Abstract

There is a major education problem in South Carolina. According to a 2011 article provided by the American Legislative Exchange Council, which ranks every US state based on student performance in a nationally administered exam, South Carolina ranked 48th. Entrance into 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 preschool 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 attendees.

Introduction / Lit Review

Pre-school is a private system which increases a child’s ability to enter into 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 Playita Academy because despite both of my parents working from 8 to 5 each day, my grandparents were able to pick me up at 2 at least 3 days each week. 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. This problem lies in the fact that preschools 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 startup cost and profit. 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 learning for kids from any background for no cost, the Greenville All-Risk 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 HIV). 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 All-Risk program.

V. Methodology

I carried out an analysis of the reasons why children in Greenville do not attend a greater number of preschools. I utilized ArcMap 10.2 to find out the median income by block group for each city and see 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 incomes and black showing the highest.

Next, the population density seemed a very useful map to create because as mentioned before, preschools want to be located where there is a large density of people. For this map the blue dots represent a concentration of a population for a block group. This could mean a neighborhood or 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 Greenville bus routes are shown by a blue line.

Above 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 Blacks, 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 minute drive.

VI. Future Research

Further research in this topic should focus on the childhood structural experience in correlation with preschool enrollment. For example, is there a correlation between the racial makeup of a neighborhood and the racial makeup of the children attending the preschools in that neighborhood? Further, educational attainment for the parents needs to be looked into as well. Finally, it would be interesting to compare the income between the parental educational level and enrollment of the child.

IV. Results and Discussion

Many of the assumptions made for this reason why many preschools are clustered in certain areas of Greenville can be confirmed through the analysis of these GIS maps. Highland areas 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 higher concentration of preschools in the City block group? One reason is made clear by the next map, which shows 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 densely areas of the map, however, some are not located in highly dense areas, and some heavily dense areas on the west side of the city do not have any preschools. For these occasions, it is helpful to compare this population density map with the map to reveal 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 areas within which the 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 Preschool in Greenville. 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 enrolled into preschool than a child who is born into a lower income household. Next, a child born into an area which is extremely densely populated is much more likely to be enrolled in preschool than in an less populated area. Finally, a white child generally has a greater chance than children of other races of being enrolled into Pres-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 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 enrolment into preschool, but 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 most visible exceptions to the assumptions listed above. While many were made with the project in mind, it is possible that this project would have been possible without the map of those two.