Using Digital Learning Media Applications In Introducing Marine Education To Children

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ARTICLE INFO	ABSTRACT
	In limited circumstances, the role of educators is very central to creating an atmosphere and learning achievement. education is important to be introduced from an early age so that children can grow up living with their love of being a maritime nation. The growth of maritime values can foster identity in children. The role of PAUD as an educational institution in instilling a maritime spirit is one of them by implementing maritime learning content based on what is in the 2013 PAUD curriculum. Maritime education has material content that cannot be explained abstractly in early childhood. So that is helping the learning and learning process that takes place effectively and efficiently, interesting learning resources are needed. An interesting learning resource today is an active and interactive learning resource by collaborating with *Information and Communication Technology* (ICT) *audio* and *visual*. This study uses the method of literary analysis and implementation in children aged 5-6 years. The results of the study show that ICT collaboration in maritime learning in early childhood affects the learning process that is interesting, effective, interactive, and encourages children's interaction and participation. This facilitates the *golden age* that is being experienced by children so that they can support, stimulate and develop the various multi-intelligence potentials of children so that they can interpret maritime education, especially in the 21st century.

Introduction

Knowing and loving the sea must be introduced to children at an early age because they are the forerunners of the nation's next generation (Harefa & Sarumaha, 2020). So that children can live as a maritime nation. Children must know their national identity so that maritime values grow in children, and their identity as a maritime nation will be

maintained (Soedarsono, 2013). Living in an archipelagic country with the vast expanse of the Indonesian sea with all its wealth, we should be prepared to protect it. Indonesia has a sea area 2/3 wider than the land. As the world's maritime axis, its territory stretches from west to far east along 5,111 km from north to south as far as 1,888 km geographically and economically. In addition, this rich country is located in the middle of the Pacific Ocean and the Indian Ocean so it becomes the link between the two oceans. By having the potential of marine natural resources which are very abundant, the marine wealth, as well as the fishing and shrimp fishing area, reaches 6.1 million km2. The role of education in instilling a maritime spirit is very important in preparing the condition of a nation that is strong and good at managing its maritime wealth. Therefore, maritime education should be the main focus of compulsory learning in PAUD and not just a compliment (TUAH, 2019). Maritime education is currently included in the content of the 2013 PAUD curriculum material. In the Guidelines for Maritime Education in PAUD Units by Dr. Hasbi, M. et al. (Bakrun, 2019) it is stated that the Regulation of the Minister of Education and Culture Number 17 of 2014 concerning PAUD Standards and the Regulation of the Minister of Education and Culture Number 146 of 2014 concerning the PAUD Curriculum are the reference standards for the content of the maritime curriculum. The content of the maritime curriculum for early childhood includes Indonesian maritime material, understanding of the conditions of Indonesia's maritime territory, the characteristics of Indonesian waters, the potential and wealth of Indonesia's seas, and the use of the coastal environment as a vehicle for early childhood play and transportation and trade routes (Farchan & Muhtadi, 2019). *Augmented Reality* based on the opinion (Mustaqim & Kurniawan, 2017) in (Mustaqim, 2017) is an interactive technology in the form of objects that are projected in a real environment that appears inreal-time*e*. Meanwhile, based on the opinion of Sinduningrum, et al. (Puspitadewi et al., 2020) (Wardani, 2015) through the use of *augmented reality* (Ibáñez & Delgado-Kloos, 2018) children can learn while playing so that the process of recognizing letters and vocabulary that are considered boring activities can be minimized so that it is fun and can attract children's attention. ICT collaboration in maritime learning in early childhood affects the learning process that is interesting, effective, interactive, and encourages interaction and participation of children, especially in the 21st century.

Character education has a meaning that is not much different from moral education. Maritime character education is an education that instills maritime values with religious, social, and cultural dimensions, which can be manifested in character, both in actions and words. The integration of the environment with the sea as well as involving physiological and psycho-socio-cultural adaptations by utilizing the sea and its contents together is a common and strikcharacteristiccter of maritime communities. Maritime character education is an important part of human life that absolutely must be owned, especifor ally teenagers.

One way to support learning in this context is the use of digital media. Due to their different functions, digital media have a high potential to structure and support informal learning. Digital media offer opportunities to present information in a variety of ways, for example visual and auditive or by mixing virtual and real environments (Degner et al., 2022).

Method

Methods The research method used in this study uses the method of literary analysis and observation and implementation of digital application media in children aged 5-6 years (Danandjaja, 2014). With the number of teachers 4 people. The results of the study show that ICT collaboration in maritime learning in early childhood through digital application media affects the learning process and atmosphere that is interesting, effective, interactive, and encourages children's interaction and participation (Widianti, 2020) This facilitates the *golden age* that is being experienced by children and can support, stimulate and develop various multi-intelligence potentials that children have so that they can understand marine resources which are part of maritime education.

Results and Discussion

Digital Application Media in introducing maritime education and marine animal learning to children has a positive influence on students The process during the use of this media provides a real sensation of experience through *augmented reality* with *audio* Learning activities that take place using the type of situated learning activity in a context Certain aspects, and the quality of learning, are the result of interactions between people, places, objects, processes and culture in certain contexts (Kampschulte et al., 2019) Collaborated interactive activities when using media. This media as a medium for learning about marine animals in introducing maritime education to children can encourage participation and understanding in children. Implementation was carried out on 12 students aged 5-6 years. Before using digital application media, only 2 people were active in learning activities and 4 people occasionally answered questions. After the collaboration in the use of digital application media, there was a significant increase among students who actively participated in learning about marine animals in the maritime world. Because it is effective, efficient, and has high adaptability, as a medium for learning marine animals in introducing maritime education to children, it is very

suitable for use in the learning process and refers to *constructivist learning theory* which is an active learning process in building meaning systems as well as understanding reality through observation. and interactions (Suhendi, 2018).

Table 1
An observation survey of marine animal understanding in the maritime context using digital application media

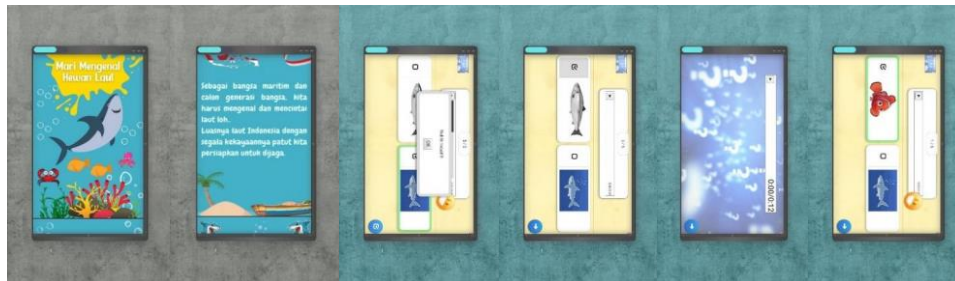| no.	Before Use	After Use
Understanding Material	2/12 students	9/12 students
Participation and activity	4/12 students	11/12 students
	Low	High

Figure 1
The appearance of digital application media in introducing maritime resources

Media This application can be used on gadgets in the form of games that contain learning content by the teaching footing which consists of apperception, material introduction, ability test, feedback, and reaffirmation. This media can optimize the learning process as well because the content of maritime education material is very important to be taught to children to foster a sense of love for the homeland. This Digital Application Media can be an effort to build a generation of marine resource guards and all the potential in it and become a solution in maritime learning in Kindergarten. Thus this media is designed as a digital media innovation that has a positive impact that is extraordinarily effective.

Conclusion

ICT collaboration in maritime learning in early childhood through digital application media affects the learning process and atmosphere that is interesting, effective, interactive, and encourages children's interaction and participation. This facilitates the *golden age* that is being experienced by children and can support, stimulate and develop various multi-intelligence potentials that children have so that they can understand marine resources which are part of maritime education. We will use the Digital Media Application as a follow-up program for several Kindergartens in various

regions by utilizing the network of fellow educators and children in the surrounding environment to assist the 21st-century learning process. Cooperation with educational institutions is the best solution for implementing an impactful educational process and attracting the trust of parents.

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BIBLIOGRAPHY

Bakrun, M. (2019). *Bantuan Pengembangan SMK Kelautan Pendukung Kemaritiman*. Direktorat Jenderal Pendidikan Dasar dan Menengah.Google Scholar

Danandjaja, J. (2014). Metode Penelitian Kepustakaan. *Antropologi Indonesia*. Google Scholar

Degner, M., Moser, S., & Lewalter, D. (2022). Digital media in institutional informal learning places: A systematic literature review. *Computers and Education Open*, *3*, 100068. https://doi.org/https://doi.org/10.1016/j.caeo.2021.100068 Google Scholar

Farchan, A., & Muhtadi, A. (2019). Pengembangan Desain Kurikulum Maritim di Jepara. *Indonesian Journal of Curriculum and Educational Technology Studies*, *7*(1), 27–36. Google Scholar

Harefa, D., & Sarumaha, M. (2020). *Teori Pengenalan Ilmu Pengetahuan Alam Sejak Dini*. PM Publisher. Google Scholar

Ibáñez, M.-B., & Delgado-Kloos, C. (2018). Augmented reality for STEM learning: A systematic review. *Computers & Education*, *123*, 109–123. Google Scholar

Kampschulte, L., Ostermann, A., Müller, F., Ropohl, M., Schwanewedel, J., Härtig, H., & Lindmeier, A. (2019). Einsatz digitaler und analoger Medien an außerschulischen Lernorten. *Kiel: IPN*. Google Scholar

Mustaqim, I. (2017). Pengembangan media pembelajaran berbasis augmented reality. *Jurnal Edukasi Elektro*, *1*(1). Google Scholar

Mustaqim, I., & Kurniawan, N. (2017). Pengembangan augmented reality sebagai media pembelajaran pengenalan komponen pneumatik di SMK. *Jurnal Pendidikan Teknologi Dan Kejuruan*, *14*(2). Google Scholar

Puspitadewi, F., Dewi, F., & Maranatha, J. R. (2020). Analisis Tiga Aplikasi Augmented Reality Untuk Mengenalkan Nama Binatang Dalam Bahasa Inggris Pada Anak Usia Dini. *Research in Early Childhood Education and Parenting*, *1*(2). Google Scholar

Soedarsono, S. (2013). *Membangun kembali jati diri bangsa*. Elex Media Komputindo. Google Scholar

Suhendi, A. (2018). Constructivist learning theory: The contribution to foreign language learning and teaching. *KnE Social Sciences*, 87–95. Google Scholar

TUAH, Y. H. (2019). Pendidikan Karakter Maritim Sebagai Upaya Memperkuat. Google Scholar

Wardani, S. (2015). Pemanfaatan Teknologi Augmented Reality (AR) untuk Pengenalan Aksara Jawa pada Anak. *Jurnal Teknologi*, *8*(2), 104–111. Google Scholar

Widianti, S. (2020). Konektivitas dan Kolaborasi: Peran Information Communication Information (ICT) Sebagai Enabler Musisi Generasi Net Indonesia Menembus Industri Musik Global. *Jurnal Budaya Nusantara*, *4*(1), 164–177. Google Scholar