

## **The Variations of Spatial Distribution of the Schools in Colombo District: A GIS Based Approach**

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The education provides the life blood for human being. In Sri Lankan context Education Zone (EZ) is supervised the large numbers of schools in the specific area. Due to lack of application the Information Communication Technology (ICT) in education many problems can be identified in school management process. Especially there is a high potentiality to apply Geographic Information Systems (GIS) for education management and administration. Even most of the schools do not cover the GIS part in their curriculum. Now a day's popular schools gained more competition in the process of grade one student selection. Thus the schools used manual distance calculation system using hard copy of the area map, no common computerized system. And also there is a contrastive difference between Colombo urban schools and schools in the outskirts of Colombo. Within the Colombo metropolitan area the number of 1AB schools are higher than the other areas of the country as well as the outer core of Colombo. There are 36 National Schools and totally 405 government schools are situated in the district of Colombo. Moreover 16 out of 36 National schools are located in the Colombo metropolitan area. The study has been devoted to discuss what factors have been contributed towards the variations in spatial distribution of schools in the Colombo District. Identifying the spatial variation of school distribution in the district and determining the school catchment areas were among specific objectives. The school system can be used the GIS for distance calculation within the specific proximity area. In the study different GIS techniques like proximity analysis and Thiessen Polygon tools were being facilitated to identify threshold within a school clusters. This study tried to identify schools clusters by using Spatial Autocorrelation and Multi-Distance Spatial Cluster Analysis (Ripley's K Function) tools. The study had proven the schools in Colombo District are spatially distributed as clusters. According to the analysis main school clusters located in the western coastal area which having high density of schools. Excluded the core schools in clusters are being changed the level of schools. The results will be able to imply in the decision making in bottom level to top level especially in education zone.

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