



**INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS**

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SHORT ABSTRACT

This thesis explores how bilinguals' real-world language use—particularly their contextual patterns of language switching—modulates executive control functions. Framed within the Adaptive Control Hypothesis, the study investigates the cognitive implications of bilingual interactional contexts (single-language, dual-language, and dense code-switching) on the components of the executive control mechanism, namely, cognitive flexibility, working memory, inhibitory control, and affective control. In order to do so, a comprehensive battery of nine behavioural tasks (such as Switching tasks, N-Back task, Stroop task, Emotional Go/No-go task, etc.) was employed to target the various domains of executive control. The participants were grouped based on their contextual language usage, and their performance in the abovementioned tasks was analysed. The analyses examined both accuracy and reaction time measures to see how different components of the executive control engage across various tasks, based on the language usage behaviour of young adult bilinguals. Our findings indicated that all three language context environments exerted differential patterns of cognitive control, thereby resulting in the language context groups performing differently across the various tasks. This suggests that contextual language use does not maintain a uniform advantage as previously assumed, but rather contextual usage shapes the utilisation of executive control mechanisms in a context and domain-specific manner. Thus, by situating bilingualism within its sociolinguistic context, this study contributes to a better understanding of bilingualism in an under-researched non-WEIRD country where being bilingual is commonplace and the norm.