DEVELOPMENT OF MOBILE APP-BASED AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC) TOOLS FOR PEOPLE WITH CEREBRAL PALSY IN ACTIVITIES OF DAILY LIVING (ADL) SKILLS

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

DEVELOPMENT OF MOBILE APP-BASED AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC) TOOLS FOR PEOPLE WITH CEREBRAL PALSY IN ACTIVITIES OF DAILY LIVING (ADL) SKILLS

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Cerebral palsy (CP) is a brain disorder that causes motoric impairment and the communication method uses gesture, body language, and verbal but not clear. Two current prominent methods which helps communication process are Augmentative and Alternative Communication (AAC) and through Brain Computing Interaction (BCI). Simplified AAC is developed by adapting Activities of Daily Living (ADL) skills and AAC pictorial-based system. The objective of this research is to prove that this simplified AAC method in mobile apps could make the communication process easier and develop online platform for Caregivers to exchange experiences in using the ADL color configuration. This research follows prototyping method with functionality, user acceptance test and ended with usability testing conducted to both CP individual and their caregivers at YPAC Jakarta and the questionnaire is modeled after Nielsen's usability study. The software result is acceptable to the CP therapists and all functionality features can run well. The test result proves that communication process is easier using AAC Messaging and development of TAP Online platform is able to create a starting point for caregivers to share and build communities.

Keyword: *Mobile Apps, Augmentative and Alternative Communication, Cerebral Palsy, Activities of Daily Living Skills, Brain Computing Interaction.*

DEDICATION

I dedicate this thesis work for Cerebral palsy individuals in YPAC (Disabled Children's Counselling Foundation) Jakarta and their caregivers and therapists.

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