

Comparative Study of the Motivation to Learn ICT among Gampaha District School Children: Interactive Whiteboards vs. Traditional Whiteboards in Online Teaching

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This study investigates the impact of interactive whiteboards (IWBs) versus traditional whiteboards on the motivation of 11th-grade students in Gampaha District, Sri Lanka, to learn Information and Communication Technology (ICT). The shift towards digital teaching tools underscores the need to assess how these technologies affect student engagement and learning outcomes. The primary aim is to determine if IWBs can significantly enhance students' motivation towards ICT compared to traditional teaching methods. The objectives include comparing pre and post-intervention motivation levels between students taught with IWBs and those taught with traditional whiteboards, and analyzing specific areas of motivation such as Technology Orientation, Instrumental Orientation, Self-Confidence in ICT, and Self-efficacy beliefs. The study included 180 male and 106 female students from public schools in the Gampaha District. The study divided 286 students into two groups, employing a robust methodology to ensure accurate, reliable findings. Data was collected using a self-administered questionnaire before and after a seven-week intervention. Statistical analysis included Independent Samples t-tests and Levene's test for equality of variances. Before the intervention, motivation levels were comparable between the groups. Post-intervention data revealed that students using IWBs showed significantly higher motivation across all examined dimensions. For example, in Technology Orientation, IWB users scored 4.72 compared to 4.39 for non-users ($p=0.027$), and in Self-Confidence in ICT, IWB users scored 4.86 versus 4.29 for non-users ($p=0.012$). This study aims to provide evidence that integrating IWBs into classrooms can make learning more interactive and engaging, significantly improving student motivation.

Keywords: Interactive Whiteboards (IWBs), Student Motivation, Information and Communication Technology (ICT), Educational Technology, Quantitative Analysis