



DEVELOPING A GAME-ASSISTED FOCUS GROUP DISCUSSION ACTIVITIES MODEL FOR JAVANESE LITERACY LEARNING OF LIS STUDENTS

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Abstract

Javanese script literacy competence is essential for managing Javanese script; however, students' ability to read Javanese script remains relatively low. This study focuses on developing and validating a learning model based on students' needs in the Library and Information Science Program. This study employs the Sugiyono Research and Development method, which comprises five stages: analysis of potential and problems, data collection, product design, design validation, and design revision. The results of the needs analysis indicate that students require an innovative, engaging, and technology-supported learning method to overcome difficulties in understanding the complex structure of Javanese script. The GAFOD model integrates focus group discussions with educational games based on digital technology. Validation results from three experts yielded an average score of 93.4%, placing it in the "very good" category and indicating suitability for implementation without revision. The GAFOD stages include pre-activity (determining facilitators, participants, time, and guidelines), implementation (introduction, presentation of material, FGD, and reading practice through games), and post-activity, includes analysis of discussion results, evaluation, and reflection. The GAFOD model for Javanese script learning was successfully developed with structured stages for prospective librarians. This model contributes to the pedagogical innovation in higher education and the sustainable preservation of cultural heritage.

Keywords: learning model, FGD, game, Javanese literacy

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INTRODUCTION

The Javanese script is a written cultural heritage of the Javanese people that embodies profound historical, philosophical, and aesthetic value. However, in the modern era, literacy in the Javanese script among the younger generation is showing a significant downward trend (Santosa et al., 2026). Furthermore, there is a mismatch between the various preservation efforts that have been undertaken and the actual level of literacy proficiency. Rusqiyati (2024) notes that various preservation initiatives have been implemented, such as the use of Javanese script in public spaces, the organization of digital competitions, and the

development of transliteration applications. Nevertheless, the younger generation's literacy level in reading Javanese script remains relatively low (Insani et al., 2024). This is due to a lack of daily practice opportunities, as they lack the motivation or practical need to engage with Javanese script literacy. This situation indicates that both physical and digital preservation efforts will not be optimal without the support of human resources possessing adequate literacy skills.

The dominance of the Latin alphabet in official communication and writing systems has led to younger generations becoming increasingly unfamiliar with their own regional scripts

(Hernawan et al., 2025). This phenomenon is exacerbated by the fact that many students and college students are able to communicate in Javanese but lack the ability to read or write using the Javanese script (Karimah, 2022). If awareness among the younger generation is not improved, there is concern that the Javanese script will become increasingly marginalized and will be known merely as a cultural artifact.

This situation is exacerbated by a lack of effective and innovative teaching methods in educational institutions. Javanese script is often considered difficult to learn due to its complex structure, the presence of similar characters, and complicated writing rules (Hapsari & Yuda, 2022; Febriani & Insani, 2024; Lestari et al., 2024). In addition to internal factors such as low motivation and the perception that Javanese script is difficult to understand, external factors, namely teaching methods that remain conventional and monotonous, also act as barriers (Kholiq et al., 2024). At the university level, such as in the Library and Information Science Program at UIN Sunan Kalijaga, uninnovative methods make it difficult for students to read Javanese script, understand vocabulary, memorize letter forms, and identify word structures (Insani & Kholiq, 2025). This problem is exacerbated by the heterogeneous background of the students, many of whom are from outside Java and have never studied this script before.

In the context of higher education, libraries serve as memory institutions responsible for storing, managing, and preserving the nation's collective memory, including ancient manuscripts (Kusnandar et al., 2025). This is done to ensure that both the physical condition and the content of these materials are well-maintained (Ariyanti, 2017), to expand sustainable access to

information (Ariani et al.), and to preserve the historical and cultural values contained within them. As future librarians, students in the Library and Information Science program require specific professional competencies to fulfill these functions. Librarians are not only expected to be able to read Javanese script but also to understand the contextual content of the manuscripts, perform cataloging, transliteration, and digitization of ancient manuscripts so they can be accessed by the general public. These skills are essential for cataloging special collections, preserving and conserving ancient manuscripts, transliterating them into Latin script, providing reference services, and identifying manuscript types (Prabowo et al., 2022). However, in reality, there is a significant competency gap among current students. Based on observations in the Library and Information Science Program at UIN Sunan Kalijaga, students' literacy level in reading Javanese script is still relatively low, as evidenced by a pretest score of 63.64. It is this gap that underscores the need for intervention through more interactive and innovative learning models to make the learning process more engaging and effective (Thifali et al., 2025).

One approach that can be implemented is active and collaborative learning through discussion and educational games. Collaborative learning in higher education is an approach that involves cooperation among students in the learning process. Afriadi (2024) states that the implementation of collaborative learning can improve conceptual understanding, develop communication skills, and strengthen students' critical thinking abilities. Other research indicates that discussion methods can increase students' active participation, critical thinking skills, and communication skills in the learning process (Setiawan, 2025). Group discussions also create a

collaborative learning environment that allows students to share knowledge with one another and deepen their understanding of the learning material (Sari & Kasduri, 2025). Furthermore, the implementation of active learning strategies such as group discussions, problem-solving, and the use of interactive media has been proven to improve learning motivation, critical thinking skills, social skills (Ariga, 2025), and student academic achievement (Oktavia et al., 2025).

On the other hand, the integration of educational games into learning has also been shown to have a positive impact on motivation and learning outcomes. A game-based learning approach can create a more enjoyable learning atmosphere, increase student engagement, and help them understand the material more effectively (Olayvar, 2023). Wibowo et al. (2025) noted an increase in learning motivation, active participation during the learning process, and student literacy, particularly in reading and writing skills. Several other studies also indicate that the use of game-based media, digital applications, and interactive media can significantly improve Javanese script reading skills Feronika & Sukasih (2023); Wahyuni (2023). Therefore, combining discussion methods with educational game elements has the potential to serve as an effective learning approach for enhancing Javanese script literacy.

Based on the above discussion, the development of learning activities that integrate discussion methods with educational games is important for improving students' understanding of the Javanese script. The use of FGD and game interventions was found in a study by Chunanei et al. (2024), which successfully tested the effectiveness of the Focus Group Discussion (FGD) method and games on reproductive health knowledge among 30 seventh-grade female

students at the Hidayatullah Muntilan Islamic Boarding School. Using a one-group pretest-posttest design and a knowledge questionnaire, this intervention proved significantly successful because information conveyed by peers is more easily accepted and trusted.

Meanwhile, the development of a game-based learning model is documented in Sukoyo et al. (2024). They tested the effectiveness of the joyful learning model in teaching Javanese script to 66 students at SMPN 12 Semarang. This model combines the traditional game of engklek with digital applications such as Quizizz, Wordwall, and Kahoot. The results of the study showed a significant improvement in learning outcomes because the learning atmosphere became more relaxed and enjoyable, and it was able to reduce students' anxiety in learning Javanese script.

Previous research has demonstrated the potential of using games and discussion methods in learning, but these approaches still have limitations in terms of context and target audience. Chunanei et al. (2024) examined the effectiveness of Focus Group Discussions (FGDs) and games in improving junior high school students' knowledge of reproductive health, rather than their language or literacy competencies. Meanwhile, Sukoyo et al. (2024) applied a joyful learning model that integrates traditional games and digital applications in Javanese script instruction, but this was aimed at junior high school students who have different characteristics and pedagogical needs compared to college students. Therefore, there remains a research gap regarding the development of a Javanese script learning model specifically designed for college students.

In contrast, GAFOD offers innovation through an approach tailored for higher education and validated by experts. Furthermore, GAFOD

combines the FGD method with elements of digital-based educational games and features comprehensive operational stages. Thus, this study focuses on the development and validation of a learning model based on the needs of students in the Library and Information Science Program.

METHODS

This study employs a research and development (R&D) methodology aimed at producing a specific product and testing its effectiveness (Sugiyono, 2018). The research stages follow the 10 steps of research and development outlined by Sugiyono (2018). However, this study was only conducted up to the fifth stage, which includes potential and problems, data collection, product design, design validation, and design revision.

Although Sugiyono's (2018) framework comprises ten developmental stages, the present study was deliberately bounded to the first five stages above. This scope was determined as a primary consideration. The central aim of this study is to produce a validated instructional product rather than to assess its large-scale implementation outcomes, which falls within the purview of subsequent stages. This is grounded in the developmental classification proposed by Siregar (2023), wherein Stage "product validation" constitutes the threshold requirement for Level 1 research. This is widely regarded as methodologically pivotal, as it subjects the developed prototype to expert judgment through established evaluative techniques, encompassing both qualitative and quantitative feasibility assessments. Full-scale empirical trials are appropriately deferred to future research.

Broadly speaking, this study can be divided into two parts: needs analysis and the development of learning activities. The first part was conducted to identify students' needs

regarding learning activities, while the second part was conducted to develop learning activities based on the results of the first stage's analysis and expert evaluations.

This study was conducted from January to March 2026 in the Library and Information Science Program at UIN Sunan Kalijaga Yogyakarta. Purposive sampling was used in this study, with the criteria for students being those enrolled in the LIS program at UIN Sunan Kalijaga, aged 17–23 (Generation Z), and taking the Javanese Language course. The criteria for lecturers were that they teach the Javanese Language course at the LIS program at UIN Sunan Kalijaga and have at least five years of teaching experience in that course.

The data and data sources in this study were: 1) data regarding issues in Javanese script learning sourced from a Javanese language lecturer and 12 students in the Library and Information Science Program at UIN Sunan Kalijaga Yogyakarta; 2) data on student and lecturer needs regarding Javanese script learning methods obtained from a Javanese language lecturer and 12 students in the Library and Information Science Program at UIN Sunan Kalijaga Yogyakarta; 3) data on the GAFOD method design for Javanese script instruction developed by the researcher; 4) validation data from three learning model experts; and 5) data on the GAFOD method for Javanese script instruction that has been revised according to the validators' suggestions. The instruments used in this study were interview guidelines and a validation questionnaire. The interview guide was developed by the researcher, inspired by Macalister & Nation (2019) meanwhile, the assessment instrument for the learning model, based on Suartama (2016) consists of quantitative and qualitative questions; the questionnaire was

distributed to experts in printed format. Data collection methods included interviews and the completion of questionnaires. Data analysis employed a mixed-methods approach, combining qualitative content analysis and quantitative descriptive analysis using mean scores presented as percentages. Qualitative content analysis was used to describe the interview results and the design of the GAFOD method, while quantitative descriptive analysis was used to describe the validation questionnaire

Three experts were involved in the learning model validation process, each with diverse backgrounds and at least five years of experience in their respective fields. The selection

of experts was based on various criteria, including educational background, involvement in research projects, teaching experience, and professional expertise. The validation questionnaire consisted of both quantitative and qualitative questions. The experts used a Guttman scale evaluation form containing statements with “Yes” answers scored as 1 and “No” answers scored as 0 to assess the activities quantitatively (Sugiyono, 2018). Following this quantitative evaluation, they provided qualitative comments to offer a comprehensive assessment. Decision-making and interpretation of the results of the expert validity calculations followed the guidelines below:

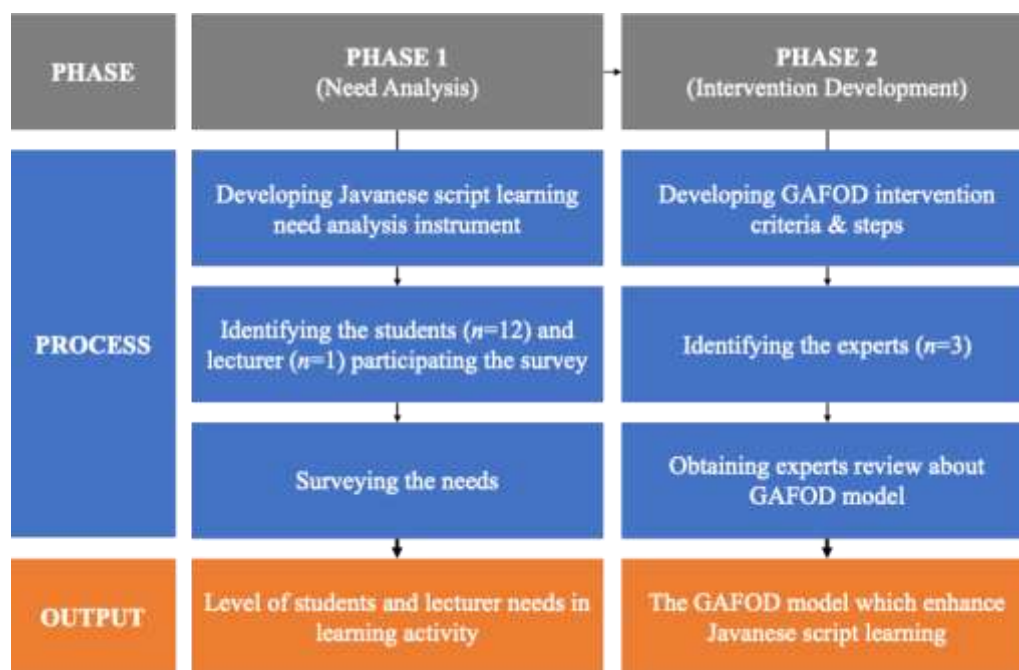


Figure 1. Research stages.
Source: Created by authors (2026)

Table 1. Interpretation Skor adapted from Riduwan (2010)

Criteria	Qualification	Description
81% - 100%	Very good	No revision needed
61% - 80%	Good	No revision needed
41% - 60%	Fair	Revision required
21% - 40%	Poor	Revision required
0% - 20%	Very poor	Revision required

$$\text{Percentage Formula} : \frac{\text{Total validation score}}{\text{Maximum score}} \times 100\%$$

RESULTS

Student and Teacher Needs Regarding Javanese Script Learning Methods

In the first phase, student needs were assessed through game-based learning activities and Focus Group Discussions (FGDs). The results of this needs assessment were used to develop the GAFOD learning model. This process is crucial for understanding and addressing individual or organizational needs to design effective interventions aimed at enhancing desired skills or knowledge; in this study, this refers to improving Javanese script literacy. This needs analysis was derived from data collected through interviews with 12 students and one lecturer teaching the

Javanese Language course in the Library and Information Science Program at UIN Sunan Kalijaga Yogyakarta. The theoretical framework used in the needs analysis draws on (Macalister & Nation, 2019), which encompasses the aspects of needs (necessities), wants, and lacks. Basic needs are the competencies students must possess to function and learn effectively. Wants are the expectations or things that students believe they need to learn to support their learning process. Meanwhile, lacks refer to the gap between the skills students already possess and the skills they should master. The results of the needs analysis regarding the learning model are presented in Table 2.

Table 2. Needs Analysis

Aspect	Result
Necessities	The importance of introducing Javanese script to the younger generation The importance of learning Javanese script in the Library and Information Science Program Javanese script literacy skills are used in managing Javanese-script collections
Wants	Active learning methods (student-centered learning) Technology based learning media A comfortable learning environment Effective classroom management Objective and process-based assessment Communicative and supportive lecturers
Lack	Difficulty in mastering reading Javanese script Many students are not of Javanese ethnicity

Based on the table above, the need to introduce the Javanese script to the younger generation is of utmost importance. The younger generation, dominated by Generation Z, accounted for the largest demographic group in the 2020 Indonesian Population Census, at 27.94% (BPS, 2021). This initiative serves as a means of cultural preservation, ensuring that the younger generation understands their cultural roots and perspectives. Additionally, strengthening cultural literacy by mastering the skills of reading and writing the Javanese script will facilitate access to ancient documents as

historical sources. In Yogyakarta itself, the use of the Javanese script in public spaces has long been implemented, such as on street signs and the names of government agencies. This serves as a strong cultural symbol of the region's identity. Efforts to popularize the Javanese script in this digital age are being vigorously pursued through the digitization of manuscripts using educational apps and games to appeal to Generation Z. Interactive Android-based educational apps and games for the Javanese script include Adventure Quest Aksara Jawa, Baladewa (Belajar dan Menulis Aksara Jawa), and Hanacaraka.

In the context of higher education, particularly within the Library and Information Science Program at UIN Sunan Kalijaga, the study of the Javanese script holds significant relevance. Library and Information Science students are not only expected to manage modern information but are also expected to manage various collections written in the Javanese script. By studying the Javanese script, students are equipped with the knowledge and skills that support their professional competencies. Javanese script literacy skills are essential for managing Javanese script collections in information institutions such as libraries, museums, or other documentation centers. These skills are necessary for identifying, describing, transcribing, cataloging, digitizing, preserving, conserving, documenting, and providing access to Javanese script collections. Thus, the mastery of the Javanese script by Library and Information Science students not only plays a role in supporting the preservation of cultural heritage but also enhances the quality of managing collections rooted in local wisdom, which are an integral part of the nation's knowledge heritage.

The Library and Information Science Program at UIN Sunan Kalijaga Yogyakarta incorporates Javanese script literacy skills into several courses. These courses are offered from the second through sixth semesters and include Javanese Language, Philology, Cataloging of Javanese Script Literature, Local Cultural Documentation, and Scriptorium. Interviews with students and instructors of the Javanese Language course revealed that students' literacy skills, particularly in reading Javanese script, are relatively low. First, students find it difficult to master the Javanese script, including difficulties in 1) distinguishing between similar-looking Carakan characters, 2) using pairs (sandhangan),

3) understanding murda and rekan characters, and 4) determining word boundaries when reading Javanese script. Second, Javanese pronunciation, including 1) pronouncing Javanese characters according to the position of the speech organs, 2) distinguishing the sounds of *ta, tha, da, and dha* 3) understanding the sound of *a* and its allophones, for example, words that sound like *â* but are written as *a*, and 4) distinguishing the sound of the sandhangan taling. Third, the diverse student demographics. Some of them come from outside Java and have never studied the Javanese script. The Javanese script is considered difficult, so students have little interest in the subject. Therefore, students need an engaging and non-monotonous learning model that utilizes technology-based interactive media.

This aligns with Otieno's (2019) view that an effective learning model for Generation Z is one that creates an engaging, technology-based learning environment, as they are a generation that has been accustomed to living in a digital ecosystem since birth. The use of AI and educational games such as Kahoot or Wayground can enhance students' motivation and provide learning challenges. This will create an enjoyable learning experience while strengthening students' conceptual understanding and skills. The desired classroom atmosphere is also one that is relaxed, flexible, and enjoyable, so that students feel comfortable and confident in practicing reading Javanese script. Students also desire a student-centered learning approach that emphasizes active student participation, where students are at the center of the learning process. The learning process minimizes lectures and prioritizes active learning through discussions, exchanging ideas, and various interactive activities. Small-group discussions with 5–6 students are considered ideal for facilitating coordination and fostering

collaboration. Groups are effectively designed with members of diverse backgrounds and abilities so that students can complement one another.

In addition, students desire a balanced distribution of the instructor's role in the learning process, meaning that instructors must be able to design comprehensive learning experiences. Learning activities begin with an introduction, followed by core activities such as discussions and a variety of games, and conclude with a wrap-up consisting of evaluation and reflection. Time management is also implemented to ensure that the material is covered thoroughly, given the broad scope of the subject matter. Students selected a learning duration of 100–120 minutes

to complete a single session. Furthermore, the evaluation or assessment system desired by students is objective and process-based. Evaluation is conducted face-to-face with the teacher in the form of an oral test reading simple texts in Javanese script. The questions consist of short sentences classified by difficulty level and organized by proficiency level. The aspects assessed in reading Javanese script are fluency, accuracy of pronunciation, clarity, and intonation. Meanwhile, the aspects assessed in group discussions are participation, conceptual understanding, and cooperation within the group. Thus, the assessment reflects the achievement of competencies comprehensively.

Development of GAFOD

The GAFOD Model

In the second phase, the researchers developed the GAFOD learning model based on the results of the student needs assessment. The designed learning model was evaluated by three experts. GAFOD is a learning model that combines game-based learning and the Focus Group Discussion (FGD) method. The researchers identified five

key components considered to support Javanese script reading skills within the GAFOD model. These findings are based on the evaluation and synthesis of quantitative and qualitative research data from the experts. The experts' opinions regarding the GAFOD factors that support Javanese script literacy are summarized in the Table 3 below.

Table 3. GAFOD factors that support Javanese script literacy

Theme	Description
Innovative learning	Innovative learning creates a conducive learning environment
Technology	Integrating technology in GAFOD increases students' interest in learning Javanese script
Engaging activities	Engaging activities through games encourage motivation to learn Javanese script
Focus Group Discussion	FGD fosters collaborative learning that improves Javanese script literacy skills
Teacher support	Teacher support is very important in guiding students through GAFOD

Based on expert assessments, both quantitative and qualitative, this GAFOD learning program was developed. The GAFOD activity stages follow the framework USAID

(2011), which consists of: selecting discussion facilitators, identifying the groups and participants who will take part, determining the discussion schedule, preparing the FGD

guidelines, conducting the FGD, documenting the discussion outcomes, and analyzing the discussion results. This is illustrated in Figure 2.

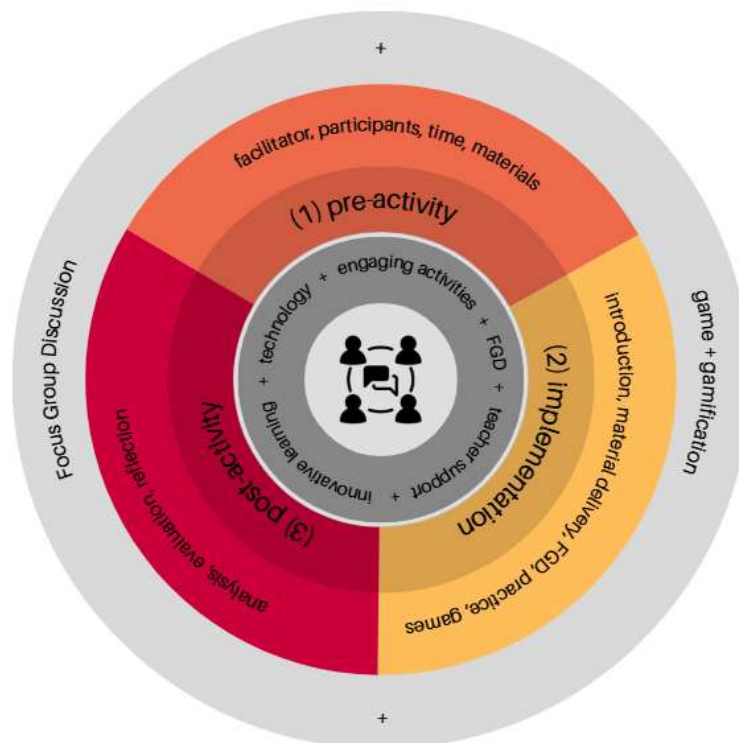


Figure 2. GAFOD Instructional Model

Quantitative Results of the Expert Assessment

The main activities in the development of the GAFOD intervention consist of three phases: pre-intervention, implementation, and post-intervention. These activities were evaluated by

three experts using 20 assessment criteria adapted from (2016). Table 4 shows the average scores for each criterion on the Guttman scale. The experts also provided several comments to improve the intervention.

Table 4. Average Scores for Each Criteria

No.	Indicator	Validator			Average
		I	II	III	
1	Clarity of general learning objectives	1	1	1	1
2	Clarity of specific learning objectives	1	1	1	1
3	Clarity of program targets	1	1	1	1
4	Consistency between objectives, materials, and evaluation	1	1	0	0.67
5	Material delivery provides logical steps and flexible navigation flow	1	1	1	1
6	Material delivery follows effective instructional design and learning principles	1	1	1	1
7	Learning activities motivate students	1	1	1	1
8	Exercises are provided to support concept understanding	1	1	1	1
9	Evaluation is provided to measure students' abilities	1	1	1	1
10	Provides feedback on evaluation results	1	1	0	0.67
11	Helps recall prior knowledge and skills	1	1	1	1
12	Provides examples in presentation	1	1	1	1
13	Includes attention-grabbing elements	1	1	1	1

No.	Indicator	Validator			Average
		I	II	III	
14	Engaging material presentation	1	1	0	0.67
15	Provides learning guidance	1	1	1	1
16	Provides opportunities for students to practice independently	1	1	1	1
17	Provides reinforcement	1	1	1	1
18	Learning considers individual differences	1	1	1	1
19	Involves emotions and feelings	1	1	0	0.67
20	Helps apply material in real life	1	1	1	1
Total		20	20	16	
Average		18.68			Valid
Percentage		93.4%			

The overall average score for the 20 criteria of the GAFOD intervention was 93.4%, falling within the 81%–100% range, which qualifies as “very good” and requires no revision. Based on these scores, the GAFOD learning model can be used without revision. This learning model has been validated by three experts: a Javanese script specialist, an instructional design expert, and an educational media expert. This process ensures

that the GAFOD learning model meets established standards.

Qualitative Results of Expert Assessment

Based on the experts’ assessment of the three main steps of GAFOD; pre-activity, implementation, and post-activity, the experts provided recommendations for each step. These are summarized in Table 5 below.

Table 5. Recommendations For Each Step

Aspect	Recommendation Classification
Pre-Activity	-
Implementation	Explanation of students’ initial characteristics Formulation of learning objectives Detailed learning indicators Separation of exercise types Student participation Consistency of learning components Learning motivation Variety in content presentation Improvement of material delivery Emotional engagement
Post-Activity	Differentiation strategies Addition of exercises and assignments Learning reflection Clarity of feedback

Based on the experts’ assessment, recommendations for developing the GAFOD learning model can be classified into three stages: pre-activity, implementation, and post-activity. In the pre-activity stage, the experts did not provide any recommendations. In the implementation stage, the experts recommended that learning objectives be formulated more clearly and explicitly at the beginning of the lesson.

Maintaining consistency between objectives, content, and assessment, as well as improving the presentation of content to make it more concise, varied, and capable of engaging students’ emotional aspects. The inclusion of motivational phrases is also recommended to enhance students’ learning motivation. Additionally, students’ initial characteristics, such as their proficiency in Javanese script literacy and prior

learning experiences, need to be explained more clearly in the introduction to strengthen the rationale for selecting the learning method. The experts also provided several suggestions to improve learning effectiveness. It is recommended that learning outcome indicators be made more measurable in each session so that instructors and students can more easily follow the learning flow. Practice activities also need to be clearly distinguished between concept comprehension exercises and reading skill exercises. The experts also emphasized the importance of ensuring the participation of all students in the activities.

Meanwhile, in the post-activity phase, experts suggest adding individual assignments to

support students' independent practice, such as reading different short texts or recording themselves while reading. Additionally, assigning authentic tasks related to real-life situations, such as reading Javanese-scripted nameplates or documents, can make the transfer of learning more evident. Strategies for differentiating tasks for students with varying skill levels are also necessary. The teacher should also pay attention to student reflections and feedback following the learning session as a basis for improving instruction in subsequent sessions.

Based on the experts' recommendations, the steps of the GAFOD learning method are summarized in table 6 below.

Table 6. GAFOD Instructional Model (Revised Version) Guideline

Step	Description
1	Pre-activity
	a) Selecting discussion facilitators, namely the instructor and group leaders b) Identifying participants, forming groups, and appointing a leader for each group • The teacher administers a pre-test to assess students' baseline knowledge prior to the intervention. • The teacher analyzes the pre-test results to guide the formation of discussion groups • The teacher forms groups based on the pre-test scores. Each class consists of 6 groups, where students who scored high, specifically 100 or 90, will serve as group leaders. Additionally, other requirements for becoming a group leader include at least 5 years of experience learning Javanese script, being of Javanese ethnicity, and having a minimum GPA of 3.76. • Each group consists of 5–6 students, with scores, GPA, duration of Javanese script study, ethnicity, gender, and age randomly assigned to ensure diversity within each group. c) Determining the activity schedule d) Developing the GAFOD guide, materials, questions, practice problems, exam questions, discussion worksheets, selecting appropriate games based on the theme, and creating evaluation instruments.
2	Implementation
	Introduction
	a) Teacher and students begin the class with a prayer b) The teacher prepares the class by conducting an apperception activity using a prompt question, such as "Have any of you ever studied the Javanese script?" c) The teacher motivates the students, for example, "By studying the Javanese script, you are not only learning a writing system, but also helping to preserve and understand the cultural values that are part of our identity." d) The teacher assesses students' Javanese script literacy skills and prior learning experiences e) The teacher communicates the learning objectives and connects previous material to the upcoming content. f) The teacher explains the benefits of learning the Javanese script for librarians
	Material Delivery

Step	Description
a)	The teacher presents introductory material on the concept of the Javanese script using PowerPoint and relates it to its use in the library context.
b)	The teacher and students engage in a question-and-answer session regarding the material
FGD	
a)	The teacher divides the students into 6 randomly selected groups and appoints group leaders.
b)	The teacher asks the students to gather in their respective groups.
c)	The teacher explains the GAFOD learning method.
d)	The teacher ensures that every student understands the procedures for implementing GAFOD.
e)	The teacher establishes an agreement on time allocation and a schedule for implementing GAFOD.
f)	The teacher distributes discussion sheets to each group; each group receives the same discussion material.
g)	The teacher explains how to fill out the discussion sheets.
h)	The teacher invites students to begin the FGD with the group leader as facilitator
i)	The teacher identifies Javanese script types (<i>carakan</i> , <i>sandhangan</i> , <i>pasangan</i> , <i>murda</i> , <i>rekan</i> , and <i>swara</i>) within their groups
j)	Students discuss the use of the Javanese script types <i>carakan</i> , <i>sandhangan</i> , <i>pasangan</i> , <i>murda</i> , <i>rekan</i> , and <i>swara</i> within their groups
k)	Students record the results of the discussion by documenting the FGD findings on the discussion worksheet
l)	The teacher monitors student engagement during the FGD
m)	The teacher guides students who encounter difficulties during the FGD
Practicing Reading Javanese Script	
a)	Students practice reading Javanese script under the guidance of the group leader
b)	The Javanese script reading exercises are tiered (ranging from easy to moderate to challenging) so that students' reading skills can improve without feeling pressured
c)	One by one, students take turns practicing reading Javanese script within their groups
d)	Students help each other correct pronunciation, clarity, and intonation when reading Javanese script
e)	The teacher supervises and guides students who encounter difficulties while practicing reading Javanese script
Practicing Reading Javanese Script Through Games	
a)	Students practice reading Javanese script through a game.
b)	The game is a competition between groups; the winning group will receive a prize.
c)	The game utilizes digital technology and multimedia, such as interactive quizzes, PowerPoint, AI, etc. For example: • Wayground quiz Each group transcribes a simple text written in Javanese script on Wayground. The groups compete to see who can transcribe the text the fastest and most accurately. The time allotted for this game is 20 minutes. The winner is the group with the highest total score. • Tournament bracket Each class consists of 6 groups. Each group is given 20 simple sentences in Javanese script containing paired characters displayed on the PowerPoint presentation. The time allotted for this game is 5 minutes per group. The group that accumulates the most points is the winner. The six groups are then divided into three pairs: 1-2, 3-4, and 5-6. Each group lines up at the back, and one by one, group members read the questions displayed on the PowerPoint. Each pair of groups competes against each other to determine a winner. The three group winners then compete against each other to determine the final winner. • Bom cessa aww Each class consists of 6 groups. Each group is given a simple text written in Javanese script containing numerals, consonants, vowels, and diphthongs. This text is entered into Kahoot with a 20-minute transcription time limit. After the text is transliterated in pairs within the group, the instructor asks questions based on the text. Each group races to answer the questions using a keyword: boom, ces, aww, ohh, yess, noo. The

Step	Description
	researcher selects the group that mentions the keyword the fastest and gives them 3 seconds to answer. The group with the highest score wins.
	d) The teacher supervises and guides students who encounter difficulties in practicing reading Javanese script
	e) The teacher gives recognition to the winning group
3	Post-activity
	a) Analyzing the discussion outcomes Teacher and students review the key points discussed, identify areas of agreement and disagreement, and draw conclusions based on the data or arguments presented.
	b) Evaluation - The teacher assesses the students' participation in the discussion, provides a summative assessment of their understanding of Javanese script, and evaluates their performance in reading Javanese script - The evaluation results are used as a basis for improvement in future activities
	c) Reflection - Students summarize the learning material - Students discuss the challenges they faced while learning to read Javanese script - Students identify which parts of the material they have and have not yet understood - Teacher and students reflect on their shared experiences to understand what has been learned, the feelings that arose, and the lessons that can be drawn. - The teacher assigns individual tasks to give students the opportunity to practice on their own, such as reading different simple texts or recording themselves while reading Javanese script - The teacher implements differentiated instruction strategies for students with very high or very low reading proficiency. - Assignments are authentic, such as reading signboards, traditional manuscripts, or library documents written in Javanese script, to make the transfer to real-life situations clearer. - Teacher and students conclude the learning activity with a prayer

DISCUSSION

The GAFOD model distinguishes itself from comparable game-based language learning interventions through its deliberate focus on Javanese script, a heritage writing system whose instructional neglect reflects broader tensions between cultural preservation and contemporary literacy priorities. While studies such as Hatamleh et al.(2025) and Shen et al. (2024) demonstrated the effectiveness of game mechanics and gamification elements in reducing demotivation and enhancing achievement outcomes among foreign language learners at scale, these frameworks were designed for majority or globally circulated languages where motivational dynamics operate largely independent of cultural identity. GAFOD, by contrast, situates game-based learning within a heritage literacy context in which engagement is

inseparable from learners' negotiation of their relationship with a historically embedded script, a dimension absent from existing interventions and one that potentially introduces cultural identity reinforcement as a meaningful co-variable in learning outcomes.

The model's developmental architecture further sets it apart from prior work. Rinata et al. (2023) produced a physically mediated Javanese script learning tool validated primarily for content accuracy, while Sadigzade's (2025) *LinguaQuest* integrated NLP-driven feedback into a simulated game environment, both representing valuable but relatively contained contributions. GAFOD advances beyond isolated media creation by formalizing a two-phase R&D structure in which needs analysis (involving students and a lecturer) directly informs the construction of intervention criteria and steps, subsequently subjected to

independent expert review. This procedural depth, consistent with the R&D logic articulated by Siregar (2023), reflects an epistemic accountability toward the intervention's pedagogical design that game-based studies in foreign language contexts rarely operationalize at this level of explicitness.

Collectively, GAFOD occupies an underexplored intersection among three characteristics seldom found in combination within the existing literature: a culturally specific heritage script as the target system, a structured multi-phase developmental methodology with embedded expert validation, and game-based pedagogy explicitly oriented toward indigenous literacy rather than general language proficiency. Chowdhury et al.'s (2024) finding that learner agency and intrinsic motivation are central to game-based vocabulary gains lends further conceptual support to GAFOD's potential, given that heritage script learners may carry heightened affective investment relative to foreign language counterparts. Empirical testing across broader and more varied participant groups in subsequent phases will be necessary to establish the model's scalability and assess its transferability to analogous regional script literacy challenges.

CONCLUSION

The Game-Assisted Focus Group Discussion (GAFOD) model was developed to address the low level of Javanese script literacy among Library and Information Science students at UIN Sunan Kalijaga, which is caused by the complexity of the script's structure and teaching methods that tend to be monotonous. The ability to read Javanese script is crucial for aspiring librarians so that they can professionally manage, catalog, and preserve ancient manuscripts for the sake of cultural heritage preservation. This

learning model combines group discussion methods with elements of educational games based on digital technology to create an interactive, participatory, and enjoyable learning environment for Generation Z students.

Validation results from experts indicate that the GAFOD model has a feasibility rate of 93.4 percent, qualifying as "very good". Operationally, this model is implemented through structured stages ranging from pre-activity, discussion and game implementation, to post-activity. The pre-activity stage consists of selecting facilitators, identifying participants, determining the schedule, and preparing guidelines. The implementation includes introductory activities, material delivery, focus group discussions (FGDs), practicing reading Javanese script, and reading Javanese script through games. Meanwhile, the post-activity phase involves analyzing discussion results, evaluation, and reflection. The GAFOD model for Javanese script learning was successfully developed with structured stages for prospective librarians, promote innovative learning through the integration of digital technology and collaborative methods in higher education, and support the preservation of the Javanese script so that it remains relevant and is mastered by younger generations.

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