What is the best ‘school run’ for the environment?

New research indicates that educational policies can affect the environmental, health and financial impacts of school commuting. It found that the most effective school-enrolment policy for reducing traffic emissions is to send children to the school closest to where they live.

School commuting emits both air pollutants and CO₂. The US study explored the influence of school policy on the environmental impacts of school commuting. Traditionally, elementary school children attended the school closest to where they live, but the 2002 “No Child Left Behind” Act encouraged school districts to allow parents to choose which school to send their child to, without limiting how far the school is from the child’s home. Although this school choice has received support from parents, few studies have evaluated its effect on school transportation.

Using results from a survey, the study predicted the impact of five policy scenarios for one school district on travel choice and emissions of five pollutants: carbon monoxide, CO₂, PM₁₀, nitrous oxides and volatile organic compounds (VOCs). The scenarios were as follows:

- **Current scenario**, where students continue to attend the same school as present;
- **Random scenario**, where students are assigned to a random school;
- **Neighbourhood only scenario**, where students are re-assigned to the school closest to where they live;
- **Regional choice scenario**, where parents can choose from several schools, but only those in the local area; and,
- **Increased walking scenario**, where all children within a certain distance of school commute via walking.

The neighbourhood only policy scenario eliminated school choice and predicted a four to five fold reduction in average travel distance. Walking rates were predicted to increase by three to four times. However, previous research has shown that if school commuting distances are reduced, parents may be more willing to drive their children to school instead of sending them on the bus. Thus, the use of cars was also predicted to increase but, due to shorter commutes, the total distance travelled by car was halved. The total emissions were predicted to be 3-8 times lower for this scenario than the current scenario, depending on the pollutant.

In the regional choice scenario the travel distance was predicted to remain nearly unchanged, as were the rates of walking. It was predicted that car usage would increase but bus usage would fall leading to a 13 per cent net drop in NOₓ emissions but a 4 to 45 per cent increase in the remaining pollutants.

In the increased walking scenario the 27 per cent of the students that live within a mile of the school they currently attend were assigned to walking. The walking rate and distance was predicted to at least double. Car use was predicted to fall by 8 per cent and the predicted effect on emissions was a decrease of 1 to 12 per cent.

The results indicated that school-assignment policy could affect the environmental impacts of the school commute. The predicted reductions in emissions for the increased walking and regional choice scenarios were surprisingly modest. This could be because many people choose to attend to a school that is further than a mile away from their home, so are not obliged to walk. For the regional choice scenario, the researchers assigned students to a school that could in fact have been further than their previous school.

Because the study focuses on environmental impacts, it does not evaluate possible advantages of school choice, such as increased racial and socioeconomic integration or parental choice. However, it does highlight potential environmental, health, and economic benefits of locating schools relatively closer to students’ homes. Although European policy doesn’t necessarily encourage school choice, it is useful to understand the possible impacts of such a policy stance and the possible reasons for why some policies, such as the one designed to increase walking, may not fulfil their potential.


Contact: julian@umn.edu

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