsmat91141872020>
- Nofya, M., & Atmazaki, A. (2024). Investigating the Effect of Inquiring Mind Want to Know Assissted by Audiovisual Media and Learning Motivation Students' Writing Skills. *Journal of Languages and Language Teaching*, 12(1), 379. <https://doi.org/10.33394/jollt.v12i1.9653>
- Naqsyabandiyah, N., & Dehghanitafti, N. (2023). Developing Task-Based Learning Materials to Improve Students' Vocabulary Mastery Viewed from Linguistic Awareness. *Journal of Language and Literature Studies*, 3(1), 37–52. <https://doi.org/10.36312/jolls.v3i1.1088>
- Putri, R. D. F., Hadi, M. S., & Mutiarani, M. (2021). The Efficacy of Instagram @Gurukumrd as the Media in Improving Students Reading Skills. *Journal of Languages and Language Teaching*, 9(3), 350. <https://doi.org/10.33394/jollt.v9i3.3795>
- Putri, I. G. A. P. E. (2018). Critical Environmental Education in Tertiary English Language Teaching (ELT): A Collaborative Digital Storytelling Project. *Indonesian Journal of Applied Linguistics*, 8(2). <https://doi.org/10.17509/ijal.v8i2.13280>
- Prananta, Y. R., Setyosari, P., & Santoso, A. (2020). Development of Hand Puppet Media. *Creative Journal of Basic Education*, 10, 126-132.
- Rahmawati, A., Syafei, M., & Prasetyanto, M. A. (2023). Improving Speaking Skills through Tiktok Application: An Endeavour of Utilizing Social Media in Higher Education. *Journal of Languages and Language Teaching*, 11(1), 137. <https://doi.org/10.33394/jollt.v11i1.6633>
- Rohani, T., Yuniar, V., & Yuliana, Y. (2022). A Descriptive Study on the Improvement of Students' Reading Comprehension Through Number Head Together Technique. *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi*, 9(2), 524–536. <https://doi.org/10.47668/edusaintek.v9i2.525>

- Santi Devi. (2023). New Vocabulary in Indonesian (Analysis of Previous Researchers Using Qualitative Studies in the Use of New Vocabulary into Standard Language). *Creative Student Journal*, 1(1), 01-04. <https://doi.org/10.59581/jmk-widyakarya.v1i1.121>
- Sipayung, T. N. (2023). Training on the Application of the Numbered Head Together (NHT) Cooperative Learning Model in Introductory Mathematics Learning. 4(3), 1065–1071.
- Sotlikova, R. (2023). The Presentation-Practice Route to Teach Vocabulary to Young Learners: A Casa Study at International Schools in Uzbekistan. *Journal of Language and Literature Studies*, 3(1), 67–79. <https://doi.org/10.36312/jolls.v3i1.1172>
- Sugiyono. (2019). Educational Research Methods (Quantitative, Qualitative, Combination, R&D and Educational Research). Yogyakarta: ALFABETA
- Tuhfa, E. F., & Rahayu, E. (2024). Implementation of project-based learning model in improving Indonesian vocabulary of Muslim students at Satun Wittaya School in Thailand. *SCHOULID: Indonesian Journal of School Counseling*, 9(1), 18. <https://doi.org/10.23916/083756011>
- Widyantara, I., & Rasna, I. (2020). The Use of Media in Learning Learners' Language Skills. *Journal of Indonesian Language Education and Learning*, 9(2), 113-122. https://ejournal-pasca.undiksha.ac.id/index.php/jurnal_bahasa/article/view/3531/pdf