Exploring the Needs for Developing a Digital Learning Application for Sundanese Language in Early Childhood Education

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INTRODUCTION

Background

1. The Need to Revitalize Sundanese Culture in the Digital Era
2. The "Kamis Nyunda" program has been routinely implemented in several PAUD institutions.
3. There is still a lack of use of digital media as a support for Sundanese language learning.

Problem Formulation:

1. How is the practice of learning Sundanese language in PAUD Institutions?
2. What are the needs of teachers and children related to digital learning media?
3. How does the relevant application model fit the teacher's expectations?

Problem Formulation:

1. Analyze the needs for developing digital applications based on local culture.
2. Formulate application development recommendations for early childhood.

LITERATURE REVIEW

	Early Childhood Regional Language Learning	Early Childhood Digital Technology Integration	Design of Needs-Based Learning Media
Key Theories	Mother tongue shapes a child's identity and literacy (Cummins, 2001; UNESCO, 2016).	Digital technology supports children's motivation & learning experience (NAEYC, 2020).	Analysis of needs is important in media design (Branch, 2009; Deliana et al., 2023).
Previous Research	The use of Sundanese in PAUD is still limited to memorization or ceremonial (Suherman & Suryani, 2020).	The use of Sundanese in PAUD is still limited to memorization or ceremonial (Suherman & Suryani, 2020).	Interactive apps improve children's cognitive & social abilities (Hsin, Li & Tsai, 2014).
Gap	Research rarely develops culture-based digital media	The majority of educational applications do not contain regional languages	Design of Sundanese language learning applications for early childhood with a real needs-based approach from PAUD units

METHOD

Approach

Qualitative, in-depth case studies

Research Location

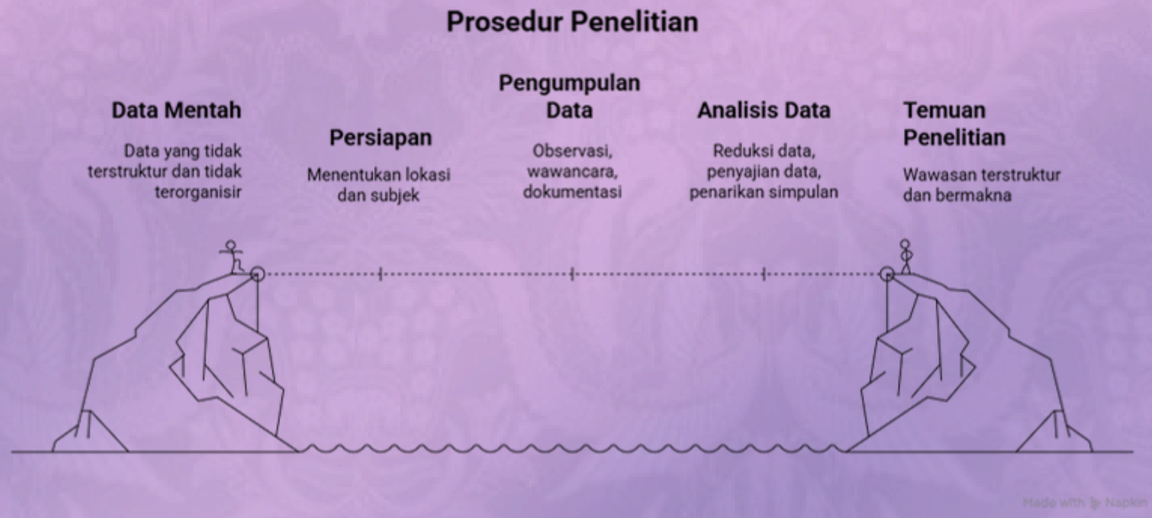
Lembaga PAUD in Greater Bandung (Kindergarten PGRI 3 Cimahi, Kindergarten IT Generasi Harapan, Kindergarten Negeri Pembina Citarip)

Subject

Teachers and teaching tools (Thursday Nyunda)

Data Collection Techniques

Observation, semi-structured interviews, documentation



FINDING AND DISCUSSION

The Context and Challenges of Sundanese Language Learning in Early Childhood Education

Finding

1. PAUD in Greater Bandung implements Sundanese language learning with variations, one of which is Thursday Nyunda.
2. Children are introduced to basic vocabulary, greetings, songs, children's games, with a thematic atmosphere.
3. Challenge: the use of Sundanese at home is still low, it needs to strengthen the environment and parenting.
4. Documentation: cultural themes have been included in the RPPH, but still traditional/manual.

Discussion

1. Mother tongue supports identity & literacy (Cummins, 2001; UNESCO, 2016).
2. The Thursday Nyunda program supports the Pancasila Student Profile (Ministry of Education and Culture, 2021).
3. School-home collaboration is needed so that learning continues.

FINDING AND DISCUSSION

Views & Expectations On Digital Media

Finding

1. Teachers have tried digital media: video, audio, visual stories.
2. Visual and audio media help the child's focus and comprehension.
3. Barriers: internet & equipment limitations; there is no special application for Sundanese.
4. Documentation: the use of digital media has not been systematically integrated.

Discussion

1. Digital media supports thematic, interesting, interactive learning (Hsin, Li, Tsai, 2014; NAEYC, 2020).
2. The potential of digital media to bring Sundanese cultural content to life is not just manual.
3. Innovation and policies are still needed so that the use of technology is on target and sustainable.

FINDING AND DISCUSSION

Key Application Development Needs

Finding

1. Materials needed: daily vocabulary, regional songs, folklore, children's games.
2. App features: interactive visuals, narrative sounds, cartoon characters, motivational feedback.
3. The app should be easily accessible to teachers, children, and parents.
4. The documentation shows that the themes already exist in the RPPH, potentially developed to digital.

Discussion

1. The design of the application must be appropriate to the child's developmental stage & local context (Fu, 2025).
2. TPACK principles: technology, pedagogy, integrated local content (Suryani & Pratama, 2022).
3. Apps support meaningful learning & reduce the burden on teachers (Rizkia Triadi et al., 2023).

FINDING AND DISCUSSION

Cultural Integration

Finding

1. Sundanese culture as the main element: stories, songs, games, traditional clothing.
2. Children are more enthusiastic and easy to understand with animation and audio.
3. Teachers want to design applications that are funny, bright, with Sundanese characters.

Discussion

1. Appropriate to contextual & sociocultural learning theory (Silva et al., 2024).
2. Visual & audio local culture instills identity from an early age.
3. Application as a school-home bridge for cultural preservation (Wang, 2023; West Java Education District, 2022).

CONCLUSION

1. Sundanese language learning at PAUD Bandung Raya has been running through the Kamis Nyunda program consistently.
2. The children are interested and enthusiastic, but there are still obstacles to teaching media and the use of Sundanese at home.
3. Digital media is considered an important solution to support engaging and interactive learning.
4. Teachers & parents need apps with content: basic vocabulary, songs, folklore, children's games.
5. Important features: voice narration, Sundanese characters, interactive animations, positive feedback.
6. The app must support the preservation of local culture & the strengthening of children's identity.
7. Application design needs to be based on real needs, easy for teachers and parents to use, and appropriate for children's developmental stages.

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