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

of

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BSc (University of Victoria, 2017)

“Performance-based Measures of Executive Function
and BRIEF-P in Preschoolers”

Department of Psychology

Monday, April 26, 2021
10:00 A.M.
Remote Defence

Supervisory Committee:
Dr. Ulrich Mueller, Department of Psychology, University of Victoria (Supervisor)
Dr. Michael Masson, Department of Psychology, UVic (Member)
Dr. John Sakaluk, Department of Psychology, Western University (Outside Member)

External Examiner:
Dr. John Walsh, Educational Psychology and Leadership Studies, UVic

Chair of Oral Examination:
Prof. Robert Lapper, Faculty of Law, UVic

Dr. Stephen Evans, Acting Dean, Faculty of Graduate Studies
Abstract

Preschool years are an important period for executive function (EF) development. The two common ways of assessing EF in preschoolers are performance-based (PB) and rating measures. One of the most commonly used rating scales for preschoolers is the Behaviour Rating Inventory of Executive Function – Preschool Version (BRIEF-P). The current study explored the longitudinal relationship between three PB measures (Grass/Snow, Shape School, Self-ordered Pointing) and corresponding BRIEF-P scales (Inhibit, Shift, Working Memory) in typically developing preschoolers. There were three assessments, with six-month intervals. Participants included 101 children at first assessment, with 86 and 75 in subsequent waves. Using a latent variable approach, longitudinal measurement invariance was tested, supporting partial strong invariance. Results showed a lack of direct correlations between PB measures and corresponding BRIEF-P across time. These findings were interpreted in the context of existing literature, yielding a more nuanced understanding of what these two types of measures assess. Specifically, it is proposed that BRIEF-P measures children’s subjective, average level of EF, while PB tasks measures their objective, in-the-moment EF.

Keywords: executive function, preschool, BRIEF-P, performance-based, assessment