Notice of the Final Oral Examination for the Degree of Master of Arts

of

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“The Effectiveness of Information and Communications Technology (ICT) Used in Second Language (L2) Classrooms: A Meta-analysis”

Department of Curriculum and Instruction

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Remote Defence

Supervisory Committee:
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Abstract

Objectives: A number of primary empirical studies report strong and positive relationships between information and communications technology (ICT) and second language (L2) learning outcomes. However, these strong relationships were not observed in recent meta-analysis studies associated with ICT and L2 learning outcomes. This meta-analysis study aims to iterate the evaluation of effectiveness of ICT integrated L2 classrooms.

Method: Initially, a study search and screening of the digital database were conducted to include quantitative studies exploring the use of ICT for L2 skills in classroom contexts with an experimental design. Then essential statistics from included studies were retrieved and coded. Standardized mean difference of comparison groups across included studies were calculated as the unit of analysis. Finally, a random effects model was used to pool mean effects sizes calculated from included studies. Heterogeneity test, subgroup analysis and publication bias were assessed for implication of study variation and reliability.

Results: After a systematic study search and screening, 30 experimental studies were included for this meta-analysis, which yielded 43 effect sizes based on comparison groups across included studies. Results showed a large effect size in favor of technology-integrated instruction with substantial between-groups heterogeneity. Additionally, nine moderating variables were identified, covering substantial, methodological and reporting features. Results also updated the current information on the state of methodological practice in the L2 research domain and suggested that the reliability of instruments used for measurements were overlooked and might lead to an overestimation of effect size.

Conclusion: The current meta-analysis provided an updated evaluation of the ICT integrated L2 classrooms, supporting the effectiveness of integrating technologies into L2 instruction (with the exception of L2 pragmatics). Both theoretical and methodological maturation were observed in the research domain, as well as methodological limitations which might impact the precision of effect size. More research is needed to explore more specific topics, as well as methodological imperfections in ICT integrated L2 classrooms.

Keywords: meta-analysis, information and communication technology, second language classroom