

**The Implementation of Deep Learning in Instructional Media for Fruit  
Recognition for Children in Study Groups.)**

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**ABSTRACT**

*The role of instructional media is crucial in supporting learning activities for children in study groups, as they undergo rapid development during this period. The use of technology in instructional media also has a positive impact on the delivery of learning materials and the improvement of the quality of education. Therefore, in this activity, Deep Learning is applied for early childhood fruit recognition. The method employed in this instructional media is Convolutional Neural Network with DenseNet-121 architecture to achieve optimal system performance. Training data was conducted for 100 epochs, resulting in a system accuracy rate of 98.5%. Additionally, learning media has undergone system testing using confusion matrix, as well as direct functionality testing with early childhood children at the PAUD Alamanda 105 Child Education Center.*

**Key words :** *Learning Media, Deep Learning, Convolutional Neural Network*