

## **Analysis on Transport Mode Choices of School Children in Colombo District, Sri Lanka**

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### **Abstract**

The increase in the usage of private transport modes for school trips has become a major reason for traffic congestion in Colombo District during peak hours. Colombo District consists of 402 functioning government schools, with a total student population of 374,995. Those schools have been categorized into four categories based on the availability of classrooms. According to the Ministry of Education, there is a limitation which is imposed on the distance from home to school, in the student enrollment process. However, it has been identified that the distances are exceeding the limitation, with respect to the school type and location. As a result, students choose different transport modes based on many factors such as accessibility, connectivity, safety, reliability and comfort. This study focuses on identifying the distances from home to school and the respective transport mode choice of the students in Colombo District. In addition, the factors which affect those school children to avoid public transport modes were analyzed. The quantitative research approach has been used in developing the research methodology in several phases such as factor identification, mode choices and demand distribution. Data collection has been conducted through a questionnaire survey which covers 28 selected schools under four categories, with a total sample size of 2875 in all Divisional Secretariat Divisions (DSDs) of Colombo District. Stratified sampling technique was used to collect data from the above school types. Schools which have classes in all streams up to advanced level (1AB schools) show the highest percentage of students (44%) who travel a distance of 2-10 km from home to school, while other school types show the highest percentage of students (49%) who travel a distance range of less than 2 km. Further, it has been identified that 1AB schools have some students who travel more than 25 km daily for their school trips. School van/bus services are the main mode of transport which is used by the students of schools located in Colombo Municipal Council (CMC) area, while public transport modes such as bus, train and “Sisu-Sariya school bus service” are the main modes of transport which are used by the students outside the CMC area. Active transport modes are the least popular mode of travel in both CMC and Non-CMC area (13% each), while private transport modes, which consists of car/van/jeep, motorbikes and three-wheelers contribute 25% in CMC area and 33% in Non-CMC area. Furthermore, it has been identified that longer travel times, longer waiting times, poor accessibility, less security and less comfort are the main reasons for the students in Colombo District, to not use public transport services. Even though there is a dedicated public transport service (“Sisu-Sariya”), which have been provided for school

children, it has been found that there is a considerable usage of private transport modes for school trips in the district. Therefore, this study recommends a procedure to develop an improved public transport system for school trips including a model for trip distribution patterns, network connectivity and system planning to attract more students into public transport services.

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