

# **INTRODUCTION OF VEGETABLES AND FRUITS FOR AUTISM SPECTRUM DISORDER (ASD) CHILDREN USING ANDROID-BASED AUGMENTED REALITY TECHNOLOGY**

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## **ABSTRACT**

*Autism is a neurobiological developmental disorder that affects children's social, communication and interaction abilities. Limitations in accepting and interacting with healthy foods, such as vegetables and fruit, are common challenges in children with autism. To overcome this challenge, researchers propose the use of Augmented Reality (AR) technology as an interactive and fun method for introducing vegetables and fruit to children with autism. This research aims to investigate the effectiveness of using AR in increasing the interest and acceptance of children with autism towards vegetables and fruit by proposing the use of augmented reality technology and applying the Picture Exchange Communication System (PECS) technique. The PECS method is a communication training technique that uses pictures or symbols to help children with autism communicate. This application was designed using the Unified Modeling Language (UML) tool. Testing of this application is carried out using alpha testing and beta testing. The results of alpha testing using a black box can be concluded that the application runs smoothly and there are no problems with its functionality. Results from beta testing with an average of 82.50%. So it can be concluded that the use of the PECS method and AR technology can improve communication skills and motivation in recognizing vegetables and fruit, and can help children with autism follow the Gluten Free Casein Free (GFCF) diet which is used to reduce the symptoms experienced by children with autism.*