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Visual Storytelling Learning Method for Early Childhood

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Abstract: *The community service carried out by the SERASA team from Sampoerna University at PAUD Jala Benaya, Penjaringan, North Jakarta, on June 8, 2023, aims to improve teacher competence and introduce the use of visual media and artificial intelligence-based technology in early childhood learning. With the theme "Visual Storytelling Learning Methods for Early Childhood", this activity consisted of training and workshops attended by PAUD teachers and students of PAUD Jala Benaya. In this workshop, teachers were given knowledge about their role in creating a conducive learning environment, the importance of structured learning planning, as well as an understanding of visual learning styles and educational technology. Preschool students were also given the opportunity to learn using AI technology through several interactive websites. This activity showed that ECD teachers gained a deeper understanding of the use of visual media and technology in learning, as well as more confidence in implementing technology in the classroom. Preschool students responded positively to the interactive learning methods provided, which increased their interest in learning.*

Introduction

Early childhood is a very important period in a child's life. The first five years of life are often referred to as the golden age, during which a child's cognitive and emotional development is rapid. During this time, children begin to form important foundations that will affect their ability to learn and develop in the future. Therefore, education at an early age plays a very crucial role in supporting the optimal development of children, both cognitively, socially, emotionally, and physically.

According to Piaget's cognitive development theory, early childhood is in the pre-operational stage. At this stage, they still have limitations in thinking logically and abstractly.

Early childhood children tend to learn through direct observation, interaction with the environment, and involvement in play activities. As a result, the learning process in early childhood must be designed in such a way as to stimulate various aspects of their development through activities that are fun and relevant to the child's world. One approach that can be applied is visual-based learning and storytelling.

Figure 1. Jean Piaget (cognitive psychologist).

Early Childhood Education (ECE) is an institution designed to support the optimal development of children in this preschool period. PAUD Jala Benaya, located at Jalan Bandengan Utara Raya No.40H 5-6, RT.11/RW.15, Penjaringan, Penjaringan Sub-district, North Jakarta City, is one of the PAUDs committed to providing quality education services for children in the area. To support this commitment, community service activities were carried out by Serasa Sampoerna University, which consists of active lecturers and students through activities themed Visual Storytelling Learning Method for Early Childhood, intending to improve early childhood cognitive development in terms of communication skills, listening, and letter recognition through the use of digital technology.

Figure 2. Paud Jala Benaya.

Early childhood has unique learning characteristics. They are more interested in learning that involves visual elements and interactive activities. The visual storytelling method is one technique that has proven effective in increasing children's attention and participation in the learning process. In this method, images, symbols and animations are used to help children

understand the concepts presented. With the support of digital technology, this method can be more interesting and effective, as children can learn through dynamic and interactive visualizations. The main objective of this community service activity is to facilitate the improvement of early childhood cognitive development through visual storytelling methods supported by digital technology. In this activity, children will be introduced to stories that not only involve interesting visualizations, but also contain age-appropriate educational messages. Through these stories, children are invited to listen, recognize letters, recognize animal names, names of stars in the sky, digital drawing so that they understand verbal communication in a more fun way. The importance of understanding and introducing digital technology in the early childhood learning process has been increasingly recognized in recent years. Digital technology, when used appropriately and wisely, can be a very effective tool in supporting learning. By utilizing apps specifically designed for early childhood, children can learn while playing. These applications are generally designed with interactive features so that children can learn in a more independent and fun way. In the training and workshop of this community service activity, the use of digital technology is integrated with visual storytelling methods to provide a rich and interesting learning experience for children.

Of course, it is also necessary to realize the dangers that will be obtained when using digital technology excessively in early childhood, therefore the role and assistance of adults, namely teachers and parents, is very necessary. Early childhood is still very dependent on direction and guidance from parents, teachers, or caregivers in understanding and utilizing technology properly. Therefore, in this community service activity, teachers at PAUD Jala Benaya are also involved in training on how to utilize digital technology as an effective learning medium for early childhood.

Furthermore, this community service activity is expected to not only benefit the children who are direct participants but also the educators at PAUD Jala Benaya. By understanding and mastering visual-based learning methods and digital technology, educators can apply more creative and innovative approaches in the daily teaching process. In addition, parents are also expected to gain new insights into the importance of supporting children's learning process through the right media. Overall, this community service activity aims to have a positive impact on early childhood cognitive development, especially in terms of communication and literacy skills. Through a visual approach and the use of digital technology, the learning process can be made more interesting and follow the needs of children at their pre-operational stage of development. Thus, this activity is expected to significantly contribute to improving the quality of early childhood education at PAUD Jala Benaya.

Method

This community service program is carried out using a workshop training method accompanied by demonstrations. This activity aims to provide PAUD teachers and students of PAUD Jala Benaya with knowledge and practical skills related to visual learning methods, as well as the use of digital technology as a means to improve early childhood cognitive development. The location of this activity was carried out at PAUD Jala Benaya which is located at Jalan Bandengan Utara Raya No.40H 5-6, RT.11/RW.15, Penjaringan, Penjaringan District, North Jakarta City, precisely in the 3rd-floor study room. This activity was initiated and led by Sampoerna University's SERASA team with the theme "Visual Storytelling Learning Method for Early Childhood." The main facilitators involved in this activity were Mr. Santo Tjhin, Mr. Lukman Alfakihuddin, and Mr. Iwan Setiawan, assisted by two students from Sampoerna University. Through this collaborative approach, it is expected that participants (early childhood teachers and early childhood students) can utilize the knowledge gained to be applied in their daily learning process.

Training activities series

The training took place in a series of sessions that were systematically designed to provide material exposure, demonstrations of technology use, and opportunities for participants to interact directly with the technology used. The following is a summary of the activities carried out:

Run Down PAUD Jala Benaya
08 June 2023. (Kamis)
Tema : Visual Storytelling Learning Method for Early Childhood

08.00 – 08.30	: Meeting Point
08.30 – 09.00	: Paud Jala Benaya - Jl. Bandengan Utara Raya No.40H 5-6, RT.11/RW.15, Penjaringan, Kec. Penjaringan, North Jkt, Special Capital Region Jakarta 14440
09.00 – 12.00	: Sampoerna's Remarks : Remarks by Jala Benaya Representative : Symbolic Handover of Computers represented by Sampoerna & Jala Benaya. : Souvenirs from Jala Benaya Paud : Group Photo*. - All Participants Jala Benaya & Team Serasa SU : Presentation of Visual Storytelling Learning Method for Early Childhood *. Mr Santo Tjhin, *. Mr Lukman Alfakihuddin, and *. Mr Iwan Setiawan : Quiz on the material presented, with teachers & students of Paud Jala Benaya
12.00 -01.30	: Refreshment *. Lunch
01.30 -02.30	: *. Game Education *. Participant Testimonials

Figure 3. Event Rundown.

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Providing Materials and Training to PAUD Teachers

The first session of the activity began with the provision of materials to PAUD teachers on the Visual Storytelling Learning Method. This material was designed to emphasize the importance of using visual media in early childhood learning, especially since children at this age tend to be more interested in things that are dynamic and moving.

The main points presented in this training include:

1. The Role of Visual Media in Early Childhood Learning
   Effective learning for early childhood should involve dynamic visual media, as at the pre-operational stage, children are not yet able to think abstractly. By using pictures, videos, and other visual aids, children can more easily understand basic concepts such as letters, numbers, and shapes.
2. The importance of planned preparation in teaching early childhood
   Early childhood teachers play a role in organizing and conditioning the learning environment to make it interesting for children. Well-planned preparation will result in a meaningful learning process. This includes selecting teaching aids that suit children's needs, such as picture cards, posters, or interactive videos.
3. Learning as a fun, interactive process for children
   Learning is defined as a process of behavioral change that occurs as a result of interaction between an individual (child) and their environment. Therefore, PAUD teachers must be able to create an interactive learning environment that involves active participation from children.
4. Visual Learning Style
   In this session, ECD teachers were introduced to visual learning styles where children focus more on visual elements than text or sound. ECD teachers are given an understanding of several types of visual media that can be used in learning, such as:
   - Instructional Material
   - Audio Visual Communication
   - Visual Education
   - Educational Technology
   - Teaching aids (posters, cards, pictures, and interactive videos)

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Figure 4. Provision of interactive multimedia material.

Demonstration and Interaction with Technology

After the presentation of the material to the teachers, it was continued with a demonstration session on the use of digital technology and Artificial Intelligence (AI) as a learning tool. PAUD teachers and students of PAUD Jala Benaya were invited to interact directly with the technology that had been introduced, using several AI-based sites as visual learning media. The sites used in this demonstration include:

1. neal.fun/deep-sea
   This site allows children to explore marine life with interactive visualizations, allowing them to get to know different types of marine animals. With engaging and interactive displays, children are invited to understand marine ecosystems in a fun way.
2. stars.chromeexperiments.com
   This site helps children learn about the solar system through an interactive exploration of celestial bodies. Children can see the planets and stars, and gain basic knowledge about astronomy.
3. autodraw.com
   This site facilitates children to learn how to draw with the help of AI technology. The AI on this site can recognize and complete drawings made by children, so they can develop their creativity and visual skills.

This workshop and demonstration aim to introduce that modern technology can be an effective tool in early childhood learning, by providing an interactive and fun learning experience. The technology used is not only educational but also stimulates children's imagination and creativity.

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Result

Digital technology in the era of 4.0 is not a foreign technology in the current era of disruption, as the world of education is the origin of technology. Therefore, the maximum use of technology in the world of education is a must to facilitate the teaching and learning process. On Thursday the 8th of June, SERASA Sampoerna University carried out community service in the form of training & workshops at PAUD Jala Benaya with the theme "Visual Storytelling Learning Method for Early Childhood". This activity aims to provide training and understanding to PAUD teachers on the importance of using visual media and technology in the early childhood learning process. This workshop will also provide an interactive experience for PAUD students to recognize different digital technology-based learning media. The objectives of the implementation of this activity are:

1. Improve the ability of PAUD teachers to utilize visual media and digital technology for more effective and interactive learning.
2. Provide knowledge to PAUD teachers about visual learning styles of early childhood and how to maximize children's potential through this approach.
3. Introducing Artificial Intelligence (AI) based technology to children as a learning tool, especially to recognize sea animals, solar system, and drawing skills easily.
4. Helping to improve the cognitive development of PAUD children through learning methods that are more interesting, interactive, and focused on the needs of pre-operational age.

During the training and workshop, there were several stages of material provided to PAUD teachers and students of PAUD Jala Benaya, namely:

1. The role of PAUD teachers in organizing the learning environment through understanding that they have a key role in creating a conducive learning environment.
2. An interesting and structured environment will help early childhood to be more focused and engaged in learning.
3. Teachers are invited to create an interactive atmosphere by utilizing various visual media so that children absorb information more easily.

Scheduled preparation makes for more meaningful learning. This is emphasized in this material. PAUD teachers are encouraged to systematically design learning activities using visual aids such as pictures, videos, and other props. This will help to increase children's interest in learning and make them more focused on their learning. Learning as an interactive process Teachers are told that learning is a process of behavior change that occurs through children's interaction with their environment. Visual media and technology play an important role in facilitating this interaction. Through dynamic visual media, children become more interested and actively involved in the learning process.

Visual Learning Styles and the Use of Media Early childhood educators will be

introduced to a variety of visual learning styles, such as

1. Teaching materials: The use of visual teaching materials such as pictures, posters, and videos.
2. Audiovisual communication: The use of audio-visual media to convey information more clearly.
3. Visual education: The use of visual teaching to help children understand abstract concepts.
4. Educational Technology: The use of educational technology in the learning process.
5. Props: The use of props to clarify concepts taught to children.

Use of Artificial Intelligence (AI) Technology In this session, PAUD teachers and students from PAUD Jala Benaya were introduced to the use of AI-based technology that can be used in the learning process. The websites used in the demonstration included :

1. neal.fun/deep-sea: Children are invited to explore underwater life through interactive visualizations.
2. stars.chromeexperiments.com: Students learn about the solar system and celestial bodies in an interactive way.
3. autodraw.com: Kids can learn to draw with the help of AI, where the technology can recognize and complete the drawing.

Figure 5. Interactive Learning using Artificial Intelligence (AI) technology.

There are several positive outcomes from the activities undertaken by the teachers and students of PAUD Jala Benaya:

1. Increased teacher knowledge

   Teachers gained a deeper understanding of the importance of visual media in the early childhood learning process. They also realized that structured and well-designed learning preparation is essential to help children learn in a more fun and effective way.

2. Improved skills in the use of technology
   PAUD teachers have an understanding of technology and can use it in their daily learning activities. Through the use of AI-based technology, teachers now have new tools that can enhance the appeal of learning and help children learn visually and interactively.

Figure 6. Teaching method with props and activities.

3. An interactive learning experience for children
   Students at Jala Benaya PAUD get a fun and interactive experience through the use of AI technology. They learn about marine animals, and the solar system and develop their creativity by drawing with the help of technology. This helps to increase the children's interest in learning and makes learning more enjoyable.

Figure 7. Interactive Learning with interactive animations.

During the implementation of the activity, Serasa Sampoerna University encountered several obstacles. These included:

1. Limited equipment

One of the main obstacles encountered during the workshop was the limited technological equipment at PAUD Jala Benaya. The use of technology could not be optimally implemented as many computers were inadequate to support digital technology based learning activities.

2. Limited initial teacher skills in using technology
   A number of the teachers in the PAUDs were unfamiliar with the use of technology in learning and needed time to learn how to incorporate AI technology into learning activities.

The SERASA Sampoerna University team donated four Lenovo computers to PAUD Jala Benaya to help them overcome the various obstacles they face. Mr. Santo Tjhin attended the handover of the computers. With the addition of these computers, it is hoped that PAUD teachers and students will be able to maximize the use of technology in their learning activities. The computers are designed to support the use of visual media and AI technology in learning and are expected to improve the quality of education at PAUD Jala Benaya.

Figure 8. Handover of Computer Units to representatives.

Figure 9. Group photo of PAUD Jala Benaya community service activities.

Conclusion

The workshop conducted by the Sampoerna University community service team has had a positive impact on the improvement of PAUD teachers' understanding and skills in the use of visual media and technology in early childhood education. Although there are obstacles in the form of limited technological equipment, the solution provided in the form of donated computers is expected to help maximize the use of technology in teaching and learning. With the support of technology, the teachers and students at PAUD Jala Benaya will now be able to carry out a learning process that is more interactive, more interesting, and more in tune with the times.

Acknowledgements

The community service project of Sampoerna University's SERASA team at PAUD Jala Benaya, Penjaringan, North Jakarta, on June 8, 2023, went smoothly and brought significant advantages to the teachers and students of PAUD Jala Benaya. In the closing ceremony of the activity, Mr Johan Sunarto, a representative of Jala Benaya Foundation, expressed his deep gratitude to Sampoerna University for its contribution and support in the advancement of early childhood education through the introduction of visual learning methods and artificial intelligence technology. Mr. Johan Sunarto and the team and faculty who conducted the community service activities at PAUD Jala Benaya especially thanked Mrs. Endriyani Widyastuti and Mr Surya Danusaputro Liman, leaders of Sampoerna University, for their trust and permission to conduct this community service activity. The support they provided was key to the success of the event, from planning to implementation. In addition, the donation of four Lenovo computers from Sampoerna University was recognized as a real contribution to improving the quality of learning facilities and infrastructure at PAUD Jala Benaya.

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