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Notice for the PhD Viva Voce Examination

Mr Sijo Varghese, Registration Number: 2170082, PhD Scholar at the Department of Social Work, School of Psychological Sciences, Education and Social Work, CHRIST (Deemed to be University) will defend his PhD thesis at the public viva-voce examination on Wednesday, 10 June 2026 at 11.00 am in Room No. 044, Ground Floor, R&D Block, CHRIST (Deemed to be University), Bengaluru - 560029, Karnataka, India.

Title of the Thesis : **Enhancing the Integration of Education for Sustainable Development into Curriculum among Secondary School Teachers: An Intervention Study**

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The members of the Research Advisory Committee of the Scholar, the faculty members of the Department and the School, interested experts and research scholars of all the branches of research are cordially invited to attend this open viva-voce examination.

Registrar (Academics)

Place: Bengaluru
Date: 27 May 2026

ABSTRACT

Education for Sustainable Development (ESD) is a transformative educational approach to architect a sustainable future. It enhances teachers' skills, knowledge, and values aimed at effective sustainability pedagogy, aligning with SDG 4.7, the 2030 Agenda, and the NEP 2020 vision. Despite policy support, deploying ESD in secondary school curricula confronts barriers, including insufficient teacher preparation and professional development in marginalised communities, challenging the necessity for tailored professional development models to enhance teacher confidence and pedagogy in ESD-based teaching. The objective of the study is to enhance ESD integration in strengthening secondary school educators' self-efficacy and pedagogical practices. The study employed a quasi-experimental, one-group pretest–posttest design without a control group, with a 3-month follow-up, to assess the effectiveness of a Multi-Cognitive Approach (MCA)–based ESD intervention. The intervention, consisting of 10 sessions over three months, was designed based on a need assessment (N=400) and a pilot study (N=20), focusing on MCA components such as content, perspective, process, context, and design. Fifty secondary school teachers from marginalized communities in Kerala, India, participated in the intervention, with 6+ years of teaching experience and no prior ESD training. Data were collected at three points using the Teachers' Self-Efficacy for ESD Scale (SEFF) and the Self-Reported ESD Practices Scale (PRAC). Statistical analyses were conducted with SPSS 29, employing paired-samples t-tests, repeated-measures ANOVA, and correlation analyses. Results revealed teachers' self-efficacy scores significantly improved post-intervention (52.70 ± 7.61) immediately, were sustained at three months (56.60 ± 4.59) compared to pre-intervention (49.06 ± 9.69) ($p < .001$). Educators reported effective ESD practices following the intervention (47.48 ± 7.16), compared to the pre-assessment (41.90 ± 5.91), and further improved at three months (51.86 ± 3.96). MCA effectively improved teachers' ESD self-efficacy and practices, with increased proficiencies at three months post-intervention. The study demonstrates that professional development grounded in the MCA enhances teachers' self-confidence and facilitates the constructive incorporation of ESD in secondary classrooms, particularly in marginalized contexts. It proposes a conceptual framework that emphasizes collaboration, ongoing support for teachers, and targeted training for ESD animators. Recommendations include establishing ESD cells in schools and mentoring systems to bolster ESD initiatives, with active participation from students, parents, and stakeholders. Future research should explore ESD interventions at various educational levels. The MCA-based intervention is identified as a scalable model in line with policy objectives.

Keywords: education for sustainable development, curriculum, self-efficacy, teaching practices, marginalized communities

Publications:

1. Varghese, S., and Mathew, P. M. (2026a). A multi-cognitive approach to empowering secondary school teachers' self-efficacy and practices related to education for Sustainable Development. *Asian Education and Development Studies*, 1–20. <https://doi.org/10.1108/aeds-09-2025-0491>
2. Varghese, S., & Mathew, P. M. (2026b). Beliefs of secondary school teachers towards education for sustainable development: A statistical research. *International Journal of Evaluation and Research in Education*, 15(2), 1332. <https://doi.org/10.11591/ijere.v15i2.35765>
3. Varghese, S., & Mathew, P. M. (2026c). Optimizing education for sustainable development through secondary school teachers with relevant subjects, standards, and training: Quantitative Review. *Asian Journal of Human Services*, 30(2). <https://doi.org/10.14391/ajhs.e3002.1.023>
4. Varghese, S., & Hemalatha, K. (2024). Were the recent air pollution and landfill fires in Brahmapuram at odds with Kerala's vision of Sustainable Development? *Present Environment and Sustainable Development*, 18(1), 219–233. <https://doi.org/10.47743/pesd2024181016>
5. Varghese, S. (2024). Environmental and Sustainable Development Policies to Address the Pollution Catastrophe in India. *Asian Journal of Water, Environment, and Pollution*, 21(3), 45–52. <https://doi.org/10.3233/ajw240033>
6. Varghese, S., & Mathew, P. (2025, August 22). Development of an ESD-Based Intervention for Enhancing Knowledge, Self-Efficacy, and Practices among Secondary School Teachers (Patent).