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Pre-K Access in Greenville, SC

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FURMAN

Abstract

There is a major education problem in South Carolina. According to a 2014 article provided by the American Legislative Exchange Council, which ranks every US state based on student performance in a nationally administered exam, Vermont ranks first and South Carolina last. Enrolling kids in Pre-schools to prepare them to enter grade school is a very important step in the learning process, yet many parents do not enroll their kids in any schooling before Kindergarten. The purpose of this project is to locate different pre-school programs in Greenville, South Carolina, and analyze various factors which could reveal why certain areas of this city experience much lower pre-school enrollment. Factors such as median income by family, population density, city bus routes, and race along with the locations of preschools will be shown on a visual map of Greenville in an attempt to draw conclusions for Pre-k attendance.

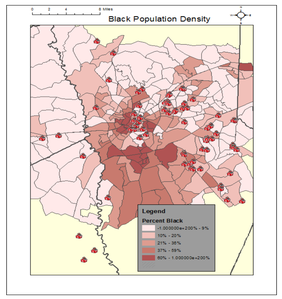
Introduction / Lit Review

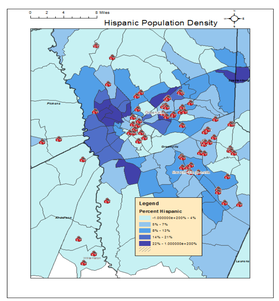
Pre-school is a proven system which increases a child's ability to learn prior to entering grade school. Parents have a great deal of influence in whether a child enrolls in Pre-k or not, yet there are several other factors that play into whether a parent can put their child into a Pre-school program.

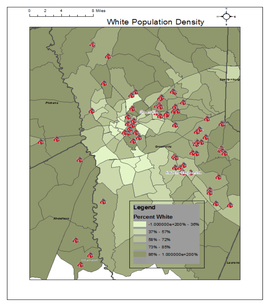
Speaking from personal experience, I believe getting the opportunity to do a year of pre-school set me ahead of all my friends in my neighborhood once we got to Kindergarten. I was fortunate enough to be able to go to preschool at La Petite Academy because despite both of my parents working from 8 to 5 each day, my grandparents were able to pick me up at 2 when I got out each day. Many kids are less fortunate than I was, and are unable to get a head start on the learning process.

Parents sometimes are simply unable to put their child in a preschool program due to a variety of factors. These include most commonly distance to travel and financial status. The problem lies in the fact that pre-schools tend to be located in areas where people are generally more willing to pay to enroll their child, or there is a large enough population density for a preschool to have enough applicants for it to be worth the start up risk. A preschool program's owner is not going to choose to be located in a small town, because he or she will surely lose money.

However, in an attempt to provide preschool training for kids from any background for no cost, the Greenville At-Risk 4k program offers children to be enrolled if certain requirements are fulfilled. The children must "demonstrate academic/developmental needs and/or risk factors such as low family income and low parent education level" (Greenville.k12). The children who apply are screened and ranked district wide and those highest ranked will get highest priority. Children do not have to live in the school district to attend an At-Risk program.







III. Methodology

To carry out an analysis of the reasons why certain areas in Greenville contain a greater number of preschools, I utilized ArcMap 10.2 to first map out the median income by block group for South Carolina, to show if there is any correlation between median income and preschool locations in the county. The income was divided into 5 different categories, with white showing the lowest range of incomes, to green showing the highest level of incomes.

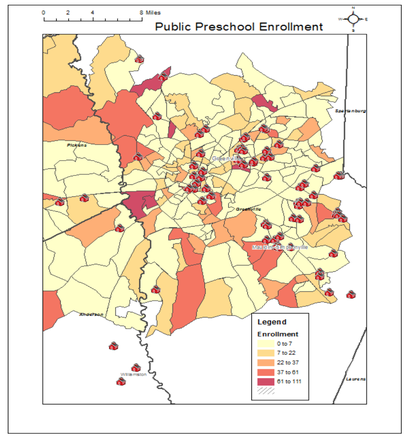
Next, the population density seemed a very useful map to create because as mentioned before, preschools want to be located where there are a large density of people. For this map the blue dots represent a concentration of population for a block group. This could mean a neighborhood or maybe just a group of houses located pretty close to one another.

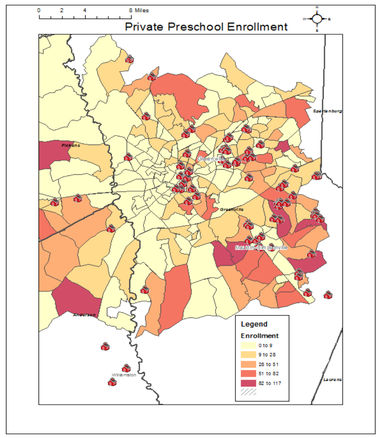
Race and income are usually always somewhat directly proportional so it was decided that the density of white people by block group should be mapped out. The darker green block groups indicate a greater density of whites in a block group, with white block groups indicating the lowest number of whites per block.

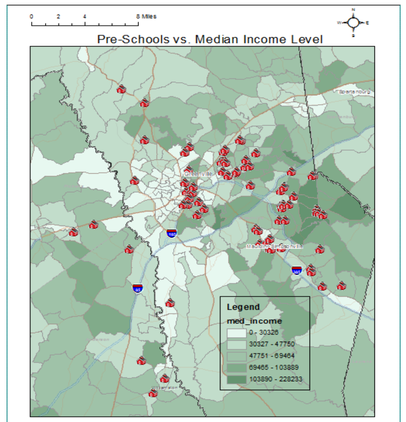
The Greenville City bus routes and bus stops have been mapped to show how much public access parents could potentially have to take their child to a preschool. The bus stops are shown by a dot, Greenville city bus routes are shown by green lines, and Greenlink bus routes are shown by a blue line.

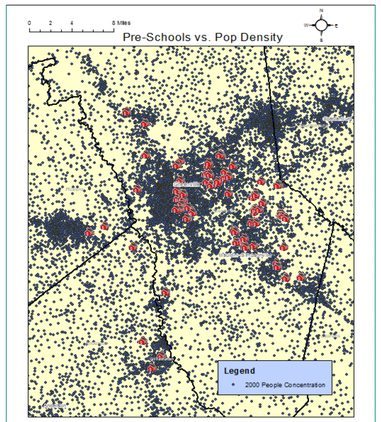
Above there are three maps each of which show the percent of a certain racial identifier present in each block group using a light to dark color scheme. The first map shows Black percentages, the second map shows Hispanic percentages, and the third shows White percentages in Greenville County and surrounding areas.

Finally, the drive time has been mapped from a point in a low income area on the west side of the city to show how long a parent would have to drive his or her child to the nearest preschool. Yellow indicates a 5 minute drive, red a 10 minute drive, and blue a 15 min drive.



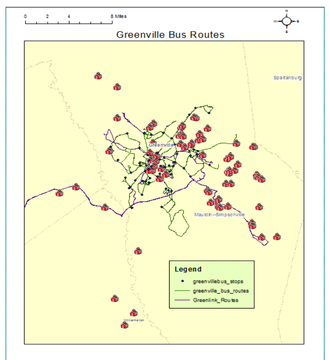






V.I. Future Research

Future research in this topic should be focused on the household structure, and its correlation with preschool enrollment. For example, are homes with a single parent less likely to have a child enrolled than a two parent home? Further, educational attainment for the parents should be looked into to see if there is a correlation between the parents' educational levels and enrollment of the child.



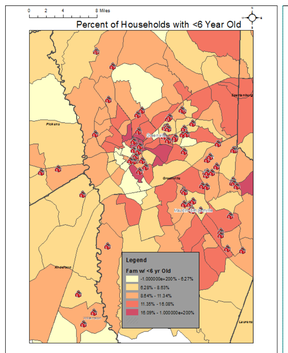
IV. Results and Discussion

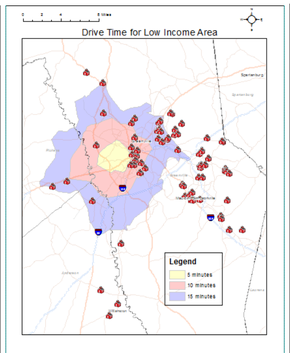
Many of the assumptions made for the reasons why many preschools are clustered in certain areas of Greenville can be confirmed through the use of these GIS maps. To begin with, most of the preschools are located within block groups which have a darker shade of green and a higher median income, besides those which lie in the inner city limits of Greenville. Why is there a cluster of preschools inside the lower median income Greenville City block group? One reason is made clear by the next map, which shows the high population density within the city limits.

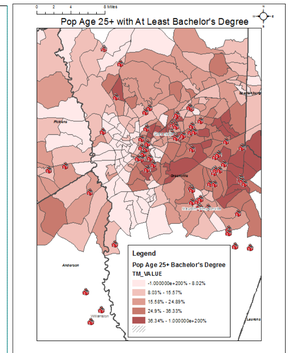
After viewing the population density map in relation to preschool locations, one should be able to see a clear connection between the two. Most of the preschools are located in heavily dense areas of the map, however, some are not located in heavily dense areas, and some heavily dense areas on the west side of the county do not have any preschools. For these occasions, it is helpful to compare this population density map with the median income map to realize that highly dense areas of population with no schools are in low income areas, and low density areas with preschools are in high income areas.

The Private and Public preschool enrollment maps show a correlation with the median income map again. Areas with a lower income seem to have higher public preschool enrollment, while higher income areas show a higher private preschool enrollment.

The final map shows a pretty direct correlation between the density of white people in a block group and the median income for that group. The income and race maps are nearly identical, and for both maps the preschools are generally located in darker shaded areas, except for in the inner city.







V. Conclusion

In conclusion, there are three main factors which influence a child's chances for being enrolled in Pre-k in Greenville County. First and foremost, a child who grows up in a higher income household outside of Greenville city limits has a much greater chance of being entered into preschool than a child who is born into a lower income house. Next, a child born into an area of high population density has a greater chance of being enrolled in preschool, with few exceptions. Finally, a white child generally has a greater chance than children of other races of being entered into Pre-K.

This means children who grow up in a lower income household or in a rural area are less likely to be enrolled in a preschool program because either their parent or parents cannot afford it, or the nearest preschool is just too far away for it to be economically feasible for the child to be able to go every day.

Now for the exceptions to these conclusions. Within city limits, a child has a greater chance of being entered into a preschool program because of easy access with bus routes, and the larger cluster of preschools located in this area. Also, a child born into a highly populated area outside of city limits but in an area of low income has a much lower chance of enrollment than in a higher income area. A child born into a low density area with a high income still has a good chance of being entered into Pre-k. The comparison of these maps are the best way for one to draw conclusions about this.

VIII. Acknowledgements

I would like to thank Dr. Mike Winiski for his continued help throughout the project. I would also like to thank Dr. Kyle Longest for providing his report highlighting key factors on this subject area. This project would not have been possible without the help of these two.

VII. References/ Data Sources

References:

At-Risk 4K Pre-Registration for 2015-2016. (2014, January 1). Retrieved December 2, 2014, from http://Greenville.k12.sc.us/Parents/main.asp?titleid=krieg

Data Sources:

https://www.google.com/maps/search/preschool+locations+in+greenville+sc/@34.8331685,-82.3628305,12z/data=!3m1!4b1 for Preschool locations

ESRI Community Analysts for Median Income, Race Percentage, Educational Attainment, and Preschool data