Proposed Title: Baybayin Quest: Tracing App for Young Scholars

Problem and Motivation:

The cultural and historical features of indigenous scripts are frequently ignored in the current educational system, preventing students—especially those in primary school—from having sufficient exposure to their own history. In the Philippines, the Baybayin script, an ancient writing system, carries great cultural relevance. However, there is a lack of engaging educational resources to introduce this script to the young learners, which leads to a gap in their understanding of their cultural roots.

Several number of primary-level students at Kabatuhan Integrated School in Labo, Camarines Norte, lack access to tools and resources that facilitate an interactive and enjoyable learning experience regarding the Baybayin script.

With that, the motivation behind developing the Baybayin Quest Tracing App stems from the need to bridge this educational gap. The holistic development of students depends critically on the preservation and comprehension of cultural heritage. By introducing Baybayin to young learners in an engaging and interactive way, this application aims to foster not only a deeper appreciation for the Philippines' cultural legacy but also to enhance their cognitive and fine motor skills.

The goal of the Baybayin Quest Tracing App is to meet the needs of today's young learners while protecting the legacy of the Baybayin script. This application aims to make learning engaging and enjoyable by combining gamification, interactivity, and educational content. This will help students at Kabatuhan Integrated School connect with and value their cultural heritage in a way that suits their interests and learning preferences.

Problem Analysis and Possible Solution:

The absence of engaging educational resources and limited exposure to the Baybayin script in primary-level education leads to critical issues, such as a cultural disconnect among students. Without easily available educational resources, learners are unable to gain a broad understanding of their cultural background. Traditional teaching strategies frequently fail to maintain the interest of students who are immersed in digital media, which reduces their motivation and excitement for learning these subjects.

The table below illustrates the specific demographics and educational needs concerning literacy for both male and female students of Kabatuhan Integrated School in each grade. This will serve as a valuable data to justify the importance of an engaging education tool like the Baybayin tracing app.

Grade Level	Male Non-Readers	Female Non-Readers
Kinder	10	11
Grade 1	3	5
Grade 2	4	2
Grade 3	5	3
TOTAL	22	21

The table revealing the count of male and female non-readers across grade levels indicates a notable educational challenge within the student population. The lack of improvement in basic reading skills highlights a possible problem with traditional educational strategies which potentially affects students' overall educational journey and cultural understanding, including the appreciation of elements like the Baybayin script.

Research from institutions like the Department of Education (DepEd) in the Philippines often highlights challenges in reading acquisition, especially in primary education. Factors contributing to these difficulties include overcrowded classrooms, limited resources, language barriers, and inadequate teacher training in effective reading instruction (DepEd, 2019).

Furthermore, studies conducted by local researchers have emphasized the importance of culturally relevant teaching materials and strategies in enhancing reading proficiency among Filipino primary students (Manlapig, 2017).

To address these challenges, an effective way forward is to create an NUI (Natural User Interfaces) mobile application specifically designed to teach the Baybayin script. This app will provide an interactive learning experience where students can trace and understand Baybayin characters using touch gestures. By adding gamification elements like levels, rewards, and challenges, the application aims to sustain motivation and engagement, making Baybayin learning an enjoyable experience. Moreover, this mobile app will serve as an accessible educational tool, supplementing the school's curriculum and making Baybayin learning more approachable for primary-level students at Kabatuhan Integrated School. By integrating modern technology with cultural education, the proposed app seeks to bridge the gap between traditional cultural elements and the interests of today's youth, providing an innovative and engaging approach to learning about the Baybayin script.

Key Features:

1. Baybayin Tracing Module: The application will feature an interactive module allowing students to practice tracing Baybayin characters using touch gestures on their mobile devices. It will provide step-by-step guidance for accurate character formation, assisting students in mastering the correct strokes and shapes of the Baybayin alphabet.

2. Gamified Learning Experience: The app will employ gamification elements, such as level progression, rewards, and challenges, to engage and motivate students. Levels can be unlocked as they successfully trace characters, and achieving milestones or completing challenges will earn them rewards, fostering a sense of accomplishment and encouraging continued participation.

3. Progress Tracking and Performance Reports: The app will monitor individual progress and generate performance reports. It will record the accuracy and speed of tracing, allowing students and teachers to track improvement over time. This feature aims to provide insights into areas that may require more focus and celebrate achievements.

4. Audio Guidance and Pronunciation: The application will include audio instructions and pronunciation guides for each Baybayin character. By hearing and practicing the correct pronunciation, students will better understand the sounds associated with each character, aiding their comprehension and speaking skills.

5. Cultural Insights and Historical Context: Alongside the tracing exercises, the app will offer bite-sized historical and cultural insights into the significance of Baybayin in Philippine history. This feature aims to contextualize the script, enriching students' understanding of its cultural importance and historical relevance.

6. Customization and User-Friendly Interface: The app will offer user-friendly controls and customization options. Students will be able to adjust settings based on their learning pace and preferences. The interface will be intuitive, ensuring ease of navigation for students of various ages and technological proficiencies.

7. Offline Accessibility: To ensure accessibility, the app will have offline capabilities, allowing students to continue practicing even without an internet connection. This feature ensures that learning isn't restricted by connectivity issues, enabling usage at school or home regardless of internet availability.

These key features aim to create an immersive and comprehensive learning experience for students, blending interactive tracing with gamified elements, progress tracking, cultural insights, and user-friendly design, making the learning process engaging and enjoyable while promoting a deeper understanding of the Baybayin script.

Key Benefits:

1. Cultural Preservation and Connection: The app serves as a significant tool for preserving and connecting students with their cultural heritage. By introducing the ancient Baybayin script in an engaging manner, it fosters a deeper appreciation and understanding of Filipino cultural roots, ensuring the preservation of this valuable aspect of Philippine history (NCAA, n.d.).

2. Enhanced Engagement and Interest: Through gamified learning and interactive tracing exercises, the app sustains high levels of engagement and interest among students. By transforming learning into an enjoyable and interactive experience, it captures their attention and maintains their enthusiasm for learning Baybayin (Sevilla, 2019).

3. Cognitive Skill Development: The tracing exercises within the app promote the development of fine motor skills and hand-eye coordination. By guiding students through the precise tracing of characters, the app contributes to cognitive skill enhancement and boosts proficiency in writing and coordination (DepEd Philippines, 2016).

4. <u>Holistic Educational Approach</u>: The incorporation of cultural insights within the app creates a holistic approach to education. It combines the development of cognitive skills with an understanding of cultural history, providing a more comprehensive educational experience for students (NCAA, n.d.).

5. <u>Personalized Learning and Progress Tracking</u>: The app's ability to track individual progress enables personalized learning experiences. Students can advance at their own pace, and teachers can identify areas for improvement or offer extra support based on the progress reports generated by the app (Sevilla, 2019).

6. <u>Technological Integration for Modern Learning</u>: By using modern technology to teach an ancient script, the app bridges the gap between traditional cultural elements and modern educational tools. It aligns with the preferences of the digital generation, making cultural education more accessible and engaging for contemporary students (DepEd Philippines, 2016).

7. <u>Accessibility and Convenience</u>: The offline capability of the app ensures accessibility and convenience for students, allowing them to continue their learning even in environments with limited or no internet connectivity, thus promoting consistent practice and engagement.

Conclusion:

In conclusion, the development of the Baybayin tracing app stands as a critical step in addressing the educational gap concerning the Baybayin script among primary-level students at Kabatuhan Integrated School in Labo, Camarines Norte. The identified lack of engaging educational resources and limited exposure to this ancient script highlight the necessity for a modern and interactive approach to introduce Baybayin, ensuring the preservation and understanding of the Philippines' rich cultural heritage.

The Baybayin tracing app is a project proposal that combines cultural heritage with modern education. It combines technology with traditional learning methods, providing an engaging and accessible learning experience. The app uses gamified elements, progress tracking, and cultural insights to enhance cognitive skills and promote a deeper connection to students' cultural roots. The app will enrich Kabatuhan Integrated School's educational experiences and serve as a model for integrating cultural education with modern technology in primary-level education.

References:

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