



COMMUNITY ENGAGEMENT PROGRAM : UTILIZING LOCAL POTENTIAL AS LEARNING MEDIA FOR EARLY CHILDHOOD EDUCATION (PAUD) TEACHERS IN THE HINTERLAND AREA OF TELUK BAKAU, PULAU TERONG BATAM

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Abstarct. This Community Engagement Program (PKM) aims to enhance the capacity of early childhood education (PAUD) teachers in hinterland areas to develop learning media based on local potential. The main objective of this activity is to facilitate teachers in identifying, exploring, and utilizing natural, cultural, and environmental resources as contextual and meaningful teaching materials for young children. Through training and mentoring, PAUD teachers are expected to create creative, low-cost, and relevant learning media that reflect children's daily lives in the hinterland. This effort seeks to improve the quality of the teaching and learning process while strengthening the connection between children and their environment. Additionally, the program aims to raise awareness of the importance of local wisdom in early childhood education as part of cultural preservation and character building from an early age.

Keyword: Learning Media, Local Potential, Teacher.

INTRODUCTION

Early Childhood Education (PAUD) serves as a vital foundation in shaping children's character, intelligence, and creativity from an early age. The success of the learning process in PAUD greatly depends on the teacher's ability to create a meaningful, contextual, and enjoyable learning atmosphere. One of the efforts to improve the quality of learning in PAUD is by utilizing local potential as learning media.

Law Number 20 of 2003 concerning the National Education System, Article 1, paragraph 14, states that Early Childhood Education (PAUD) is a form of educational development aimed at children from birth up to six years old, carried out by providing educational stimulation to support their growth and development. This law emphasizes the importance of educational stimuli through activities and experiences designed to develop all aspects of a child's potential, including moral, motor and physical, cognitive, language, emotional, and cultural-artistic abilities. Altogether, these aspects form the foundation for a child's overall intelligence and development.



The hinterland area is also known as a satellite city. The term *hinterland* refers to small towns or specific regions surrounding a major city that share similar performance patterns and are influenced by the development of the central city (Febriyani, R., Ribbawanto, H., & Prasetyo, 2014). Essentially, the hinterland is an area directly bordering a large city—serving as a transitional zone between urban and rural characteristics (Ananda et al., 2023). According to Allen (2003), as cited by La Quinta and Drescher (2000), the hinterland is generally defined as the area surrounding urban regions or the urban fringe, which combines both rural and urban characteristics as reflected in land-use patterns, demographics, and the availability of public infrastructure and services (Allen, 2003; La Quinta & Drescher, 2000, in Rudiarto, Handayani, & Megawati, 2013).

The local potential found within the learners' surroundings—such as natural resources, culture, local wisdom, and community social activities—can serve as rich and relevant learning resources. Through this approach, children not only learn theoretically but also become familiar with their environment, appreciate local culture, and develop a sense of love for their place of origin.

However, in hinterland (remote) areas, PAUD teachers continue to face various challenges, such as limited access to modern learning media, insufficient training, and a lack of educational facilities. Therefore, this Community Service Program (PKM) aims to provide guidance and training for PAUD teachers in the hinterland to utilize local potential as creative, affordable, and easily accessible learning media.

This activity is expected to enhance teachers' competence in designing and implementing learning media based on local potential, as well as strengthen the relationship between education and the surrounding sociocultural environment.

In fact, PAUD teachers in hinterland regions face challenges in providing learning media that meet children's needs due to limited access to modern teaching materials and a lack of continuous training. Nevertheless, these areas possess abundant local potential—such as natural materials, local culture, and coastal community wisdom—which can be used as creative and contextual learning resources for early childhood education. The utilization of local potential is expected to improve the relevance of learning and strengthen regional cultural identity.

This activity is thus anticipated to increase teachers' competence in designing and implementing learning media based on local potential while fostering stronger connections between education and the local sociocultural context.



METHODOLOGY

The implementation method of this Community Service Program (PKM) employs a participatory and applicative approach, actively involving early childhood education (PAUD) teachers in every stage of the activity. The program is carried out through several main stages as follows:

1. Observation and Needs Identification

The implementation team conducted field observations and preliminary interviews with PAUD teachers in the hinterland area to identify:

- Their level of understanding of learning media based on local potential,
- The available local potentials (natural, cultural, and environmental), and
- The relevant training and mentoring needs.

2. Activity Planning

Based on the identification results, the team developed a plan for training and mentoring activities. The plan includes:

- A training module on learning media based on local potential,
- Examples of learning media that can be developed from local materials, and
- A schedule adjusted to the availability of PAUD teachers.

3. Training and Workshop

The training activities were conducted face-to-face using the following methods:

- **Interactive lectures:** Introduction to the concepts of contextual learning and local potential.
- **Group discussions:** Sharing experiences and mapping local potentials in each area.
- **Hands-on practice:** Creating learning media from locally available materials that are affordable, easy to obtain, and safe for young children.

4. Mentoring and Implementation

After the training, intensive mentoring was provided to the teachers in:

- Developing learning media based on local potential in their respective schools,
- Implementing the media in learning activities, and



- Monitoring its impact on children's interest and engagement.

5. Evaluation and Follow-Up

The evaluation was carried out through:

- Direct observation of teachers using the learning media,
- Interviews and questionnaires with teachers to identify benefits and challenges, and
- Documentation of locally-based learning media products.

RESULTS AND DISCUSSION

The Community Service Program (PKM) with the theme *“Utilizing Local Potential as Learning Media for Early Childhood Education (PAUD) Teachers in the Hinterland”* was conducted with the aim of enhancing teachers' competence in developing learning media based on their surrounding environment.

This activity took place in several PAUD institutions located in the hinterland area (Pulau Terong, Belakang Padang District, Batam City). The area is categorized as having limited access to modern learning resources; therefore, teachers need to be encouraged to utilize locally available materials in their environment as alternative learning media.

The activity was carried out over a period of 14 days, consisting of three main stages:

1. **Preparation Stage** – identification of local potential, coordination with partners, and development of training materials.



This photo was taken during the initial phase of the Community Service Program (PKM) conducted at one of the early childhood education (PAUD) centers in the hinterland area. It shows the PKM implementation team carrying out field observations and an initial discussion with local PAUD teachers. The activity aimed to understand the school's surrounding environment, identify



local potentials that could be utilized as learning media, and explore the teachers' needs and challenges in the teaching and learning process.

The atmosphere appeared relaxed yet enthusiastic, reflecting the collaborative spirit between the PKM team and the teachers. The discussion was conducted in a participatory manner, with teachers showcasing various local materials they commonly use in daily activities, such as leaves, seeds, small bamboo, traditional fabrics, shells, and natural stones. This moment served as an important foundation for designing a well-targeted training program grounded in local realities.

2. **Implementation Stage** – includes training, workshops, and hands-on practice in creating learning media based on local potential.



At the implementation stage, the team conducted training sessions, workshops, and hands-on practice in creating learning media based on local potential, attended by PAUD teachers from hinterland and coastal areas. This activity aimed to enhance teachers' ability to develop creative learning media by utilizing natural materials and local resources that are easily accessible in their surroundings.

During the training and workshop sessions, participants received materials on the basic concepts of contextual learning media, techniques for utilizing natural materials, and methods for integrating elements of local wisdom into early childhood learning activities.

Next, during the hands-on media creation session, participants worked in groups to produce various types of learning media, such as number boards made from seashells, shape teaching aids crafted from seeds, and educational games created from recycled materials. The teachers showed great enthusiasm and creativity in producing innovative and engaging works for young children.

The activity ran smoothly, filled with a spirit of togetherness, active discussions, and idea sharing among participants. The completed works were later exhibited as a form of appreciation



and inspiration for other teachers to develop learning media that reflect the unique local potential of their respective regions.

3. Evaluation Stage – assessment of activity outcomes and joint reflection with the participating teachers.

The activity was attended by six PAUD teachers from TKN 009 and TKN 011 Batam, both located in Pulau Terong.

Implementation of the PKM Activities

The implementation of the Community Service Program (PKM) was carried out through the following stages:

a. Socialization and Introduction to the Concept of Local Potential

In the initial stage, the PKM team conducted a socialization session emphasizing the importance of local potential in early childhood education. The teachers were introduced to the concept of contextual learning, which connects teaching materials with the environment and children's real-life experiences.

Participants were also encouraged to identify local potentials in their respective surroundings, such as:

- **Natural materials** (sand, leaves, shells, stones, wood, seeds),
- **Local cultural products** (traditional games), and
- **Community social activities** (fishing).

b. Training and Workshop on Developing Learning Media

After understanding the basic concepts, the activity continued with practical training. The teachers participated in a workshop on developing learning media based on local potential.

Examples of products created during the training included:

- **Sea animal puzzles** made from shells and beach sand,
- **Number boards** crafted from natural materials such as coconut shells and seashells,
- **An illustrated storybook** titled "*Adventure at the Beach*," inspired by local fishermen's folktales, and
- **Simple rhythmic musical instruments** made from bamboo and seashells.

The workshop was conducted in groups to encourage idea and experience sharing among teachers. Participants showed great enthusiasm through their creativity and eagerness to transform simple materials into engaging learning tools for children.



c. Mentoring and Classroom Implementation

After the training, direct classroom mentoring was conducted at the participating PAUD centers. The PKM team assisted teachers in using the learning media they had created during teaching activities.

Observations showed that:

- Children were more enthusiastic when learning with media based on their local environment.
- Teachers became more confident and creative in developing simple teaching aids.
- The materials used were easily obtainable, inexpensive, and relevant to the children's daily life context.



This classroom learning activity showcased the creativity of PAUD teachers and children in utilizing seashells as learning media based on local potential. The teacher introduced various shapes, sizes, and textures of shells collected from nearby beaches, then guided the children to sort and count them.

Through this activity, the children learned basic science concepts, practiced counting, and directly experienced the beauty of the coastal environment. In addition, they developed fine motor skills by gluing and arranging the shells into art creations such as wall decorations and sea animal figures.

This activity not only enhanced the children's imagination and skills but also fostered a love for their environment and appreciation for the local potential of coastal areas. The learning atmosphere was joyful, filled with curiosity, and full of positive interaction between teachers and students.



In this activity, the teacher and students created learning media by utilizing leaves found around the school environment. The teacher invited the children to observe various shapes, colors, and textures of leaves, then used them as the main material to make creative artworks such as animal figures.

Through this activity, the children learned about nature firsthand while developing fine motor skills, creativity, and observation abilities, as well as fostering environmental awareness. The teacher played an active role in guiding and demonstrating how simple natural materials can be transformed into engaging and meaningful learning media.

The classroom atmosphere was lively and full of enthusiasm, with children working eagerly while sharing ideas and showcasing their creations. This activity reflected joyful, contextual learning that made optimal use of local potential.



In this activity, PAUD students appeared enthusiastic while participating in a pre-writing lesson using sand as a learning medium. The teacher utilized sand, which is easily found in the coastal environment, as a child-friendly local material to help develop hand-eye coordination and fine motor skills.



The children were encouraged to write letters and numbers with their fingers on the sand, making the learning process more fun and interactive. Through this activity, children not only learned to recognize letter and number shapes but also honed their concentration, patience, and curiosity about their surroundings.



The learning atmosphere was cheerful and natural; the children enthusiastically explored and created in the sand. This activity demonstrated that local potential can be creatively utilized to support meaningful learning for early childhood.

In this activity, early childhood education students enthusiastically participated in the learning process, utilizing seeds as a learning medium based on local potential. The teacher introduced the children to various types of seeds, such as mung beans, corn, rice, and soybeans, which are readily available in the surrounding environment.

Through this activity, the children learned to group seeds by color and shape, count them, and glue them together to create artworks such as flower, animal, and letter patterns. In addition to fostering creativity and fine motor skills, this activity also instilled a love for local natural resources, as well as a careful and patient attitude in their work.

The learning atmosphere was fun and filled with laughter. The children learned through play, while the teacher guided them attentively, demonstrating that the early childhood education students enthusiastically participated in the learning process, utilizing seeds as a learning medium based on local potential. The teacher introduced the children to various types of seeds, such as mung beans, corn, rice, and soybeans, which are readily available in the surrounding environment.

Through this activity, the children learned to group seeds by color and shape, count them, and glue them together to create artworks such as flower, animal, and letter patterns. In addition to fostering creativity and fine motor skills, this activity also instills a love of local natural products, as well as a meticulous and patient attitude in creating.



The learning atmosphere is fun and full of laughter. The children learn through play, while the teacher provides attentive guidance, demonstrating that simple natural materials can become meaningful and engaging learning media for young children.

In this activity, early childhood education students enthusiastically participated in learning about animal habitats, utilizing stones from the beach as a learning tool based on local potential. The teacher encouraged the children to play and learn by arranging the stones into miniature animal habitats, such as a fish pond, a turtle house, and a crab habitat.

Through this activity, the children learned about various types of animals and their habitats, while fostering a sense of care for the natural environment. This activity also fostered imagination, cooperation, and fine motor skills as they arranged the stones and added other natural elements such as sand and leaves.

The learning atmosphere was cheerful and full of curiosity. The children seemed to enjoy the exploration process, while the teacher patiently guided them. This activity serves as a concrete example of how local potential can be creatively utilized to create contextual, enjoyable, and meaningful learning for early childhood.

d. Activity Evaluation and Reflection

At the end of the activity, an evaluation was conducted through questionnaires, discussions, and interviews with participants. The evaluation results showed that:

- 85% of participants stated they gained new knowledge about the concept of local potential as a learning medium.
- 90% of participants felt more creative in designing teaching media.
- 80% of participants committed to continuing to develop media based on local potential in their respective schools.



The collective reflection showed that this activity not only improved teachers' abilities in creating learning media but also strengthened the relationship between the PAUD institution and the surrounding community.

Achieved Results

Based on the implementation of the PKM activity, the results achieved can be detailed as follows:

1. Knowledge Aspect

Teachers understand the concept of utilizing local potential as a learning resource and are able to identify environmental elements relevant to early childhood learning.

2. Skills Aspect

Teachers are skilled at creating various simple learning media from local materials, such as counting aids, sensory media, and storytelling aids.

3. Attitude Aspect

Teachers demonstrate high enthusiasm, are aware of involving the surrounding environment in learning, and collaborate with fellow teachers in creating teaching media.

4. Activity Products

- A simple module on Utilizing Local Potential for Early Childhood Education.
- A product of locally-based learning media.
- Documentation of training and mentoring activities.

Discussion

The results of the Community Service Program (PKM) activities indicate that utilizing local potential is highly effective in enhancing the creativity and competence of PAUD teachers in the hinterland. This approach is relevant to contextual teaching and learning theory, which emphasizes the connection between learning materials and children's real-life situations.

Furthermore, this activity supports the implementation of the Independent Curriculum, which encourages environment-based and project-based learning. Teachers become not only media users but also creators of innovative learning materials.

However, this activity also faced several obstacles, such as:

- Limited training time and supporting materials.
- Geographical constraints that hamper coordination between PAUDs in the hinterland.



Nevertheless, this activity had a significant positive impact on improving teacher capacity and the quality of early childhood learning. Follow-up programs or advanced training are needed to ensure teachers consistently apply this concept in their daily learning activities.

Community Service Team

Table of Training and Workshop Results for Creating Local Potential-Based Learning Media in the Hinterland (Coastal) Region

No.	Name of participants	School	Types of Learning Media Created	Local Potential Utilized	Score before	Score after	Improvement	Description/Evaluation
1	Idayah,S.Pd.	TKN 011 Batam	Sea animal puzzle	Shells and beach sand	70	90	+20	Creativity and neatness increased significantly
2	Nurysakina, S.Pd.	TKN 011 Batam	Natural number board	Coconut shells and seashells	68	88	+20	Contextual and engaging media
3	Suryati	TKN 011 Batam	“Adventures on the Beach” picture book	Local fishermen's folktales	72	91	+19	Educational story content and interesting visuals
4	Neti Herawati, S.Pd.	TKN 009 Batam	Simple rhythmic musical instruments	Bamboo and seashells	65	87	+22	Innovative and easy for children to use
5	Nouli, S.Pd.	TKN 009 Batam	Coastal ecosystem flashcards	Field observation photos	75	92	+17	Materials according to local context
6	Anita Dewi, S.Pd.	TKN 009 Batam	“Beach Exploration” game board	Simple map and seafood	69	90	+21	Developing children's cooperation and cognitive skills



Summary of Training Results

Aspects Assessed	Average Training Before	Average Training After	Average Improvement
Understanding the Concept of Learning Media	70	90	+20
Media Design Skills	68	89	+21
Creativity and Innovation	72	91	+19
Utilization of Local Potential	74	93	+19
Overall Average	71	91	+20

CONCLUSIONS AND SUGGESTIONS

The Community Service (PKM) activity with the theme "Utilizing Local Potential as a Learning Medium for Hinterland Early Childhood Education Teachers" was successfully implemented and had a positive impact on improving the competency of early childhood education teachers in the hinterland.

Based on the results of the implementation and evaluation of the activity, the following conclusions can be drawn:

1. Improved Teacher Knowledge and Understanding

Early childhood education teachers gained a deeper understanding of the concept of local potential, its benefits in early childhood education, and how to integrate it into teaching and learning activities.

2. Improved Practical Skills

Through training and workshops, teachers were able to design and create learning media based on local potential using simple materials found in the surrounding environment. These media have proven effective in increasing children's engagement and enthusiasm for learning.

3. Changes in Teacher Attitudes and Creativity

This activity fostered creativity, innovation, and independence among teachers in developing teaching media. Teachers became more confident in using local resources without relying on commercial media.

4. Support and Collaboration with the Local Community



The implementation of these activities also involved the community, parents, and local Early Childhood Education (PAUD) institutions, creating a positive synergy between education and the socio-cultural environment.

5. Relevance to the Curriculum and Regional Context

The utilization of local potential as a learning medium aligns with the principles of the Independent Curriculum, which emphasizes contextual learning and strengthening children's character through learning experiences relevant to everyday life.

Overall, this Community Service Program (PKM) activity successfully improved the skills of hinterland PAUD teachers in developing creative, contextual, and locally-based learning. This demonstrates that limited resources are not a barrier to creating meaningful and high-quality learning processes.

RECOMMENDATION

Similar training activities need to be conducted periodically so that hinterland PAUD teachers can continue to hone their skills in designing learning media based on local potential. Follow-up mentoring is also needed to ensure the consistent implementation of this concept in the classroom.

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