GIS Solving After-School Programming Demands

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Importance of After-School Programming

Studies have shown that children not involved in after-school programs are:

♦ 75% more likely to use tobacco or drugs
♦ 37% more likely to become teen parents
♦ 50% more likely to be arrested
♦ 3 times more likely to skip class
♦ 5 times more likely to be “D” students

Methodology

♦ Focus Groups
♦ Extensive Literature Review
♦ 3 Phases of Interviews
  • After-school Programmers
  • “High” & “Low” Achieving Schools
  • Department of Education Transportation Departments from around the country
Results of the Interviews

1. Springfield’s parents have limited school choice. Most choose to send their children to schools that they can be bussed to rather walk due to safety issues.

AND

2. Only 10% of Springfield’s student population attends after-school programming, mostly because many parents don’t have the means to get their children home. Many parents claim that they would rather send their child home to an empty house on the after-school bus than send them to after-school programming. The theory of many educators and after-school organizers is that participation will dramatically increase if transportation home from after-school programs is provided.

Queries Using GIS

1. How many schools do not have an after-school program within 1 mile?

♦ 2. How many schools are “high achievers”, meaning they have an overall MCAS score of 24 or greater. How many programs do these “high achieving” schools have associated with them and do any offer tutoring and mentoring?

♦ 3. Are the “high achieving” schools clustered in one area of the city?
How Query Was Conducted

♦ “Select by attribute”
  • overallmcas > 24
♦ Use the “buffering” function
  □ • schoolss (feature layer) make sure the use selected features box is checked
  □ • 1 mile
  □ • Check the no—do not dissolve barriers
♦ To find the number of programs: “Select by location”
  • Afterschools
  • • Are completely within
  • • Buffer of schools
  • • Apply
Continued Queries

4. Are the “low achieving” schools (those that had a 10 or less passing rate on the overall MCAS) clustered in one area of the city?

5. How many after-school programs are located in the “high-achieving” areas of the city?

6. How many after-school programs were located in the “low achieving” areas?
Final Queries

7. Of those programs that provide transportation are they serving limited areas of the city or are they city-wide?
8. Of those that provide transportation how many charge a fee?
9. How many programs in “low-achieving” areas charge a fee?
10. How many programs in “high-achieving” areas charge a fee?

Techniques Used

- Scanning & importing maps off the internet
- Georeferencing
- Digitizing
- Querying
- Buffering
- And even merging
Conclusions

♦ Lack of accessibility not a lack of programming is keeping children from attending after-school programs.
♦ As of yet no programs provide transportation home and those that provide transportation from school to the programs all charge a fee. Again decreasing the accessibility to programming. It is important to mention that 72% of all Springfield’s students receive “free lunch”, meaning their families are at or below the poverty line.
♦ After-school programs are within close proximity to each other. Therefore it would be realistic for programs to pool funds and share buses to transport participants home.