

## **Spatial Behaviour of the Undergraduates’ Satisfaction and Issues of Participation on E-Learning during COVID-19**

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All the higher education institutions in Sri Lanka have shifted to e-learning from face to face learning with the COVID-19 by making e-learning essential for every university student. However, the studies on e-learning during COVID-19 focused more on the overall satisfaction and issues, rather than aerial unevenness behind them. Therefore, as a preliminary attempt, this research was examined the spatial variation of undergraduates’ satisfaction and issues of participation in e-learning according to the residence. At the moment, 151 undergraduates have taken as the sample by covering 105 Divisional Secretariat Divisions in 20 Districts; representing 32% - 45% out of the total number of Divisional Secretariat Divisions in each district (hope to be completed all 25 Districts in further studies) and the findings & conclusions were made based on the sample. Geostatistical analysis: Inverse Distance Weighted Interpolation used as the main analysis technique to generate findings with the support of ArcGIS. The findings indicated that a minimum of 25% to a maximum of 86% of the undergraduates in different districts was believed that e-learning was successful. A higher percentage of undergraduates in Kandy, Colombo, and Galle were satisfied with the new learning method when respondents in Anuradhapura, Gampaha, Kegalle, Jaffna & Matale were moderately satisfied. But, a significant number of students in Monaragala, & Trincomalee were dissatisfied with the system and believed that it was unsuccessful. This reveals the students who live in major provincial capitals, and recently developed regions believed that e-learning was successful than the students in under-developed regions. Furthermore, respondents of 18 districts suffered from stuck/freezing rather than other difficulties in issues of participation. Except for the students in Colombo, Kalutara, & Galle, more than 70% of all other districts faced problems related to weak network strength due to uneven coverage network & geographical obstacles. Subsequently, the issue of data cost wounded respondents in 18 districts; mostly Monaragala, & Badulla, except for Colombo & Puttalam. Therefore, by indicating these spatial variations, the study suggests that the implementation of solutions and decisions on e-learning have to be flexible with both national and regional scales to provide a better virtual learning experience to the undergraduates.

**Keywords:** E-learning; COVID-19; Undergraduates; Spatial Behaviour