**Research Gap**

A deficiency exists in the application of augmented and virtual reality (AR/VR) in building, engineering, and architectural education, and training, according to Chen and Wang (2022). It highlights the need for more research since, although it addresses educational needs, it does not specifically address early childhood education or provide methods tailored to primary school kids. Another recent research has investigated a Sinhala writing aid for kids, filling a specialised demand by concentrating on handwriting correction but excluding a larger variety of educational topics or material (Arambewela et al.,2021).

Kingsley and Ismail (2015) have highlighted web-based e-learning programmes for young children in preschool, highlighting the role that digital platforms play in early childhood education. It does, however, imply that these systems might not fully make use of cutting-edge technology like augmented reality or tackle issues with environmental studies or nature education. The research about “AI-based learning style prediction in online learning for primary education” focuses on the role AI plays in identifying students' learning preferences and customising learning resources. Because the application uses augmented reality (AR) for environmental studies and the research is focused on AI-driven personalised learning, it draws attention to a research gap (Pardamean et al., 2022).

Easy Learning is an augmented reality (AR) mobile application that another research offers to help primary school kids learn about environmental topics. Both apps use augmented reality (AR) for teaching, although they have different focal points. Easy Learning covers a wider range of topics than your programme, which is limited to trees and animals. In line with the subjected research, the existing research investigates augmented reality-based environmental studies for elementary pupils. But the proposed system is more impactful and versatile since it provides a more complete solution, with capabilities like content summarising, self-assessment, and safe internet browsing (Wickramapala et al., 2019).

The research of Wijaythilake et al., in 2018 investigates phonological awareness, phonological memory, akshara knowledge, and rapid automatized naming (RAN) as cognitive determinants of Sinhala word reading. The application's concentration on environmental studies with augmented reality technology, as opposed to this research’ss examination of the cognitive aspects of language acquisition, creates a research gap. With its comprehensive approach that incorporates augmented reality, safe internet browsing, content summary, and self-assessment elements to enhance learning experiences, your new application is more suited to meeting the educational demands of primary school pupils. The proposed application claims to offer a comprehensive solution that is in line with contemporary educational needs by bridging the gap between developing technology and instructional material.

According to the above literature the need for innovative solutions in primary education, particularly leveraging emerging technologies like augmented reality (AR) can be determined. Current offerings often lack the depth and versatility needed to fully engage and educate primary students. The proposed system aims to address this gap by integrating AR technology with an interactive educational platform. The application fosters essential cognitive skills, curiosity, and creativity, and incorporates diverse educational content across various subjects. This innovative approach goes beyond traditional approaches, providing a comprehensive learning experience. Plus, it emphasizes the need for transformative solutions in primary education and the potential of the proposed system to revolutionize early childhood education.

**References**

Arambewela, A.L.D.S., Ahangama, S. and Dissanayake, D.M.A.K. (2021) ‘Real-time Sinhala writing assistant for kids’, *2021 IEEE 16th International Conference on Industrial and Information Systems (ICIIS)* [Preprint]. doi:10.1109/iciis53135.2021.9660732.

Kingsley S., O. and Ismail Z, M. (2015) ‘Web based e-learning system for Pre-school Kids’, *International Journal of Information Systems and Engineering*, 3(1), pp. 219–232. doi:10.24924/ijise/2015.11/v3.iss1/219.232.

Pardamean, B. *et al.* (2022) ‘AI-based learning style prediction in online learning for primary education’, *IEEE Access*, 10, pp. 35725–35735. doi:10.1109/access.2022.3160177.

Wickramapala, T. *et al.* (2019) ‘Easy learning: Augmented reality based environmental studies for primary students’, *2019 International Conference on Advancements in Computing (ICAC)* [Preprint]. doi:10.1109/icac49085.2019.9103402.

Wijaythilake, M.A. *et al.* (2018) ‘Cognitive predictors of word reading in Sinhala’, *Reading and Writing*, 32(7), pp. 1881–1907. doi:10.1007/s11145-018-9927-5.