Development of BISAWA (Bingo Aksara Jawa) Media Assisted by Pop Up Book for Teaching Javanese Script Reading to Upper Grade Students

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Abstract: This study aims to develop BISAWA (Bingo Aksara Jawa) learning media assisted by Pop Up Book for teaching Javanese script reading to upper grade students. The research method used is *Research and Development* proposed by Sugiyono through four stages, namely potential problems, data collection, product design, and design validation. Data collection was obtained through interviews and questionnaires, then analyzed using descriptive qualitative and quantitative approaches. Product validation was carried out by material validators to assess learning content and media validators to assess media quality. Based on the results of the material validation test getting a score of 81.3% and the media validation test getting a score of 91.1%, both validators stated that this product is "very feasible" to be used for learning media to read Javanese Script. BISAWA (Bingo Aksara Jawa) media assisted by Pop Up Book is expected to support the learning process of Javanese language, provide a good stimulus for students, improve students' ability to read Javanese script, and assist teachers in delivering varied Javanese script materials. Thus, this media can be utilized to improve the reading skills of elementary school students' Javanese script material.

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Introduction

The main components in the learning success process can be viewed from three main aspects, namely teachers, students, and learning resources (Sari, 2023). In this case, a learning can be said to be successful, if the three components are interconnected and influence each other so as to create effective and efficient educational goals (Purwaningsih et al., 2022). In reality, the fundamental problem found in Javanese language learning at the education level, especially in elementary schools (SD) is the low level of student understanding in absorbing material explanations. Most students who tend to be passive when learning takes place are also influenced by environmental factors (Dwihandaka et al., 2020). The common problem that occurs in low and high grades is that students often feel bored when treated to a lot of reading text, so that lessons feel difficult, monotonous, and have an impact on students' language skills (Nurmalasari, 2023). These problems also occur in the learning of Javanese characters for high grade elementary school students.

Based on pre-research data it was found that results of interviews with grade VI students at SDN Sentul 02 Pati Regency, 90% of students consider Javanese script material difficult to understand. The level of difficulty of students in understanding Javanese script material varies, ranging from difficulty distinguishing *nglegena* script forms and *pairs*, not being interested in Javanese script, let alone memorizing Javanese script forms. The distinctive shape of the Javanese alphabet and its almost similar letters make it difficult for

elementary school students to read and write Javanese characters (Rohmah et al., 2023). As a result, the average score of students on Javanese script material is still below the Minimum Completion Criteria (KKM). In fact, according to the independent curriculum, phase C learning outcomes in the high grades (grades V-VI SD / MI / SDLB) related to learning Javanese characters are that students are able to read and write sentences in Javanese letters using Javanese letter *pairs* (20 *pairs*), *sandhangan* including *sandhangan swara, sandhangan panyigeging, sandhangan wyanjana* (Salma, 2021). In addition, limited learning media is a problem that occurs today. Based on the results of interviews with teachers at SDN Sentul 02, teachers in teaching Javanese, the learning resources used only use Student Worksheets (LKS). Teachers also tend to apply conventional methods when teaching Javanese script material so that students are not interested in learning Javanese script. Conventional methods are no longer relevant in classroom learning, so there is a need for new strategies so that learning goals are achieved properly and students gain new experiences (Oguntona et al., 2021). In fact, Pratiwi et al., (2022) states that student learning outcomes in Javanese script material that are still below KKM are also caused by low student interest in learning Javanese characters. The lack of utilization of learning media makes students less motivated in participating in the learning process which has an impact on low learning outcomes and students' lack of understanding of the material taught (Annajati & Wikarya, 2023). Therefore, teachers need to change the conventional Javanese script learning method by adding learning media assistance in the Javanese script learning process.

Learning media itself can be used as an intermediary tool for teacher and student interaction which can make it easier for students to absorb information or material delivered by the teacher (Yosiva et al., 2021). The selection of appropriate learning media turns out to be able to improve teaching styles, open student stimulation, and make students enthusiastic and active in participating in learning (Siregar & Ananda, 2023). The presence of learning media will seem more interesting by providing examples and illustrations in accordance with the material being taught, so that it can provide a good stimulus for students (Prihatmojo, 2019).

The use of learning media in the teaching and learning process does have an important role. This is because a good learning process can shape students' critical thinking and foster curiosity, so that students do not always act as recipients (Suwandewi, 2020). Providing direct experience in learning, such as by using concrete learning media, is the best way for students to get information and learning experiences through the senses (Setyawati et al., 2024). In addition to using interesting learning media, in terms of the characteristics and needs of elementary school children, the learning-by-play method is the right method to apply. In addition to attracting students' interest in learning, learning through play methods can provide opportunities for students to explore, manipulate, apply, and gain knowledge (Aminah et al., 2022).

One of the game-based learning media that can be used in teaching Javanese script material is Bingo media. Bingo media is a square-shaped card game with a 5x5 cm arrangement, with provisions for students who find the correct answer on the bingo card box and collect five dots to form a horizontal, upright, or diagonal line pattern then shout "Bingo!" (Anastasya & Sukoyo, 2024). Applying Bingo media in learning, can improve students' ability to think and help students manage emotions when solving problems obtained (Mega et al., 2022). Sannathimmappa et al (2024) stated that the game of bingo serves to improve communication skills, create active learning, improve cognitive function, and foster critical thinking. In order to facilitate the delivery of student learning, this media can be

combined with various media that can facilitate the learning process, one of which is with the help of *Pop Up Book* media.

Pop Up Book is a visual interactive media made from thick cardboard in which there are 3D images that give the impression of interesting visualization on each page when opened (Setiyanigrum, 2020). Bluemel and Taylor stated that the benefits of *Pop Up Book* media include: (1) fostering a culture of loving to read, (2) increasing the level of student understanding directly through symbols or images, (3) developing students' critical and creative thinking, and (4) as an alternative for students who have barriers in language skills, so that through attractive visual media it can encourage students to learn (Kusumoningrum, 2021). Therefore, the selection of *Pop Up Book* media is considered to be an alternative for the development of learning media for reading Javanese characters.

There have been several previous studies related to the development of Bingo media, including those conducted by Saputri & Rosalina (2024) revealing that there are problems in grade IV of SDN Pleret Lor, starting from teachers having difficulties in developing media and students' lack of enthusiasm in understanding mathematics lessons. So that the Bingo card media in elementary school students' fractional mathematics lessons is able to improve learning outcomes. Furthermore, Haninda & Paksi, (2022) who developed Bingo card media on the material of Pancasila niai elementary school students. The researcher stated that the Bingo card media is arranged simply so that students can easily use it. However, this media has a simple design, so the card images in the Bingo media need to be adjusted to the characteristics of students who like interesting images. Oktiani & Hastuti (2020) developed Bingo media for history learning at the high school level combined with the Teams Games Tournaments (TGT) model. Furthermore, another study by Iriansyah & Barkah (2021) developed a Bingo game in PKN lessons on socio-cultural diversity material for grade V elementary school students. The researcher stated that the students' response was very good and very enthusiastic in playing while learning. This is seen from the improvement of student learning outcomes.

Research related to the development of *Pop Up Book* media has also been conducted by several researchers previously, including by Setyawati et al (2024) stating that the choice of book media is the right thing, because books are the main part of learning that must be developed to foster new experiences through books. In terms of *Pop Up Book* media, Javanese script material in grade IV of SDN Pleret Lor has been developed with good final results in learning. The research conducted by Laely & Hasan (2024) revealed the obstacles faced at SMPN 2 Pare, namely the lack of effectiveness of conventional methods in upload-a-nuh learning carried out by teachers so that students are easily bored. So that the development of *Pop Up Book* media in Javanese language learning upload-ungguh material is an alternative to increase students' enthusiasm and learning outcomes. Furthermore, Triwijaya et al (2022) in their research revealed that obstacles in learning Javanese language in delivering material still use the lecture method which results in students being less interested and seems monotonous. So that there is a *Pop Up Book* media in the learning of puppet stories entitled "Bima Bungkus" for grade IV of elementary school, the researcher said that the media is very interesting, practical, and efficient. Inayah et al (2024) in their research explained that elementary school students need to be given hands-on experience. This can be done with the *Pop Up Book* learning media in social studies learning natural resource materials. The results of this study show that students are more conducive and learning is more effective.

The novelty of this research lies in the new type of Javanese script learning media development by integrating Bingo media and *Pop Up Book* media. *Pop Up Book* media contains *nglegena* characters (20 characters) along with *pairs, sandhangan swara,*

sandhangan panyigeging wanda and *sandhangan wyanjana* which will be used in elementary school classes. The Bingo game used is a type of *lecture bingo* as an educational game for learning Javanese characters, so that this learning media is practically used in learning activities. Bingo media assisted by *Pop Up Book* that will be developed consists of a media container, cover illustration using *digital painting* type *ivory* paper, *Pop Up Book* content base material thick cardboard paper, Javanese script illustrations as material, Bingo game card, Bingo game guide, and *reward stamp*. The media that will be made is attractively designed according to the characteristics of elementary school students. It aims to make learning Javanese script can be done using varied media so that students in learning Javanese script get 3D visualization that clarifies the concept of Javanese script reading construction while playing Bingo. This study aims to develop BISAWA (Bingo Aksara Jawa) learning media assisted by Pop Up Book for teaching Javanese script reading to upper grade students.

Research Method

This study uses the *research and development* (R&D) with the Sugiyono model (2013). The R&D method is indeed needed to create a product in the scope of education effectively and efficiently (Mesra et al., 2023), where in this study a development product will be produced in the form of Bingo media assisted by *Pop Up Book* in learning Javanese script. The implementation of this research process starts from the stages of (1) potential problems, (2) data collection, (3) product design, and (4) design validation.

Data collection techniques in this development research were obtained through questionnaires, observations and interviews with teachers and students. Data in this study were obtained through a questionnaire of the needs of students and Javanese language teachers as well as a questionnaire of material and media validation by experts. The subjects in this study were grade VI students of SDN Sentul 02 Pati Regency, teachers, media experts and material experts. The data analysis technique in this study used qualitative and quantitative data analysis techniques. The assessment of media and material validation questionnaires is carried out on a *Likert* scale (1-5), the description of the assessment category can be seen in Table 1.

Table 1. Assessment Categories

Category	Score
Not good	1
Not good	2
Good enough	3
Good	4
Very good	5

(Sholahunnisa & Insani, 2024)

The scores obtained were then analyzed using the formula described by Sugiyono (2016), as shown in Figure 1 and interpreted with reference to Table 2.

$$P = \frac{f}{n} \times 100\%$$

Figure 1. Finding the Analysis Score Formula

Description:
P : Percentage score
F : Frequency of student scores
n : Number of students

Table 2.   Description Percentage

Description	Percentage
Very unfeasible	$\leq$ 20%
Not worth it	21% - 40%
Decent enough	41% - 60%
Worth	61% - 80%
Very feasible	81% - 100%

(Anugerah & Sasanti, 2023)

Results and Discussion

Analysis of Students' and Teachers' Needs for *BISAWA* (Bingo Aksara Jawa) Media Assisted by *Pop Up Book*

The needs analysis of students and teachers was conducted at SDN Sentul 02 Pati in the even semester through a needs questionnaire of ten grade VI students and one Javanese language teacher, interviews, and observations. The student needs questionnaire contains several aspects including: (1) Learning conditions of Javanese script material; (2) Learning resources used in learning Javanese script; (3) Needs and responses to *BISAWA* (Bingo Javanese script) media assisted by *Pop Up Book* Javanese script. Based on the results of questionnaires related to Javanese script learning, as many as 90% of students stated that they liked Javanese language subjects. However, as many as 80% of students think that Javanese script is the most difficult material. More specifically, 80% of students find it difficult to understand the learning of Javanese script material. Based on the results of the questionnaire, learning Javanese script material experienced obstacles, where 90% of students felt normal when learning took place, 90% stated that learning Javanese script material was only racing using textbooks or LKS, and 60% of students were less interested in the script material.

The teacher needs analysis questionnaire contains several aspects including: (1) learning Javanese script; (2) learning methods; (3) learning problems of Javanese script; (4) learning media of Javanese script material; (5) media needs *BISAWA* (Bingo Aksara Ja assisted *Pop Up Book* Javanese script. Based on the results of interviews with Javanese language teachers, in teaching only using conventional methods that can cause students to get bored and sleepy easily. This proves the findings of Yanuar & Pius (2023) that the cause of students being less active and bored in learning is due to the teacher's habit of teaching using conventional methods, namely lectures. In addition, lack of teaching effectiveness, difficulties in controlling learning activities in the classroom, and lack of good attention will have an impact on students. So teachers need to understand how to develop effective learning strategies (Bano et al., 2025).

Focusing on the next problem, the teacher has not used learning media in teaching Javanese language subjects, so that Javanese script learning seems ordinary. The teacher also stated that the lack of student enthusiasm was an obstacle when teaching Javanese script material. These obstacles were also found in research conducted by Sulistiyani (2020) which states that the cause of students' difficulty in mastering language skills in Javanese script material is low enthusiasm for learning. Problems in learning Javanese alphabet include difficulty memorizing the Javanese script, difficulty reading and writing the Javanese script, difficulty understanding the letter form of the Javanese script, and the lack of learning media available at school.

Based on the results of the student and teacher needs questionnaire, it is stated that the existence of learning media at school is an important learning resource to use. The existence of these problems and obstacles also causes students to need innovative learning media to improve their Javanese reading skills. According to Rinata et al., (2023) teachers and students

|738

need interesting and effective learning media to facilitate student understanding of Javanese script material. In this case, students and teachers agreed that *BISAWA* media assisted by *Pop Up Book* became the learning media for Javanese script material. Students' interest in *BISAWA* media assisted by *Pop Up Book* can be seen from the large percentage of 90%. In addition, teachers are also interested in the media to be developed because it is easily accessible to students, the design is in accordance with student characteristics, and increases student motivation to learn Javanese script material.

The design of the *BISAWA* learning media prototype assisted by *Pop Up Book* based on the needs of teachers and students is a colorful book display, a background that matches the theme, a variety of fonts that are easy to read by students, images that match the characteristics of students coupled with illustrations of typical Central Java culture. The *BISAWA* game needed by teachers and students is the selection of words that are in accordance with the ability of students and also equipped with pictures according to the material. Therefore, these various needs will be used as the basis for developing a prototype of *BISAWA* learning media assisted by *Pop Up Book*.

Prototype of *BISAWA* (Bingo Aksara Jawa) Media Assisted by *Pop Up Book*

The researcher designed the *BISAWA* media prototype assisted by *Pop Up Book* at SDN 02 Sentul to improve the Javanese reading skills of high grade students. The design of this *Pop Up Book* media, each page opened will display 3D images including shapes that arise, move, and can be drawn on each material. The size of this media is 42x25cm using *ivory* paper with digital printing technique.

a)   *Font Matter* (Initial Section)

The beginning of the book contains the front cover, spine, back cover, preface, and table of contents.

Table 3. Media Font Matter Design

Figure 2. Front Cover Media	**Figure 3. Spine of Book**	**Figure 4. Back Cover**	**Figure 5. Foreword and Table of Contents**

Figure 2, the front cover of the *Pop Up Book* is designed with a colorful illustration of elementary school students in red and white uniforms, with a background of morning nature, illustrating the enthusiasm for learning to go to school. The title of the book is made interestingly WIMASAJA (Wasis Maca Aksara Jawa). BINGO card image *spoilers* are designed on the cover, aiming to raise curiosity and attract students to be more enthusiastic about learning and playing. Figure 3, the back of the book is entitled MEDIA POP UP BOOK "AKSARA JAWA". This aims to show the title and make it easier for readers when the book is on the shelf. Figure 4, The back cover of the *Pop Up Book* contains the profile of the developer and the supervisor. In this section, a summary of the book is written which contains Javanese script material for phase C (V/VI). The background on the book cover is designed with a cream color display with illustrations of teachers and students. Figure 5, Page i and ii, entitled *POP UP BOOK* MATERI AKSARA JAWA, aims to provide information to students that this book contains Javanese script material. The preface contains the context of

the initial part of the work of the researcher. The table of contents contains parts of Javanese learning materials.

b) *Text Matter*

The body contains the title and detailed contents.

Table 4. Media Text Matter Design

Figure 6. Instructions for using the *Pop Up Book* and Learning Outcomes	Figure 7. Twenty *Nglegena* characters material	Figure 8. Twenty pairs of Javanese alphabets

Figure 6, the title on pages iii and iv is designed in Javanese script with Javanese letters. The background is designed with a picture of the jogja monument and a welcome illustration by a Javanese person. In the content section, the background has a natural nuance with the design of Mr. and Mrs. Teacher on the left showing the instructions for using the *Pop Up Book*, and on the right showing the learning objectives and achievements in phase C, namely grades V and VI. In this section, it explains specifically related to learning Javanese Script that will be taken with the guidelines for the Javanese language mulok content of the independent curriculum. Figure 7, Pages 1 and 2, titled *nglegena* Javanese script with a background design of Borobudur Temple, right and left *layout of* gunungan in puppetry and a pair of people dressed in Javanese traditional clothes. In addition, Javanese art is also added with an elegant impression. This aims to express Javanese culture in the learning material. In the content section, there are twenty *nglegena* characters equipped with word examples and translations of Latin letters with embossed designs. Figure 8, Pages 3 and 4, titled Pairs of Javanese AKSARA. The background design illustrates gunungan offerings, tumpeng, a Central Javanese joglo house, and also a pair of people dressed in Javanese traditional clothes. In the content section, there are twenty pairs of Javanese alphabets and their Latin translations with additional pictures of traditional Javanese food. To make it easier for students to understand the material, it is equipped with examples of Javanese alphabet pairs. The examples can be drawn on each sheet, so that students are more motivated and interested in learning on the next page.

Table 5. Media Text Matter Design

Figure 9. Parts of the Javanese *Sandhangan* Script	Figure 10. Bingo Game Instructions and Bingo Cards	Figure 11. *Reward* stamp

Figure 9, pages 5 and 6 titled *PERANGAN SANDHANGAN*, have gambyong dancers and dancers in the background. On this page, the color display is balanced, accompanied by a picture of a gate, and the layout is in accordance with the embossed and interactive *Pop Up* design. This page contains, among others: (1) *Sandhangan Panyigeg Wanda*, including *wigyan, layar, cecak,* and *pangkon*. The design of this section is pulled down, so that each

sheet will display the content. (2) *Sandhangan Swara*, including *wulu, suku, pepet, taling*, and *taling tarung*. The design of this section is to extend to the left when opened. (3) *Sandhangan Wyanjana*, including *cakra, cakra keret, pengkal, panjingan la,* and *panjingan wa*. The design of this section is to extend to the right when opened. Each part of the sandhangan is equipped with an example along with the translation of Latin letters. This is so that students are able to understand the material according to their ability level.

Figure 10, pages 7 and 8 are the last sheets, entitled AYO DOLANAN BINGO AKSARA JAWA. The background is designed with illustrations of elementary school students to invite them to play BINGO with puppet characters from the Mahabharata epic. In the content section, there are game instructions and BINGO cards. Bingo cards measuring 15x19.5 cm, the top of the card contains the identity of the student/group with a picture design according to the character of each puppet. The BINGO cards are removable, making it easier for teachers and students to take them. The background design on this page is children who are having fun with a colorful display.

Figure 11, cap reward is a form of award given to students on the basis of winning when playing games or learning well. Cap *reward* in this *Pop Up Book* media is used to reward students who have BINGO in playing. Cap *reward* design in this media is star-shaped with purple ink measuring 17mm. The *reward* stamp is packaged in a tube-shaped container with, to make it more attractive. Maulida & Afrianingsih (2024) stated that giving achievement *reward* stamps greatly affects student learning outcomes and fosters student learning motivation.

c)   *Back Matter*

The final section of the book contains the author's profile.

Table 6. Media Back Matter Design

| Figure 12. Author Profile	Figure 13. Product advantages

Figure 12, The author's profile contains student and supervisor data located on the back cover of the *Pop Up Book* media. Figure 13, The *BISAWA* (Bingo Aksara Jawa) media assisted by *Pop Up Book* that has been developed by the researcher is specifically designed for the material of Javanese alphabet in high class (Phase C). The advantages of this media are elegant color displays, packaging Javanese cultural arts, and designs that are in accordance with the characteristics of elementary school students. The advantage of the urgency aspect is that it can increase the attractiveness and motivation of students in reading Javanese Script with a BINGO game. The existence of this *Pop Up Book* learning Javanese Script can be done flexibly outside of class hours, so that students can learn at any time. This is in line with research conducted by Rifany et al (2024) that *Pop Up Book* is designed for portability and practicality which is relevant can be used not bound by time according to needs.

**Product Validation by Material Experts and Media Experts**

Material validation of *BISAWA* learning media assisted by *Pop Up Book* contains 3 criteria, namely suitability for the curriculum, the content and material criteria, and Bingo game criteria. The results of the assessment by material experts obtained a total score of 61 from a maximum score of 75. The overall percentage score obtained was 81.3%. The material

validation value obtained a very feasible category interpretation, so it is in accordance with the needs of students in learning to read Javanese script in high grades.
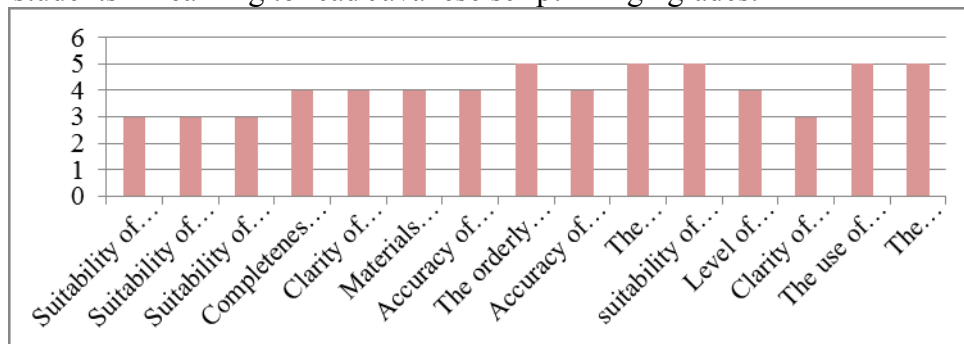
Diagram 1. Material Expert Validation
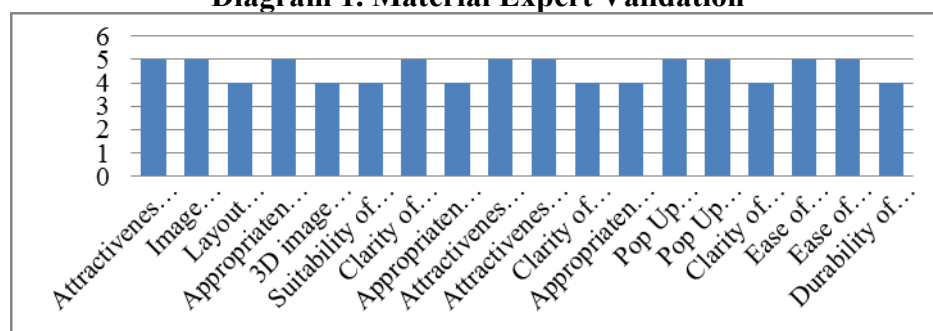
Diagram 2. Media Expert Validation

Media validation of *BISAWA* learning media assisted by *Pop Up Book* contains 4 criteria, namely media design, writing criteria, the media practicality criteria, and the criteria for media. The results of the assessment by media experts obtained a total score of 82 out of a maximum score of 90. The overall percentage score obtained was 91.1%. The score shows that the media developed is included in the very feasible category.

Table 7. Validation Results of Media and Material Experts

Validity	Percentage	Criteria
Material Expert	81,3 %	Very feasible
Media Expert	91,1%	Very feasible

The results of the media and material validation test of the *BISAWA* (Bingo Javanese script) media assisted by *Pop Up Book* can be concluded that there are suggestions for improving the writing of Javanese script in accordance with agreed rules. The media is suitable for use as a learning media for reading Javanese script in high grades.

Discussion

BISAWA (Bingo Aksara Jawa) media assisted by *Pop Up Book* developed by the researcher is designed for learning to read Javanese script for high grade elementary school students. The media was designed according to the characteristics of elementary school students through observations in the field. The uniqueness of the Javanese script *Pop Up Book* media is that it presents a 3D element, when the page is opened it will display elements that arise or move, interesting visualizations provide an interactive and fun learning experience for students (Sitorus et al., 2024). This *Pop Up Book* also has pictures of various Central Java cultures on each page. In addition to containing learning materials, there is a Javanese Script Bingo game with the word selection of Mahabharata puppet epics as questions and accompanied by pictures of puppet characters in each column. As a form of

appreciation, researchers also added a *reward* stamp for students who won the game. This is intended to give appreciation and motivate students in learning (Sazidah et al., 2023).

From the results of the validation test, *BISAWA* learning media assisted by *Pop Up Book* is considered to be used as a learning media innovation because it has been declared "very feasible" to be used in the learning process. This is shown from the results of the material expert validation with a percentage score of 81.% and a percentage score of 91.1% by the media expert. Material and media experts stated that the selection of words used in *BISAWA* media was in accordance with the level of students' abilities, so that this media was considered to facilitate students in reading Javanese texts.

The results of this study corroborate the findings of Haninda & Paksi (2022) and Iriansyah & Barkah (2021) who have also produced Bingo card products for Pancasila and Citizenship Education lessons with validation test results included in the very feasible category. This study also corroborates the findings of Oktiani & Hastuti (2020) that Bingo media is very interesting to use in the learning process and can help students in higher order thinking. More specifically, this study is in line with the findings of Setyawati et al (2024) which states that the *Pop Up Book* Javanese Script media is effectively used to improve student learning outcomes. *Pop Up Book* media is considered to be able to motivate and facilitate students in understanding the material, including Javanese language material (Laely & Hasan, 2024).

BISAWA media assisted by *Pop Up Book* is a novelty research that can have a positive impact on students' learning to read Javanese script, so that material and media experts state "very feasible" to be used as a learning media for Javanese script material for elementary school students. The conceptual implications of this study can integrate learning through Bingo games to help students fluently read Javanese script. This can be a new experience for students in learning Javanese. BISAWA (Bingo Javanese Script) media with the help of Pop Up Book is able to foster interest and motivation in improving the ability to read Javanese Script. BISAWA media is interactive, so that students are active and able to communicate with groups through BINGO games. The practical implications of the research findings in the form of BISAWA media assisted by the Pop Up Book can be a recommendation or reference for teachers in developing learning media to improve the learning of reading Javanese script. This medium is easy for students to use and can be used flexibly.

Conclusion

Based on the results of the material validation test getting a score of 81.3% and the media validation test getting a score of 91.1%, both validators stated that this product is "very feasible" to be used for learning media to read Javanese Script. BISAWA (Bingo Aksara Jawa) media assisted by *Pop Up Book* is expected to support the learning process of Javanese language, provide a good stimulus for students, improve pstudents' ability to read Javanese script, and assist teachers in delivering varied Javanese script materials.

Recommendation

Recommendations for teachers in improving Javanese reading skills need to innovate in developing learning media in accordance with the character of students so that they have a positive impact on elementary school students. This can be done by participating in workshops or teacher working group training on creating the right Javanese learning media for students. In addition, through games, the learning atmosphere feels fun for elementary school students. Media support in learning is needed to improve student learning outcomes.

Further research to develop similar learning media in other contexts, further experiments and use quantitative methods or experiments to determine the effectiveness of media on learning.

References

Aminah, S., Ramawani, N., Azura, N., Fronika, S., & Meitha, S. (2022). Pengaruh Metode Belajar Sambil Bermain Terhadap Perkembangan Kognitif Anak Usia Sekolah Dasar. *SICEDU: Science and Education Journal*, 1(2), pp. 465–471. https://doi.org/10.31004/sicedu.v1i2.66

Anastasya, N., & Sukoyo, J. (2024). Pengaruh Pembelajaran Berbasis Permainan Bingo terhadap Hasil Belajar Aksara Jawa Siswa. *Edukatif: Jurnal Ilmu Pendidikan*, 6(2), pp. 1772–1782. https://edukatif.org/edukatif/article/view/6506/pdf

Annajati, S., & Wikarya, Y. (2023). Pengembangan Media Pembelajaran Pembelajaran Interaktif Berbasis Google Slide pada Materi Seni Rupa Tiga Dimensi Kelas X SMA Negeri 8 Mukomuko. *Jurnal Pendidikan Tambusai*, 7(1), pp. 1181–1188.

Anugerah, D. K. S., & Sasanti, S. N. (2023). Efektivitas Permainan Bingo Terhadap Kemampuan Membaca Katakana Siswa Kelas XI SMA Negeri 1 Tarik Tahun Ajaran 2022 / 2023. *Jurnal Hikari*, 8(1), pp. 49–54.

Bano, S., Minaz, M., & Idris, M. (2025). Overcrowded Classroom: Challenges for Elementary School Teachers. ProScholar Insights, *4*(1), pp. 8–17. https://doi.org/10.62997/psi.2025a-41036

Dwihandaka, R., Ginanjar, A., & Utami, N. S. (2020). Fenomena Siswa Pasif Kelas X Dalam Pembelajaran Renang di SMA Negeri 1 Majenang Jawa Tengah. *Jurnal Pendidikan Jasmani Indonesia*, 16(2), pp. 191–203. https://doi.org/10.21831/jpji.v16i2.35905

Haninda, N. S., & Paksi, P. H. (2022). Pengembangan Media Pembelajaran Kargo Pancasila Untuk Membantu Siswa Sd Memahami Nilai-Nilai Pancasila Dalam Kehidupan Sehari-Hari. Jurnal Penelitian Pendidikan Guru Sekolah Dasar, 10(4), pp. 761–770. https://ejournal.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/46507

Inayah, A., Khoiroh, F., Harahap, S., Widia, F., Melani, H., Handini, N., & Yusnaldi, E. (2024). Pengembangan Media Pop Up Book Untuk Meningkatan Minat Belajar Siswa pada Mata Pembelajaran IPS di MI/SD. *Jurnal Pendidikan Tambusai*, 8(1), pp. 674–681. https://jptam.org/index.php/jptam/article/view/12446

Iriansyah, H. S., & Barkah, A. S. (2021). Pengembangan Media Permainan Bingo pada Mata Pelajaran PKn Materi Keberagaman Sosial Budaya Masyarakat. pp. 570–578. https://jurnal.stkipkusumanegara.ac.id/index.php/semnara2020/article/view/1355

Kusumoningrum, I. D. (2021). Media Buku Pop Up Pembelajaran Bahasa Jawa Anak Sekolah Dasar. *CITRAWIRA: Jurnal Periklanan dan Komunikasi*, 2(1), 50–66. https://doi.org/10.33153/citrawira.v2i1.3669

Laely, D. F., & Hasan, L. N. (2024). Pengembangan Media Audio Pop-Up Book Terhadap Unggah-Ungguh Bahasa Jawa Siswa SMP Negeri 2 Pare. *PERSPEKTIF : Jurnal Pendidikan dan Ilmu Bahasa*, 2(3). https://doi.org/10.59059/perspektif.v2i3.1526

Maulida, L., & Afrianingsih, A. (2024). Pengaruh Pemberian Reward Stempel Prestasi Terhadap Motivasi Belajar Anak Usia Dini di TK Raudhotut Tholibin Bungo. *PAUDIA : Jurnal Penelitian dalam Bidang Pendidikan Anak Usia Dini*, 13(2), pp. 231–241. https://doi.org/10.26877/paudia.v13i2.494

Mega, F., Hidayati, N., Dewi, G. K., & Wibowo, S. (2022). Pengembangan Media Bingo Materi Bangun Ruang Pada Siswa Kelas V SDN Pamotan. *Jurnal Ilmiah Mandala Education*, 8(3), pp. 2308–2314. http://dx.doi.org/10.58258/jime.v8i3.3721

Mesra, R., Salem, V. E. T., Meity, M. G., Daniel, Y., Santie, A., & Rai, N. M. (2023).

Research & Development Dalam Pendidikan. Edited by M. Jannah. Sumatra Utara: PT. Mifandi Mandiri Digital

Nurmalasari, W. (2023). Problematika dan Strategi Pembelajaran Bahasa Indonesia di Sekolah Dasar. *Jurnal Basicedu*, 7(5), pp. 2912–2919. https://doi.org/10.31004/basicedu.v7i5.6101

Oguntona, A., Adelana, O. P., & Ishola, A. M. (2021). Effect Of Bingo Game Strategy On Pupils ' Achievement In Mathematics. *JOSTMED*: Journal of Science, Technology, Mathematics and Edcation. *17 (1)*(March), pp. 152–162. https://www.researchgate.net/publication/354510566

Oktiani, A., & Hastuti, H. (2020). Pengembangan Bingo sebagai Media Pembelajaran Sejarah di SMA. *Kronologi: Jurnal Ilmiah Terapan*, 2(3), pp. 10–23. http://dx.doi.org/10.24036/jk.v2i3.46

Pratiwi, C. P., Kurniawati, R. P., & Saputro, P. (2022). Peningkatan Keterampilan Membaca Aksara Jawa Melalui Model Quantum Learning Berbantu Permainan Kartu Huruf Aksara Pada Siswa Sekolah Dasar. *Proseding Konferensi Ilmiah Dasar*, 3(3), pp. 672–685. https://prosiding.unipma.ac.id/index.php/KID/article/view/2987

Prihatmojo, A. (2019). Penerapan Media Pembelajaran Kartu Bergambar Dalam Meningkatkan Hasil Belajar Siswa Kelas V SD Negeri 4 Tanjung Aman. *Pedagogia: Jurnal Ilmiah Pendidikan Dasar Indonesia.* 1(1), pp. 89–100. http://dx.doi.org/10.52217/pedagogia.v1i1.409

Purwaningsih, I., Oktariani, Hermawati, L., Wardarita, R., & Utami, I. P. (2022). Pendidikan Sebagai Suatu Sistem. *Jurnal Visionary: Penelitian dan Pengembangan di bidang Administrasi Pendidikan*, 10(1), pp. 21–26.

Rifany, M., Devianty, R., & Saputra, E. (2024). Pengembangan Media Pop Up Book dalam Meningkatkan Budaya Literasi Program Pojok Baca di SMP Negeri 1 Berastagi. *Jurnal Yudistira: Publikasi Riset Ilmu Pendidikan Dan Bahasa*, 2(4), pp. 493-518. https://doi.org/10.61132/yudistira.v2i4.1301.

Rinata, S., Yuwono, A., & Insani, N. (2023). Pengembangan Media Jenga Aksara Jawa Dalam Pembelajaran Membaca Dan Menulis Teks Berhuruf Jawa. *Piwulang: Jurnal Pendidikan Bahasa Jawa*, 11(1), pp. 92–109. . https://doi.org/10.15294/piwulang.v11i1.57806

Rohmah, H., Khamdun, & Rondli, W. (2023). Penerapan Model Pembelajaran Make Amatch Berbantuan Flash Card Untuk Meningkatkan Keterampilan Membaca Dan Menulis Siswa Huruf Jawa Di SD. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang*, 09(3), pp. 178–188. https://doi.org/10.36989/didaktik.v9i3.1537

Salma, R. (2021). Pengembangan Media Interaktif "MARBEL RAJA" Untuk Meningkatkan Minat Belajar Aksara Jawa Pada Siswa Kelas V SDN Tunge 1 Wates Kediri. PP. 1-127

Sannathimmappa, M. B., Nambiar, V., & Aravindakshan, R. (2024). Engaging Students Through Activity‑Based Bingo Games In Immunology Course: Determining Students' Perception And Measuring Its Influence On Academic Performance. *Journal of Education and Health Promotion, 13*(1), 1–7. https://doi.org/10.4103/jehp.jehp

Saputri, W., & Rosalina, E. (2024). Pengembangan Media Pembelajaran Permainan Kartu Bingo Pada Mata Pelajaran Matematika Siswa Kelas IV SD Negeri 1 Tegalrejo. *Jurnal Linggau Pendidikan Sains*, 4(1), pp. 73–94. https://doi.org/10.55526/ljse.v4i1.672

Sari, I. A. (2023). Pengembangan Media Permainan Ular Tangga Pada Pembelajaran

Berbicara Bahasa Jawa Ragam Krama Untuk Kelas VIII SMP Negeri 3 Adiwerna. pp. 1-82.

Sazidah, M., Hanifah, R., Haliza, R., & Marini, A. (2023). Pemberian Reward dalam Meningkatkan Motivasi Belajar. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, 2(6), pp. 829–838. https://doi.org/10.53625/jpdsh.v2i6.5440

Setiyanigrum, R. (2020). Media Pop-Up Book sebagai Media Pembelajaran Pascapandemi. 3(1), pp. 217–220. https://proceeding.unnes.ac.id/snpasca/article/view/620/539

Setyawati, N., Muhayat, U., & Wahyudi, W. (2024). Pengembangan Media Pop-Up Book Mata Pelajaran Bahasa Jawa Untuk Siswa Kelas IV SD Negeri Pleret Lor. *Jurnal PGSD Indonesia*, 10(1), pp. 86–95. https://journal.upy.ac.id/index.php/JPI/article/view/6677

Sholahunnisa, A., & Insani, H. N. (2024). Pengembangan Media Pembelajaran Video Animasi 2 Dimensi Berbasis Computing Dan Slideshow Materi Cerita Rakyat Semarangan. *Piwulang : Jurnal Pendidikan Bahasa Jawa*, 12(1), pp. 25–34. http://dx.doi.org/10.15294/d0mzj617

Siregar, D. S., & Ananda, R. (2023). Pengembangan Media Pembelajaran Board Game Matematika Ular Tangga untuk Siswa Tunarungu. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 07(2), pp. 1924–1935.

Sitorus, M., Nasution, A., Sunya, A., & Lubis, M. (2024). Implementasi Pop Up Book dalam Meningkatkan Kecerdasan Linguistik pada Anak Usia Dini. *Childhood Education: Jurnal pendidikan Anak Usia Pendidikan*, 5(2), pp. 300–309. https://doi.org/10.53515/cej.v5i2

Sugiyono. (2013). Metode Penelitian Kuantitatif, Kualitatif, Dan R&D. Bandung: CV ALFABETA.

Sugiyono. (2016). Prosedure Penelitian. Journal of Chemical Information and Modeling, 53(9), pp. 1689–1699.

Sulistiyani. (2020). Upaya Meningkatkan Keterampilan Menulis Huruf Jawa Melalui Diskusi Kelompok Berbantu Kartu Huruf Pada Peserta Didik Kelas VI SD 1 Prambatan Kidul Kudus. *REFLEKSI EDUKATIKA: Jurnal Ilmiah Kependidikan*, 10(2), pp. 240–250. http://dx.doi.org/10.24176/re.v10i2.4695

Suwandewi, N. L. (2020). Model Pembelajaran VAK Berbantuan Media Audio Visual Berpengaruh Terhadap Kompetensi Pengetahuan IPA. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 4(3), pp. 455–462.

Triwijaya, S., Suyitno, & Widyaningrum, A. (2022). Pengembangan Media Pop-Up Book bagi Pembelajaran Cerita Wayang Kelas IV Sekolah Dasar di Kabupaten Demak. *DIKDAS MATAPPA : Jurnal Ilmu Pendidikan Dasar*, 5(3), pp. 629–638. http://dx.doi.org/10.31100/dikdas.v5i3.2315

Yanuar, A., & Pius, I. (2023). Upaya Meningkatkan Keaktifan dan Hasil Belajar Siswa Kelas 4 SDK Wignya Mandala Melalui Pembelajaran Kooperatif. *SAPA: Jurnal Kateketik dan Pastroral*, 8(1), pp. 1–10. https://doi.org/10.53544/sapa.v8i1.327

Yosiva, A., Hendrawan, B., & Pratiwi Suci, A. (2021). Pengembangan Media Pembelajaran Papan Pintar (PAPIN) Dan Katalog Ajaib Untuk Meningkatkan Hasil Belajar Siswa Kelas IV SDN 1 Kaliwungu. 7(2), pp. 20–26. http://dx.doi.org/10.32534/jps.v7i2.2442