

## SWOT Analysis on the Use of Haba Inggreh Android Application in High Schools in Nagan Raya Regency

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### ABSTRACT

Mobile application provides a spectrum of interactive and multimedia tools to improve the learning process. Unfortunately, this application not only brings benefits, but also portrays some flaws. Hence, this study aimed at finding out the strengths, weaknesses, opportunities, and threats that are potential from a newly-developed learning application named *Haba Inggreh*. This study belongs to qualitative design, involving 29 students and 4 teachers from SMAN 1 Seunagan. Classroom observations and interviews were employed as the data collection techniques, and all the obtained data were analyzed using thematic analysis. The findings reveal that in terms of the strength, both teachers and students agreed that the *Haba Inggreh* application enhances language acquisition. On the other hand, the weakness of this app is slow performance, which could frustrate the users, resulting in impeding effective learning. Furthermore, the opportunity of this app is that *Haba Inggreh* can be improved by raising interactivity and involvement. However, it also poses a threat, as using the app excessively for language learning is dangerous. Though *Haba Inggreh* offers helpful materials, language acquisition calls for real-world contact and immersion. Users could overuse the app and choose not to follow local wisdom.

**Keywords:** *ELT; Interactive Learning; Learning and Technology; Media and Technology; Mobile Application.*

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## INTRODUCTION

The integration of digital instruments has fundamentally changed the educational terrain at a time marked by fast technical improvements Faiz & Kurniawan, (2023). Among these developments, smartphone apps have become indispensable in the field of language education since they provide formerly unheard-of access to resources, interactive elements, and tailored learning environments. This change is best shown by the use of mobile apps in English language acquisition, which offers both possibilities and difficulties deserving of careful study. This paper aims to conduct a thorough SWOT analysis of mobile applications in English language learning, evaluating strengths, weaknesses, opportunities, and threats to offer an understanding of their influence in the future.

The global advancement of mobile devices has helped to enable the general acceptance of mobile applications in education Karim et al., (2018). These tools have transformed the conventional classroom environment into a digital culture classroom and let students allowing interact with English language materials anywhere and at any time. Mobile apps are robust in accessibility and simplicity since they let students adjust their study plans to fit their particular needs and preferences Sulisworo & Toifur, (2016). Learners are no longer limited by geographical or chronological constraints as they may download apps on tablets and smartphones. Therefore, language learning become a more inclusive and flexible process Göksu & Atici, (2013).

The idea of using mobile phones for learning reflects positive general concerns about using mobile applications in language instruction. From gamified learning exercises to audio and visual aids, these tools accommodate several learning environments and encourage participation and retention Oliveira et al., (2021). Applications like feature game-like components, like points, levels, and prizes, usually aim to inspire students and keep their attention Dinata, (2021). These characteristics not only make learning more fun but also, by repetition and practice, serve to strengthen linguistic abilities. Furthermore, the availability of real-time comments and progress monitoring helps students track their performance and spot areas that need more work Criollo-C et al., (2021).

Still, the use of mobile apps in English language instruction has certain flaws. The accuracy and quality of the material these programs offer raise major questions Bağcı & Pekşen, (2018). While some apps are created by recognized educational institutions and language experts, others could provide poor or false information, therefore creating misunderstandings and language mistakes Rifa'i et al., (2021). Furthermore, depending too much on mobile apps could cause one to lack depth in knowledge. Although apps are great instruments for practice and reinforcement, they might not offer the thorough training and sophisticated knowledge a formal education environment provides Contrino et al., (2024). One further important flaw is the possibility of less human interaction. Learning a language is naturally social hence it is impossible to overestimate the value of face-to-face conversation and cultural immersion Mohammadi et al., (2020). Though practical, mobile apps can lack the engaging, real-time communication seen in a classroom or conversational environment. Learners who lack these subtleties of pronunciation, intonation, and conversational flow may find their speaking and listening skills hampered. Moreover, too much screen time and reliance on mobile gadgets could lead to a lazy lifestyle, which increases even another health risk Oliveira et al., (2021).

Another concern comes from the fast speed of technical change since mobile apps must always be modified to remain current and efficient. Both developers and consumers may find difficulties from the regular changes and possible obsolescence of technology, thus, constant training and adaptability become even more important Wang et al., (2009). Moreover, the commercialization of education via mobile apps begs ethical questions since some developers may be more driven by profit than by instructional effectiveness Yang, (2023). Maintaining the integrity and quality of

language learning resources depends on educational objectives always being at top importance for app development (Ref).

As the niche presented in this study, technology's inclusion into education has become a worldwide trend in Aceh, changing conventional learning environments and providing new chances for students. Using mobile learning via Android apps has become a major educational tool in Aceh province, helping to solve several issues with access to and quality of education. Examining its advantages, drawbacks, and future possibilities in the educational framework of Aceh province, this paper explores the several effects of mobile learning using Android applications. On the northernmost point of Sumatra, Aceh has seen a number of sociopolitical and environmental tragedies over the past few years, including a prolonged conflict and a massive disaster in 2004, a tsunami. These incidents have greatly affected the education system in Aceh province, causing differences in access to high-quality education. Notwithstanding these obstacles, Aceh has shown persistence and a will to restore and enhance its education quality. One such endeavor aimed at bridging the educational disparity by offering equitable learning opportunities and introducing mobile learning using Android applications seems to be a profound solution.

The more accessible mobile learning provides to students, the greater benefits it brings for Aceh Siregar, (2020). The spread of Android cellphones, along with the declining cost of mobile internet, has made it possible for many people to access instructional materials. By allowing students to access instructional materials anywhere and at any time, mobile learning applications help to remove geographical constraints on education. Furthermore, meeting the various needs of students is the adaptability of mobile learning. Students can learn at their own pace, going back over difficult subjects as necessary and moving through the content at a rate best for them Kang, (2024). Students who might need more time to understand particular ideas or those who are quick learners and want to advance ahead of the required curriculum will find this self-paced learning model helpful.

Effective implementation of mobile learning in Aceh is also seriously hampered by technological and infrastructure constraints. Although most people own smartphones, internet access and device quality vary greatly. Many people who live in the rural areas face limited internet access. This is challenging for regular use when needed to access learning materials. Furthermore, restricting the availability of mobile learning is the expense of data, which can be unaffordable for low-income households Hidayati & Endayani, (2019). The fact that mobile learning in Aceh faces multiple obstacles and restrictions despite its many advantages seems to be a possible issue. The digital gap is among the significant obstacles that prevent the effective use of mobile learning using Android applications. Although the adoption of smartphones is somewhat strong, not every student has equal access to dependable internet connections or the required tools to interact with mobile learning apps completely. This difference can aggravate existing educational disparities since children lacking access to these tools might lag behind their peers. Furthermore, a drawback of mobile learning can be the absence of a direct teacher-student connection. Although mobile

apps can augment conventional learning, they cannot completely replace the value of in-person instruction and the individualized direction teachers offer Ismail & Sabrina, (2023). Since classroom debates and group projects often help to foster critical thinking and problem-solving abilities, this lack of human interaction can especially be harmful to their growth.

A SWOT analysis is a strategic planning technique that helps stakeholders in studying the effective use of Android mobile applications for language learning to comprehend and assess the internal and external elements affecting the development and application execution Lestari & Yunita, (2020). Understanding the strengths—such as accessibility, interaction, and personalizing tools—allows developers to more effectively devote resources to improve these features and have a competitive edge in the market. Therefore, this study helps identify special qualities that can set the application apart from others and offers ideas on how to best use these advantages.

Equally crucial is realizing flaws, including technical constraints and engagement difficulties. A SWOT analysis enables focused improvements and risk-reducing plans by pointing out areas where an application might be deficient. Early understanding of these flaws helps developers solve potential problems before they become major ones, improving the program's general quality and user experience. By stressing developing technologies like artificial intelligence as well as by broadening user demographics and language learning trends, investigating possibilities using a SWOT analysis stimulates creativity. This strategic instrument finds fresh market prospects that may be taken advantage of to create and integrate creative elements, therefore improving the learning process and increasing the reach of the application Kumar & Praveena, (2023)

Another important role of SWOT analysis is anticipating threats such as strong competition, privacy issues, and cultural sensitivity problems. It clarifies the competitive scene and supports developing strategies to keep ahead of rivals. Furthermore, by spotting possible risks connected to ethical and legal norms, developers may make sure the program conforms to these criteria, thereby preserving user confidence and a good name Gurel & Tat, (2017). Concentrating on areas needing development and employing strengths helps to maximize resources. Furthermore, it directs marketing and advertising campaigns by means of insights into the target demographic and, therefore, helps to position the app in the market by stressing its competitive advantages.

Although extensive research has been carried out on SWOT analysis on the use of mobile applications in language learning, no single study exists that analyzed *Haba Inggreh*— a very new application first used in Nagan Raya, Aceh. Therefore, there is still lacking information about the development and usage of Android applications in Aceh, especially simple and handy applications such as *Haba Inggreh*. Hence, the novelty that this study offers is to see the effectiveness of the *Haba Inggreh* application by conducting a SWOT analysis. In order to direct this present study, the research was formulated as follows.

*What are the SWOT analysis results regarding the use of the Haba Inggreh Android application in high schools in Nagan Raya Regency, Aceh?*

## METHOD

The present study intends to do a SWOT analysis of the *Haba Inggreh* Android application usage. An in-depth understanding of the strengths, weaknesses, opportunities, and threats related to the application will be obtained using a qualitative research approach Gurel & Tat, (2017). This study is well suited for qualitative research since it allows the authors to explore participants experiences as well as their perspectives regarding the use of the *Haba Inggreh* application. This study was conducted by following several important elements of the approach: research design, data collecting techniques, sample strategies, data analysis processes, and ethical issues. Thus, the study intends to produce rich, detailed data that can offer comprehensive insights of the influence of the application.

Classroom observations and semi-structured interviews, as suggested by Creswell (2013), were employed to collect the data. strengths, weaknesses, opportunities, and threats of the *Haba Inggreh* application. Using observation guidelines, the authors noticed several factors, including student involvement, teacher facilitation, and any technical problems the application emerged. Observations offered insightful analysis of the useful application implementation and its effects on the learning environment Nyimbili & Nyimbili, (2024). Subsequently, contextual data on the *Haba Inggreh* application's usage in actual school environments was obtained through classroom observations.

Purposive sampling was used in determining the participants of this study. The criteria for selecting potential participants include those who have experience using the *Haba Inggreh* application. There were 29 students and 4 teachers from SMAN Seunagan involved as the respondents in this study. Under the umbrella of qualitative research, this sampling technique guarantees that the gathered data is comprehensive and useful Nyimbili & Nyimbili, (2024), thereby offering insightful analysis of the use of the application. Similarly, the students were chosen based on their experience in using *Haba Inggreh* application.

Deductive thematic analysis was used in analysing the obtained data. This approach was initially proposed by Braun and Clarke (2006) which useful to assist a novice qualitative researcher in analysing the data. Six stages were followed in analysing the interview data. First, it is data familiarization. This stage recorded first notes and impressions; data coding—the methodical labelling of data points pertinent to the research questions—was noted. Originally, open coding—where the data were split up into discrete pieces and given labels—was employed. After that, these codes were examined and improved to create more particular and significant categories; this will help to generate themes by grouping the codes into more general themes that reflect the main trends and observations on the strengths, weaknesses, opportunities, and threats of the *Haba Inggreh* application. Based on their relevance and relevance to the research objectives, themes were established and labelled; this entails precisely describing what each theme stands for and naming them accordingly. Last, reporting—that is, combining the themes into a cogent narrative that addresses the research

questions—shows the results; detailed explanations of each theme also helps to illustrate them Thuv, (2023).

## FINDINGS AND DISCUSSIONS

### Results from Semi-Structured Interviews

In the following section, the findings from semi-structured interviews with students and teachers are shown. The interviews were originally in Bahasa Indonesia but they were translated into English to provide more precise comprehension to readers. S stands for students, followed by his/her initial, and T stands for teacher also followed by his/her initial.

#### *The strength of the Haba Inggreh application*

From the interview, it was known that both students and teachers asserted that the *Haba Inggreh* application is beneficial to be implemented in English language classrooms. The following excerpt shows their responses.

#### **Excerpt 1:**

*Interviewer: "How has the Haba Inggreh application impacted your language learning experience?"*

*S-ATR: "Learning English now seems more enjoyable and interactive thanks to the app. The games and tests appeal to me since they improve my memory of words. I used to find English lectures to be a little dull, but now I enjoy them".*

*T-FBK: "I have seen that using the app helps pupils pay more attention in class. They seem to keep knowledge better and engage more actively. Especially successful are the interactive activities and instantaneous comments."*

*T-CMZ: "Language learning has benefited generally from the app. Students' test results and their confidence in utilizing English have shown development. Technical problems still troublesome for pupils, though".*

The combined insights from students and teachers showed that educational tool significantly enhances engagement and learning effectiveness through interactive and immediate feedback mechanisms. The positive impact on student motivation, participation, and academic performance highlights the potential of the *Haba Inggreh* application as a valuable resource in language education. However, technical issues mentioned by T-CMZ cannot be overlooked. Technical problems can disrupt the learning process, causing frustration and potentially demotivating students. These issues underline the importance of robust technical infrastructure and support systems in the successful implementation of educational technologies. Schools need to ensure that the necessary resources are available to address technical problems promptly, minimizing disruption to learning. In short, *Haba Inggreh* application has a notable positive impact on language learning by making it more interactive and engaging. The improvement in student engagement, participation, and academic performance, as reported by both students and teachers, highlights its effectiveness. Nevertheless, addressing the technical challenges is crucial to maximize the app's potential and ensure equitable access for all students. The integration of such technological tools,

along with reliable support and adequate infrastructure, can significantly enhance the educational experience and outcomes in language learning.

#### **Excerpt 2:**

***Interviewer:** "What do you find most useful about the Haba Inggreh application?"*

***S-CS:** "I find the vocabulary flashcards very useful because they help me learn new words quickly. The pronunciation feature is also great because it helps me improve my speaking skills".*

***S-ER:** "The most useful feature for me is the progress tracking. It allows me to see which students are excelling and who might need extra help. It makes it easier to tailor my teaching to individual needs".*

***T-MA:** "From an administrative perspective, the analytics dashboard is incredibly useful. It provides valuable insights into overall usage patterns and helps us identify areas where the app can be improved or better integrated into the curriculum."*

The feedback on the most useful features of the *Haba Inggreh* application highlights its multifaceted benefits across different user groups. S-CS emphasizes the utility of the vocabulary flashcards and pronunciation features, which aid in rapid vocabulary acquisition and improved speaking skills. Then, S-ER finds the progress tracking feature particularly valuable. This functionality allows teachers to closely monitor students' performance, identifying those who excel and need additional support. This data-driven approach enables personalized instruction, which can address individual learning needs more effectively and improve overall educational outcomes. While from an administrative viewpoint, T-MA highlights the importance of the analytics dashboard. This feature provides comprehensive insights into app usage patterns, helping administrators understand how the app is being utilized and where improvements can be made. Such data is crucial for making informed decisions about curriculum integration and resource allocation, ensuring that the app is used to its full potential.

#### ***The weaknesses of the Haba Inggreh application***

#### **Excerpt 3:**

***Interviewer:** "What challenges have you encountered while using the Haba Inggreh application?"*

***S-MAL:** "Sometimes the app crashes or runs slowly, which can be frustrating, especially during class. Also, I don't always have access to a reliable internet connection at home, so I can't use the app as much as I'd like."*

***S-MLP:** "One challenge is that not all students have the same level of access to technology at home. This creates a gap in how much they can practice outside of school. Additionally, some features of the app could be more user-friendly."*

***S-KA:** "We have encountered challenges with integrating the app with our existing IT infrastructure. There have been compatibility issues with older devices and some resistance from staff who are not very familiar with tech."*

The challenges encountered with the *Haba Inggreh* application highlight significant areas for improvement to ensure its effectiveness and accessibility. S-MAL pointed out frequent app crashes and slow performance, which can disrupt learning and cause frustration. Additionally, unreliable internet access at home limits the ability

to use the app consistently. These technical challenges need to be addressed to enhance user experience and ensure uninterrupted learning. Later on, S-MLP emphasizes the disparity in technology access among students, leading to unequal opportunities for practice outside of school. This digital divide creates gaps in learning, as not all students have the necessary resources. Furthermore, the app's user interface could be more intuitive to improve usability. Regarding the integration and compatibility, S-KA notes difficulties with integrating the app into existing IT infrastructure, including compatibility issues with older devices and resistance from less tech-savvy staff. These integration challenges suggest a need for better support and training for staff and ensuring the app is compatible with a wide range of devices.

### ***The opportunities of the Haba Inggreh application***

#### **Excerpt 4:**

**Interviewer:** *"What opportunities do you see for improving the Haba Inggreh application?"*

**T-MY:** *"I think the app could include more interactive stories and role-playing scenarios. It would be cool to practice English through virtual conversations with characters in the app."*

**S-SIK:** *"There's an opportunity to include more collaborative features, like group exercises or peer review options. This would encourage students to interact more and learn from each other."*

The opportunities for improving the *Haba Inggreh* application focus on enhancing interactivity and collaboration. T-MY suggests incorporating more interactive stories and role-playing scenarios. These features would allow students to practice English in more dynamic and engaging ways, simulating real-life conversations with virtual characters. Such enhancements can make learning more immersive and enjoyable, helping students to develop practical language skills. S-SIK highlights the potential for adding collaborative features, such as group exercises and peer review options. These additions would promote student interaction and peer learning, fostering a sense of community and teamwork. Collaborative activities can enhance engagement and provide opportunities for students to learn from each other's strengths and perspectives.

#### **Excerpt 5:**

**Interviewer:** *"How do you perceive the balance between the app's strengths and weaknesses?"*

**S-MKR:** *"The strengths definitely outweigh the weaknesses. The interactive and fun nature of the app makes learning enjoyable. The technical issues are annoying, but they don't happen all the time."*

**S-ZKP:** *"While the app has its weaknesses, particularly with accessibility and technical issues, its strengths in engaging students and providing useful learning tools make it worthwhile. With some improvements, these weaknesses can be mitigated."*

**T-HL:** *"The app's strengths in enhancing student engagement and providing detailed analytics are significant. However, addressing the technical and accessibility issues is crucial for maximizing its potential and ensuring equitable access for all students."*



The balance between the *Haba Inggreh* application's strengths and weaknesses reveals a generally positive perception among users, tempered by notable challenges. S-MKR believes the strengths of the app, such as its interactive and enjoyable learning experience, outweigh the weaknesses. While technical issues are present, they are not frequent enough to overshadow the app's benefits. S-ZKP acknowledges the app's accessibility and technical issues but emphasizes its significant strengths in engaging students and providing effective learning tools. These weaknesses can be mitigated with targeted improvements, enhancing the app's overall value. T-HL highlighted the app's substantial strengths, particularly in student engagement and detailed analytics. However, addressing technical and accessibility issues is crucial to maximize its potential and ensure all students can benefit equally. In summary, while the *Haba Inggreh* application has notable strengths that enhance learning, addressing its technical and accessibility issues is essential for maximizing its effectiveness and ensuring equitable access.

### ***The threats of the Haba Inggreh application***

#### **Excerpt 6:**

**Interviewer:** "How do you see this application can possibly be a threat your class?"

**T-MY:** "The app's activities are engaging, but they often don't fit neatly into our lesson plans. I've started using it mostly for reinforcement after we've gone through the main subjects traditionally. It works well that way, but it does add to my workload."

**S-SA:** "Half the time I feel like I'm troubleshooting instead of learning. And then there's the issue of older devices. Some phones just don't support the app properly. It is disturbing".

T-MY's comment highlights that while the app's activities are interactive and enjoyable, they often do not align with the official curriculum or lesson plans. This misalignment requires teachers to spend additional time adapting or integrating the app's content to match their teaching schedules. This additional burden could lead to burnout or decreased enthusiasm for incorporating the app into daily lessons, especially when teachers are already managing a full curriculum. On the student side, S-SA's feedback emphasizes the technical difficulties that many students face when using the app. The most pressing issue is the incompatibility of the app with older devices, which many students rely on. This leads to frequent troubleshooting instead of actual learning, causing frustration and distraction during lessons. Thence, while the app has the potential to enhance learning through its interactive features, the practical challenges—such as the extra workload for teachers and the technical difficulties faced by students—could turn the application into a hindrance rather than a helpful tool in the classroom.

### **Results from Classroom Observations**

The observation sessions sought to compile contextual and behavioral information on high school classroom *Haba Inggreh* Android use. Attendees of several seminars spread over several institutions watched how the program was included into courses, how students interacted with it, and whether any technical problems

developed. The main conclusions of these observations are compiled in the following major points. The salient features of the classroom observation are listed here.

First, when applying the *Haba Inggreh* tool, users reported significant student involvement and interaction in the classroom activities. Games and tests, among other interactive components, kept students engaged and driven to study. Students often worked together and supported one another on assignments, promoting a collaborative learning atmosphere. Second, although the software was used as a complementary tool really well, its content clearly deviated from the official school curriculum. Teachers have to do extra work to match the exercises of the app with the lesson schedules. Sometimes, teachers utilized the app for reinforcement after a conventional approach of covering the major subjects. Third, a constant difficulty noted in the meetings was technological one. Common problems included app crashes, slow loading times, and compatibility problems with previous devices. These problems threw off the course of the instruction and infuriated teachers and students alike. Sometimes, due to the limited technological resources available, students are required to share devices.

Fourth, teachers were quite important in helping the *Haba Inggreh* application to be used. Good integration of the app into courses requires the teachers to be at ease with the technology and lead students through its use. Different degrees of teacher expertise with the app affected the flow of lessons. While some teachers easily included the app in their lessons, others battled technological issues and needed further help. Using the *Haba Inggreh* tool excited most of the students. Regarding their experiences and any problems found, they gave teachers quick comments. Students especially valued the interactive tools of the app, which included quick feedback on tests since they facilitated self-assessment and learning reinforcement.

Furthermore, there was proof of improved learning outcomes associated with the *Haba Inggreh* application. Students showed better pronunciation, enriched their vocabulary mastery, and gained more confidence in their English use. Over time, teachers observed a noticeable improvement in student performance as well as their classrooms' engagement. Subsequently, the application improved the liveliness of classrooms. Working with the app, students became more collaborative and supportive of one another. The cooperative nature of certain activities fostered peer learning and interaction, therefore enhancing the overall learning process. Finally, based on the difficulties and notes taken during the observation sessions, several areas needed improvement. To ensure reliability, technical enhancement is required to better align the apps with the school curriculum. Furthermore, providing additional training and support for teachers to integrate the app into their lessons effectively is also important.

Basically, the data offered insightful analysis of the useful implementation of the *Haba Inggreh* Android application in high school classrooms. Technical problems and the necessity of improved curriculum integration present difficulties even when the app improves student involvement, motivation, and learning outcomes. Effective use of the app depends on student comments and teacher facilitation. Through technical upgrades, content-curriculum alignment, and teacher support, the barriers to effectively

implementing this application can be addressed, and it will optimize the application's capacity to improve language learning in high schools.

## **Discussion**

From the results of data analysis, there are several key points that can be discussed in this study. They are as in the following.

### ***Strengths***

Students and teachers recognize the *Haba Inggreh* application as a significant enhancer of language learning. S-ATR's experience highlights how the app has transformed English learning from a dull activity to an enjoyable one through its interactive games and quizzes. This engagement through gamified learning tools aligns with educational theories that advocate for active and participatory learning. T-FBK supports this observation, noting increased student engagement and better retention of information due to the app's interactive exercises and instant feedback. The immediate responses provided by the app are particularly effective in helping students understand and correct their mistakes promptly, thereby enhancing learning efficiency.

T-CMZ provides a broader perspective, acknowledging the overall positive impact of the app on language education. Improvements in students' test scores and confidence in using English are notable achievements. However, T-CMZ also points out a critical challenge: technical issues. These problems can disrupt the learning process, causing frustration and potentially demotivating students, this is as further supported by Ismail and Sabrina (2023). The acknowledgement of these issues underlines the importance of robust technical infrastructure and support systems in the successful implementation of educational technologies. Schools must ensure that necessary resources are available to address technical problems promptly, minimizing disruptions to learning.

The feedback on the most useful features of the *Haba Inggreh* application highlights its multifaceted benefits. S-CS finds the vocabulary flashcards and pronunciation features particularly useful for rapid vocabulary acquisition and improved speaking skills. These tools provide targeted practice and immediate feedback, which is essential for efficient language learning. S-ER values the progress tracking feature, which allows teachers to monitor student performance closely. This data-driven approach enables personalized instruction, addressing individual learning needs more effectively and improving overall educational outcomes.

From an administrative perspective, T-MA highlights the importance of the analytics dashboard. This feature provides comprehensive insights into app usage patterns, helping administrators understand how the app is utilized and where improvements can be made. Such data is crucial for making informed decisions about curriculum integration and resource allocation, ensuring that the app is used to its full potential. These varied perspectives underscore the application's ability to cater to different user groups, enhancing vocabulary acquisition, enabling personalized teaching, and providing valuable usage insights.

### ***Weaknesses***

The challenges encountered with the *Haba Inggreh* application indicate significant areas for improvement. S-MAL points out frequent app crashes and slow performance, which can disrupt learning and cause frustration. Additionally, unreliable internet access at school limits the ability to use the app consistently. These technical challenges need to be addressed to enhance user experience and ensure uninterrupted learning.

S-MLP underscores the disparity in technology access among students, leading to unequal opportunities for practice outside of school. This is in line as stated by Kajanath and Sakthymayuran (2023) and Lotan and Patil (2023). This digital divide creates gaps in learning, as not all students have the necessary resources. Furthermore, the app's user interface could be more intuitive to improve usability. S-KA notes difficulties with integrating the app into existing IT infrastructure, including compatibility issues with older devices and resistance from less tech-savvy staff. These integration challenges suggest a need for better support and training for staff, as well as ensuring the app is compatible with a wide range of devices (Mushtaq et al., 2016).

### ***Opportunities***

The opportunities for improving the *Haba Inggreh* application focus on enhancing interactivity and collaboration. T-MY suggests incorporating more interactive stories and role-playing scenarios. S-SIK highlights the potential for adding collaborative features, such as group exercises and peer review options. These additions would promote student interaction and peer learning, fostering a sense of community and teamwork Gumbheer et al., (2022). Collaborative activities can enhance engagement and provide opportunities for students to learn from each other's strengths and perspectives. By incorporating these features, the *Haba Inggreh* application can create a richer, more engaging, and effective learning environment Karnekar et al., (2024).

### ***Threats***

While *Haba Inggreh* presents numerous benefits for language learners, it also comes with potential threats and challenges that need to be addressed. One of the primary concerns with any app that involves user data is privacy. *Haba Inggreh* collects various forms of data, such as audio recordings, progress tracking, and user preferences de Jong et al., (2022). If this data is not properly secured, it could be vulnerable to unauthorized access or breaches. Ensuring robust encryption and data protection measures are in place is crucial to safeguarding user information.

Over-reliance on the app for language learning can also be problematic. While *Haba Inggreh* offers valuable tools and resources, language acquisition also requires interaction with real people and immersive experiences. Users might become overly dependent on the app and neglect opportunities for real-world practice, which are essential for mastering a language.

The effectiveness of a language learning app largely depends on the accuracy and quality of its content. As found by Kruchinin and Bagrova (2021). If the app contains

errors or outdated information, it could mislead learners and hinder their progress. Regular updates and reviews of the content by language experts are necessary to maintain high standards and ensure that learners receive accurate information. Additionally, while *Haba Inggreh* offers some level of customization, it may not fully cater to the individual learning styles and needs of all users. Some learners may require more personalized feedback or different types of exercises that the app cannot provide, which can affect the overall learning experience and effectiveness for certain users.

Language learning requires consistent effort and motivation. While *Haba Inggreh* can provide a structured learning path, maintaining user engagement over the long term can be challenging. Without regular updates, new content, and engaging features, users might lose interest and abandon their learning journey. Furthermore, technical problems such as bugs, crashes, or slow performance can disrupt the learning process and frustrate users. Not all learners may have access to the necessary devices or stable internet connections required to use the app effectively, limiting the app's reach and effectiveness, particularly in underprivileged areas.

Language learning apps need to be culturally sensitive and inclusive. If *Haba Inggreh* fails to consider the diverse backgrounds of its users, it might inadvertently include content that is culturally insensitive or biased. Ensuring that the app respects and acknowledges different cultures and languages is essential for creating a positive and inclusive learning environment.

While the app provides valuable resources for learning, the lack of human interaction can make the learning experience monotonous. Language learning is inherently social, and the absence of live conversations, group activities, and face-to-face interactions can limit the development of conversational skills and reduce the overall enjoyment of learning. Additionally, although the app might be free or affordable for many, there could still be economic barriers for some users. Costs associated with necessary hardware, such as smartphones or tablets, and internet access can be prohibitive for learners in economically disadvantaged regions.

Lastly, features like audio recording and playback can be misused if not monitored properly. For instance, users might record inappropriate content or use the app for purposes other than learning. Implementing guidelines and monitoring mechanisms can help mitigate such risks.

### ***Balancing the Strengths, Weaknesses, Opportunities, and Threats***

The balance between the *Haba Inggreh* application's strengths and weaknesses reveals a generally positive perception among users, tempered by notable challenges. S-MKR believes the strengths of the app, such as its interactive and enjoyable learning experience, outweigh the weaknesses. While technical issues are present, they are not frequent enough to overshadow the app's benefits. S-ZKP acknowledges the app's accessibility and technical issues but emphasizes its significant strengths in engaging students and providing effective learning tools. With targeted improvements, these weaknesses can be mitigated, enhancing the app's overall value.

T-HL highlights the app's substantial strengths, particularly in student engagement and detailed analytics. However, addressing technical and accessibility issues is crucial to maximize its potential and ensure all students can benefit equally. In summary, while the *Haba Inggreh* application has notable strengths that enhance learning, addressing its technical and accessibility issues is essential for maximizing its effectiveness and ensuring equitable access.

Additionally, the observation sessions provided contextual and behavioral data on high school classroom use of the *Haba Inggreh* Android application. Observers noted high levels of student engagement and interaction when using the app. Interactive elements like games and quizzes kept students actively involved and motivated to learn. The cooperative nature of some activities fostered a positive learning atmosphere, with students often helping each other with tasks. Despite its strengths, the content of the *Haba Inggreh* application sometimes deviated from the official school curriculum. Teachers had to make additional efforts to align the app's exercises with lesson plans. In some cases, the app was used primarily for reinforcement after traditional teaching methods had covered the main topics. This indicates a need for better alignment between the app's content and the curriculum.

Technical issues were a recurring challenge observed during the sessions. Common problems included app crashes, slow loading times, and compatibility issues with older devices. These issues disrupted the flow of lessons and caused frustration among students and teachers. In some instances, students had to share devices due to limited availability or technical malfunctions, which hindered individual participation.

Teachers played a crucial role in facilitating the use of the *Haba Inggreh* application. Effective integration of the app into lessons requires teachers to be comfortable with the technology and to guide students through its use. Observers noted varying levels of teacher proficiency with the app, affecting how smoothly lessons were conducted. Some teachers seamlessly integrated the app into their teaching, while others struggled with technical aspects and required additional support.

Students were generally enthusiastic about using the *Haba Inggreh* application. They provided immediate feedback to teachers regarding their experiences and any issues encountered. The app's interactive features, such as instant feedback on quizzes, were particularly appreciated by students, as they helped in self-assessment and learning reinforcement. There was evidence of positive learning outcomes attributed to the use of the *Haba Inggreh* application. Students demonstrated improved vocabulary, better pronunciation, and greater confidence in using English. The research on the *Haba Inggreh* implementation emphasizes substantial implications for language education in remote regions like Nagan Raya, Aceh. The app's good effects on student participation, motivation, and learning results point to similar educational technology maybe being quite helpful in these areas. Making studying more fun and engaging would enable the application to help overcome the conventional obstacles of disengagement and low motivation sometimes seen in rural classrooms. Still, the technological problems found in the study—such as poor performance and app crashes—emphasize how crucial dependable infrastructure is in rural communities.

Effective application of the *Haba Inggreh* in Aceh depends on investments in modern gadgets and strong internet access. Dealing with these technical obstacles will help to guarantee that every student has fair access to the advantages of the app.

## CONCLUSION

From the discussion above, it can be concluded that the *Haba Inggreh* application can boost high school language learning by increasing student involvement, motivation, and academic achievement, according to the study. The app's interactive features and rapid feedback impressed students and teachers. For the app to be most effective, technical issues like app crashes, slow performance, and differences in internet and device access must be solved.

This study had some limitations, they are as follows: Technical challenges underlined the need for resilient infrastructure, which may not be available in all places. The focus on specific schools may further limit the findings' applicability to other educational situations, especially those with diverse technology capabilities or demands. The heterogeneity in teacher app skills suggests that further training and support are needed to integrate the app across all classrooms.

Several suggestions are made to maximize *Haba Inggreh's* potential. Technical difficulties must be addressed. Making the software compatible with many devices and stable will reduce learning disruptions. To ensure equal application access, internet infrastructure must be improved, especially in rural Aceh. Teachers should focus on professional development to gain app confidence and competency. Technical support and curriculum-integration training are included. Further research should examine the app's long-term effects on learning outcomes and adaptation to different educational contexts to fulfil students' and teachers' unique demands.

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## REFERENCES

- Bağcı, H., & Pekşen, M. F. (2018). Investigating the Smart Phone Addictions of Vocational School Students from Different Variables. *Malaysian Online Journal of Educational Technology*, 6(4), 40–52. <https://doi.org/10.17220/mojet.2018.04.004>
- Contrino, M. F., Reyes-Millán, M., Vázquez-Villegas, P., & Membrillo-Hernández, J. (2024). Using an adaptive learning tool to improve student performance and satisfaction in online and face-to-face education for a more personalized approach. *Smart Learning Environments*, 11(6), 1–24. <https://doi.org/10.1186/s40561-024-00292-y>
- Creswell, J. W. (2013). *Research Design: Qualitative, Quantitative, and Mixed*

*Methods Approaches*. SAGE.

- Criollo-C, S., Guerrero-Arias, A., Jaramillo-Alcázar, Á., & Luján-Mora, S. (2021). Mobile learning technologies for education: Benefits and pending issues. *Applied Sciences (Switzerland)*, *11*(9), 1–17. <https://doi.org/10.3390/app11094111>
- de Jong, L., Meirink, J., & Admiraal, W. (2022). School-based collaboration as a learning context for teachers: A systematic review. *International Journal of Educational Research*, *112*(February), 101927. <https://doi.org/10.1016/j.ijer.2022.101927>
- Dinata, H. (2021). Gamification in Education Context: The Intention, The Design and The Result. *Inform: Jurnal Ilmiah Bidang Teknologi Informasi Dan Komunikasi*, *6*(2), 75–80. <https://doi.org/10.25139/inform.v6i2.4035>
- Faiz, Y. H., & Kurniawan, W. C. (2023). Educational Game-Based Learning Media to Grow Learning Motivation in Computer and Basic Network Subjects in Vocational High Schools. *Letters in Information Technology Education (LITE)*, *6*(1), 27–30. <https://doi.org/10.17977/um010v6i12023p27-30>
- Göksu, İ., & Atici, B. (2013). Need for Mobile Learning: Technologies and Opportunities. *Procedia - Social and Behavioral Sciences*, *103*(November 2013), 685–694. <https://doi.org/10.1016/j.sbspro.2013.10.388>
- Gumbheer, C. P., Khedo, K. K., & Bungaleea, A. (2022). Personalized and Adaptive Context-Aware Mobile Learning: Review, challenges and future directions. *Education and Information Technologies*, *27*(6), 7491–7517. <https://doi.org/10.1007/s10639-022-10942-8>
- Gurel, E., & Tat, M. (2017). SWOT Analysis: A Theoretical Review. *The Journal of International Social Research*, *10*(51), 55–64.
- Hidayati, T., & Endayani, T. B. (2019). Smartphones To Learn English: the Use of Android Applications By Non-English Major Students in West Aceh. *Jurnal Ilmiah Peuradeun*, *7*(1), 95–112. <https://doi.org/10.26811/peuradeun.v7i1.231>
- Ismail, N. M., & Sabrina, S. (2023). Virtual Learning and Memory Dissonance. *Jurnal Ilmiah Peuradeun*, *11*(3), 925–948.
- Kajanath, D., & Sakthymayuran, L. (2023). *Challenges in Maintenance and Evolution of Mobile Applications 1 1*. *3*(3), 569–573.
- Kang, J. (2024). Benefits and Challenges of Mobile-Learning Brought to Student Learning Outcomes in Higher Education: A Systematic Review from 2014-2023. *International Journal of Academic Research in Progressive Education and Development*, *13*(1), 2107–2123. <https://doi.org/10.6007/ijarped/v13-i1/20698>
- Karim, R. A., Abu, A. G., Airil Haimi Mohd Adnan, & Astri Dwi Jayanti Suhandoko. (2018). The use of mobile technology in promoting education 4.0 for higher education. *Advanced Journal of Technical and Vocational Education*, *2*(3), 34–39. <https://doi.org/10.26666/rmp.ajtve.2018.3.6>
- Karnekar, S., Pawar, S., Sanap, R., Pawar, V., & Student, U. G. (2024). Development Of Android-Based Virtual Classroom Application Using Firebase For Learning. *International Journal of Creative Thoughts*, *12*(2), 418–423.



- Kruchinin, S., & Bagrova, E. (2021). Quality of Mobile Apps for Language Learning. *SHS Web of Conferences*, 93, 01009. <https://doi.org/10.1051/shsconf/20219301009>
- Kumar, S., & Praveena, K. B. (2023). SWOT Analysis SWOT ANALYSIS. *Intenational Journal of Advanced Research*, 11(9), 744–748. <https://doi.org/10.21474/IJAR01/17584>
- Lestari, T. I., & Yunita, L. (2020). The implementation of SWOT analysis as a basis for determining marketing strategies. *Enrichment: Journal of Management*, 10(2), 25–29.
- Lotan, M. M., & Patil, N. N. (2023). Issues and Challenges Faced by Mobile Application Users and Developers. *Mobile Computing, Communications & Mobile Networks*, 10(2), 1–11. <http://computers.stmjournals.com/index.php?journal=JoMCCMN&page=index>
- Mohammadi, M., Sarvestani, M. S., & Nouroozi, S. (2020). Mobile Phone Use in Education and Learning by Faculty Members of Technical-Engineering Groups: Concurrent Mixed Methods Design. *Frontiers in Education*, 5(February), 1–9. <https://doi.org/10.3389/educ.2020.00016>
- Mushtaq, Z., Kirmani, M., Mohsin Saif, S., & Wahid, A. (2016). Mobile Application Development: Issues and Challenges. *International Research Journal of Engineering and Technology*, 3(8), 1096–1099. [www.irjet.net](http://www.irjet.net)
- Nyimbili, F., & Nyimbili, L. (2024). Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies. *British Journal of Multidisciplinary and Advanced Studies*, 5(1), 90–99. <https://doi.org/10.37745/bjmas.2022.0419>
- Oliveira, D. M. D., Pedro, L., & Santos, C. (2021). The use of mobile applications in higher education classes: a comparative pilot study of the students' perceptions and real usage. *Smart Learning Environments*, 8(1), 1–15. <https://doi.org/10.1186/s40561-021-00159-6>
- Rifa'i, A., Kusumawati, T. I. J., & Purnomo, M. H. (2021). Mobile Serious Game using Augmented Reality for Increasing Quality of Learning. *Proceedings of 2021 6th International Conference on New Media Studies, CONMEDIA 2021*, 7–11. <https://doi.org/10.1109/CONMEDIA53104.2021.9617176>
- Siregar, A. (2020). M-Learning Device: Using Video To Improve Students' Writing Skill. *JETLi: Journal of English Teaching and Linguistics*, 1(1), 1–14. <https://doi.org/10.55616/jetli.v1i1.8>
- Sulisworo, D., & Toifur, M. (2016). The role of mobile learning on the learning environment shifting at high school in Indonesia. *International Journal of Mobile Learning and Organisation*, 10(3), 159–170. <https://doi.org/10.1504/IJMLO.2016.077864>
- Thuv, T. (2023). Qualitative method, Narrative analysis. In *Narrative Networks* (Issue May, pp. 0–12).

- Wang, M., Shen, R., Novak, D., & Pan, X. (2009). The impact of mobile learning on students' learning behaviours and performance: Report from a large blended classroom. *British Journal of Educational Technology*, *40*(4), 673–695. <https://doi.org/10.1111/j.1467-8535.2008.00846.x>
- Yang, B. (2023). Virtual Reality and Augmented Reality for Immersive Learning: A Framework of Education Environment Design. *International Journal of Emerging Technologies in Learning (IJET)*, *18*(20), 23–36. <https://doi.org/10.3991/ijet.v18i20.44209>