Mapping Catholic Schools and Their Families

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Summary

Education, it can be argued is the most valuable assets available to people today. A strong education affects nearly every aspect of a person's life, from what kind of job they receive, to whom they marriage, to where they live. Therefore it is important to identify what makes a good education and where to get one. One proven approach to a strong education is the education received in Catholic Schools both at the elementary and secondary levels. Past research has proven that Catholic schools graduate more students, send more students to college, and prepare to students for the workplace more than Public school counterparts. In this vein, our group undertook the project of locating Catholic Schools and identifying who utilizes their services as well as who are they competitors. To do this we created several maps for the Archdiocese of Chicago's Office of Catholic Schools. These maps detailed the location of a specific school and the student's family homes who attended such schools. Our information came from the Office of Catholic Schools and we used ArcMap to create maps. We also identified Charter Schools as a major competitor to Catholic schools because they offer the same amount of 'choice' that Catholic Schools do and offer more affordability. We located where this schools were and their proximity to the Catholic Schools around them. Finally we tried to identify the demographic make-up of Catholic Schools by utilizing Census tract data we were able to find what kind of neighborhoods families who sent their children to private schools were located in.

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1. Introduction

We hope to accomplish not only what Dr. Foertsch proposed but also to go a step beyond his expectations to create a broad history of the schools and families of the Archdiocese of Chicago (OSC).

We will deliver, as were the wishes of our client, updated maps of schools going through steps for school improvement. With the data provided by our client we will be able to develop accurate maps of Archdiocese schools and where their students come from. Creating these maps will enable to Archdiocese, and most importantly the school itself identify where the majority of its students are coming from. Creating comparison maps of past years to present time will allow administrators of both Offices to see where shifts have taken place in their student enrollment. Knowing where students currently live and where they have come from in the past can help marketing strategies to increase enrollment in schools that have seen decreases. It will also help within classrooms. Teachers who are able to identify students by socioeconomic status based on where they live will be better able to cater their lessons accordingly.

This project also has the potential of looking deeper into the make-up of Catholic schools and the types of people who attend them. While looking at how student location of OSC schools has changed over the years, we will be able to identify other changes as well, including the socioeconomic and educational of the changing neighborhoods. These other changes will be very important to the Archdiocese. As our client has mentioned enrollment in Catholic schools has been decreasing over the years, identifying the changes around the schools and the make-up of their student body may help explain this phenomenon. In order for the Office of Catholic Schools of the Archdiocese of Chicago to survive it needs to have students and families who are enrolled and able to pay tuition. Catholic Schools have also, as our client, Dr. Foertsch explained, had exemplary standards and results in regards to the type of students they produce, having both a very high graduation rate and a large proportion of students continuing on to higher education. It would be extremely beneficial to both the OSC as well as the public to be able to access this type of education. Finding more ways to spread information about Catholic Schools would be one of many outcomes of our work.

2.1 Background

Before we met with our client, we wanted to be get more information about Catholic Schools and their importance in the current education system. Our literature review led us to come interesting facts about Catholic Schools. We found that Catholic Schools are more likely to have higher attendance. There is a higher graduation rate among High School seniors, those coming out of Catholic schools are more prepared in general for work environment because test scores have been consistently high in the fields of Math, Health, Science, Language Arts and Fine Arts. However, our research also showed that Catholic schools are losing enrollment and are closing around the Cook County area. As schools go through improvement analysis it is our hope to provide more information on where students live in proximity to Catholic schools, what are the characteristics of these areas, as well as where the competitors to Catholic Schools are located.

Our client was the Archdiocese of Chicago's Office of Catholic Schools. The Archdiocese of Chicago and the OCS operates and manages over 257 schools in the Chicagoland area. The school system has approximately 98,225 students and 5,339 teachers. The mission of the Archdiocese is

Catholic schools exist primarily to evangelize about the Good News of Jesus Christ and educate Catholic students for the Church's mission. All are welcomed who identify with and seek to live by values in harmony with the Gospel and its preferential option for the poor. Catholic schools provide students an opportunity for educational *Excellence* in the Catholic Christian tradition. Catholic faith-learning communities commit to help each student develop his or her potential for conscious, responsible living, healthy relationships and leadership. The Catholic school communities act as good stewards to make schools *Vital*, affordable, and accessible across the Archdiocese.

The Archdiocese, does not receive a lot of federal money, and therefore this increases the stakeholders. Not only are the children who are receiving an education in the schools, stakeholders but also every employee of the Office of Catholic Schools who relies on these schools for employment.

Our Client wants us to create maps in order to show the location of student family homes in respect to the location of their school. This is the main priority because schools are up for these evaluations every month. This is within our capabilities as GIS students. The client also wanted us to observe some of the outliers that contribute to the makeup of their student home locations, as well as look at Charter Schools in the area.

Literature Review

Holland, Peter B. "Catholic School Lessons for the Public Schools." <u>School</u> <u>Administrator</u> Aug. 1997: 24.

Hunt, Thomas C., Thomas E. Oldenski, and Theodore J. Wallace, eds. <u>Catholic School</u> <u>Leadership: An Invitation to Lead</u>. London: Falmer Press, 2000.

Youniss, James, and Jeffrey A. Mclellan. "Catholic Schools in Perspective: Religious Identity, Achievement, and Citizenship." <u>Phi Delta Kappan</u> 81.2 (1999): 104.

In search for available literature, we have chosen to take a look at the importance of Catholic schools in urban settings and the challenges it faces. Here are a few facts that may help to illustrate where the Catholic school system stands in America today: there are 8,200 Catholic schools in the U.S., 85% of which are elementary schools; fewer than 5% of Catholic schools are private (Youniss, and Mclellan 104); the majority of Catholic schools are located in urban areas (Holland 24); the median tuition at elementary school in 1997-98 was \$1,499 and \$4,100 at the secondary level (Youniss, and Mclellan 104); between 1986-87 and 1996-97, Catholic elementary schools declined by 8.3% in urban areas while secondary schools declined by 18% (Hunt, Oldenski, and Wallace 52); less than 2.5% of existing Catholic schools were founded since 1980 (Holland 24). First and foremost, it is important to point out that "Catholic schools have experienced a dramatic transformation over the past 30 years that can be attributed to changes in the church and in the American Catholic population" (Youniss, and Mclellan 104). Often times, it seems Catholic schools have been used as an example to improve or replace the public school system in America. Apparently, Catholic schools have had a better success rate among its students than their public counterpart. In this regard, Younis and McLellan stress that "Catholic schools must become part of the national discussion on education and must be viewed as complementary to – and not replacements for – public schools". In Catholic School Lessons for the Public Schools, author Peter Holland only reinforces the aforementioned theory. He claims that research "showed higher academic achievements for Catholic school students after controlling for family background characteristics" and that "these results were even more pronounced for minority students in Catholic high schools" (Holland 24). The reason for this, Holland explains, is because "Catholic high schools achieved relatively high levels of student learning, distributed this learning more equitably with regard to race and class than in the public sector, and generally sustained high levels of teacher commitment and student engagement" (Holland 24).

Overall, available literature recognizes that the Catholic school system has had a higher success rate than its public counterpart, however, it doesn't mean it should replace it, but rather, help improve it. The fact that most Catholic schools are located in urban areas and have higher success rates highlights the institutions' importance to urban communities and its potential impact on local residents. Lastly, the decline in the number of open Catholic schools can be attributed largely to financial difficulties and the high costs associated with being located in urban settings. Combined, these factors can help our research and give us a better direction on how to proceed with our project. The literary review has enhanced our awareness of the Catholic school system's importance and challenges. Furthermore, the facts and figures obtained may come in handy to build our information structure

Lee, Valerie E. "Using Hierarchical Linear Modeling to Study Socail Contexts: the Case of School Effects." <u>Educational Psychologist</u> 35 (2000): 125-141.

This article focuses on school effects at a high school level through the research of Valerie E. Lee. The article also details past, present and future studies of Lee. Past studies include different methods of research, cross-sector in which she found that "students in Catholic high schools outperformed their public school counterparts." (Lee, 2000, 126). Bureaucratic and communal organization of schools was also explained. The article also gave examples of several different types of school effects, including high achievement, learning, subjects taught teachers, etc. For the current project that Lee highlights in this article, the focus was on school size and she tested this by examining test scores in math and reading comprehension of a sample size of 9812 students who attended 789 public, Catholic and elite private high schools, drawn from three waves of data in a nationally representative sample" (Lee, 2000, 130). The article found that the ideal school size should be between 600 to 900 students (Lee, 2000, 131), she based her conclusion on the ability for a school to offer a larger range of programs that a smaller school could not do and the ability for a school to focus individual attention on students who need it (Lee, 2000).

This research is important to our current study because it shows that high schools that have between 600 and 900 students do better in math and science. Most schools in the Archdiocese of Chicago fit into that range. As we research the location of Catholic school students it will be important to identify the amount of high school age students living in areas around schools. If we are able to see that there are approximately 600 to 900 students near a school it will show that it would be more effective for them to come to a Catholic high school. This will aide in marketing schools in Catholic Archdioceses to more people knowing that those schools are the optimal size for student achievement in math and science.

Sanders, William. "Private Schools and School Enrollment in Chicago." <u>Chicago Fed</u> Letters 231 (2006). 24 Jan. 2007 http://www.chicagofed.org/publications/fedletter/cfloctober2006_231.pdf>.

Even though the number of private schools in Chicago has been declining, there are still high numbers of students who are attending private schools. On the national level in year 2000, Chicago held third place when it was compared with ten largest cities in U. S. in attendance of students at private schools. Over the prolonged period of time the attendance at the Catholic schools was at 10%, however in the 1960's that attendance at the same schools was around 90%.

To be more precise the number of students at catholic schools became smaller because the numbers of Catholic schools were closed too. So over the three decades the number of students, who were attending Catholic schools decreased by 50%. What was even worse the number of students declined even more, so in school in year of 1976 to 1977 there were 132,000 of enrolled students. However, in 2004 that number was even lower so the enrolment was at 52,000.

The factors that affected of higher attendance at private schools 30 years ago, was first and foremost influenced by religion. So the parents whose were of Catholic faith were sending their children to Catholic schools. For this project, several GIS techniques will be employed. The primary purpose is to indicate where students attending one particular catholic school are located in relation to the school. For this, we only need one two types of symbols, one to indicate schools, and the other to indicate residence locations where students live. The map will be displayed using a state planar coordinate system. This is because the areas we are looking at are so localized that the state planar system would be more accurate than the global coordinate system.

During the project, we will very likely come across addresses in which more than one student resides. This could be due to more than one sibling attending school, or it could be an apartment building, in which case many families may attend. To properly represent this, we can use a graduated symbol to indicate if there is more than one student per address. Another thing we might be looking at is racial and ethnic background of the students. For this, we can use a different color symbol to represent each race. Unfortunately, if the address containing multiple students also contain more than one race, it will not be possible to properly represent them. As a result, we also calculate the numbers out. We may want to do a system wide map of schools and racial/ethnic make up, as well as chart trends overtime. If it were a public school system with specific boundaries, this task would be easy. Unfortunately, since the catholic schools do not have districts, the task is a little more challenging. To best represent this, we should use a Raster or TIN display, similar to how we did for the project last quarter. This would give us a general idea of where the schools with minority students are located. Additionally, it could account for fluctuations within the area.

Until we start to look at the data and process it, it will be impossible to know which of these techniques will be employed and/or which one will best represent the data we are looking at. However, these are some areas we can begin the focus on to gain a better understanding of the project at hand.

2.2 Project Goals

Our group will be examining the topic of enrollment in the Archdiocese of Chicago. Our group's goal will be to identify the location of student family homes in relation to the school that they attend as well as the demographic make-up of the schools and areas involved. We will also be identifying where competitors to Catholic School are located.

2.3 Objectives

Our Objectives in this project are to provide clear, well presented maps that allow viewers to easily identify both schools and student family locations. Breaking down our research question we need to know, where students are located, the proximity to the Catholic School and the demographic make-up of the locations of Schools and families.

2.4 Information Products - Information category

The information categories that we need are: Location of Schools Location of Student family homes Racial Make-up of Locations Income of locations Locations of Charter Schools

2.5 Information structure

To present this information, we need map display structures, data analysis structures and data processing structures.

3. System Requirements

3.1. Introduction

Now that we have established what our problem and what our question will be, as well as how and when we will meet with our client, we, as a group, must establish a timeline for when we will assign and complete what is required to assist our client. In order to create the best presentation, many tasks need to be completed and a schedule is necessary. For our project this involves, assigning who will write what, who will meet with who and when we will meet as a group.

3.2 Need to know questions?

Those questions are:

- 1. What is the location?
- 2. What is the proximity to Catholic School?
- 3. What is the percentage of non-white residents?

4.	What is the	percentage of	households with	n income over	·\$50,000?
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Object Classes	What is the location?	What is the proximity to Catholic School?	What is the Percentage non-white?	What is the percentage of household income over \$50,000?
2000 Cook County Attribute			Х	Х
2000 Archdiocese School Tract	Х			
2000 Archdiocese Student Tract	Х	Х		
2000 Charter School Tract	Х	Х		

Name of Entity (Object) Class: 2000 Cook County Census Tracts Entity Definition: Census tract divisions with selected attributes Spatial Type: Polygon Temporal Character: 2000 Attribute Field Name List: TRACT, RACE, INCOME

Name of Entity (Object) Class: 2000 Archdiocese Database Entity Definition: Directory of family addresses of enrolled students Spatial Type: Attribute Table Temporal Character: 200 Attribute Field Name List: ADDRESS

Name of Entity (Object) Class: 2000 TIGER Cook County Roads Entity Definition: address locator Spatial Type: Attribute table Temporal Character: 2000 Attribute Field Name List: ROADS

Name of Entity (Object) Class: 2000 Archdiocese School Locations Entity Definition: School addresses Spatial Type: Attribute table Temporal Character: 2000 Attribute Field Name List: TRACTS

Name of Entity (Object) Class: 2000 List of Charter School Addresses Entity Definition: directory of address of charter schools Spatial Type: Attribute table Temporal Character: 2000 Attribute Field Name List: TRACT



3.1 Software Requirements

Function Capabilities	What is the location?	What is the proximity to Catholic School?	What is the Percentage non-white?	What is the percentage of household income over \$50,000?
Select by Attribute			Х	Х
Table & Shapefile Joins	Х	Х	Х	Х
Georeferecin g	Х	Х		
Overlay	Х	Х	Х	Х
Map Display	Х	Х	Х	Х
Symbology	Х	Х	Х	Х
Analysis Tools	Х	Х	Х	Х
Defining Projections			Х	Х
Data Management	X	Х	Х	Х
Data Viewing	Х	Х	Х	Х

Geodatabase Construction	Х	Х		
Viewing Metadata	Х	Х	Х	Х

3.5 Personnel Requirements

Member Clare Delaney will perform role/task of manager in the project and take care of organizing and keeping all members in check as well collecting outside data not found from our client and research requiring 30 hours of work.

Member Nedzad Hodzic will perform role/task of helping complete all written work necessary for the project requiring 30 hours of work.

Member Greg Arnold will perform the role/task of communicating with our client as well as creating maps necessary for our project requiring 30 hours of work.

3.6 Timing

Timing in accordance to our particular project rests solely on the hands of the Archdiocese data team. Our group will be working according to their open hours throughout the week. The idea is that all team members will try and make the effort to arrive at the Archdiocese from time to time so that we may work on our project under the supervision of our clients. We unfortunately are unable to obtain the data formats from our clients outside their office, because we are dealing with highly confidential information pertaining to the households who house potential school goers for the Chicago Catholic School system. It is in the interests of the project members to make it to the Archdiocese as best as they can to get started on the project. The head director of the project gave us (the group members) the available hours to come in and get started and it is up to us to work around their schedule. The head director gave us the option of working from 8am to 5pm depending on days he was at the office; weekend hours were available as well. Once we all get a chance to come to the Archdiocese and work on the project the hours it will take to complete the data structuring will deter. I imagine that our work will revolve around two key stages: Data structuring and Data Formatting.

The stage of data structuring will require for all individuals to make time for attending the Archdiocese office to work on the project. The director gave us a list of days to work within hours that vary according to the availability of the director/s. Our project goal is to construct 12 maps of the school goers addresses and another map of 6 charter schools and the list of enrollment there. This process should take about a week and a half to two weeks to complete depending on the complex availability of the group members and directors.

The second stage will be in creating our data formats which I imagine will take even longer to construct our data analysis on. This stage will take up the remainder of the course to as long as it may take. As of the moment we can not disperse the particular roles assigned to individuals in constructing our final report, but we must first accomplish the task of completing the data structuring stage first. In the table below are the times available for our group members to complete the task of data structuring. There should be more than enough time for us to complete what our clients ask from us. All of us are adjusting our availability according to the table below. I mentioned before that timing rests on the availability of our clients to help supervise us, instruct us, and allow us to use their GIS tools to complete the necessary tasks.

3.7 Institutional Requirements

Days of the Year	Days of the Week	hours if available	Hours of work?	Institutional Requirements
2/12	Monday	N/A		Optional (Computer labs, home of individual)
2/13	Tuesday	Some hours	1-3	Offices of the Archdioceses of Chicago

2/14	Wednesda y	Some hours	1-3	GIS Lab DePaul University
2/15	Thursday	N/A		Optional (Computer labs, home of individual)
2/16	Friday	limited	1-2	GIS Lab DePaul University
2/17	Saturday	Some hours	1-3	GIS Lab DePaul University
2/18	Sunday	N/A		Optional (Computer labs, home of individual)
2/19	Monday	All day	1-7	GIS Lab DePaul University
2/20	Tuesday	All day	1-7	Offices of the Archdioceses of Chicago
2/21	Wednesda y	All day	1-7	Offices of the Archdioceses of Chicago

2/22	Thursday	N/A		Optional (Computer labs, home of individual)
2/23	Friday	N/A		Optional (Computer labs, home of individual)
2/24	Saturday	Some hours	1-3	GIS Lab DePaul University
2/25	Sunday	Some hours	1-3	Optional (Computer labs, home of individual)
2/26	Monday	All day	1-7	GIS Lab DePaul University or Library
2/27	Tuesday	All day	1-7	GIS Lab DePaul University or Library
2/28	Wednesda y	Some hours	1-3	GIS Lab DePaul University or Library
3/1	Thursday	N/A		Optional (Computer labs, home of individual)

3/2	Friday	N/A		Optional (Computer labs, home of individual)
3/3	Saturday	Some hours	1-3	GIS Lab DePaul University or Library

4. Data Acquisition 4.1 Introduction

This data acquisition section contains how and where we received our data. Our data came from several different sources but the two most commonly used were from the Archdiocese itself as well as the U.S. Census American Fact Finder. This section further details the steps we took in the acquisition process. Where we got our data and how we used it in accordance with display systems such as ArcMap and Excel are also explained below. Finally we outline contraints on our data.

4.2 Data Source Steps

To get our data, we first met with our client Daniel Foertsch. He informed us that most of the data we need would be provide by the archdiocese. He provided us with many database files that contained the addresses of student homes as well as locations of schools themselves. While working on finding competitors to the Catholic Schools, we had to rely on outside information. Our first step in that was to identify Charter schools as a competitior. Next we accessed the Chicago Department of Public Schools website and created our own excel file of schools and addresses. In order to get our demographic data we sought out the US Census Bureau. There we created our own table including the total population, total white population, total black population, total American Indian native American population and Asian population as well as the median income of residents. We chose Census tracts within Cook County because that is where Archdiocese Schools are located and census tracts offered the most accurate and precise data available. We chose these characteristics through our literature review, which gave us the overall makeup of Catholic Schools as mainly white and affluent, therefore we chose to identify these two factors as major contributors to the enrollment of Catholic Schools.

4.3 Fitness for Use

In terms of Census tract data, our data fit perfectly to what we were trying to measure. We wanted to identify the racial makeup and income levels of areas that feed into Catholic Schools and we were able to do just that through the information provided by the American Fact Finder. The data for locations of schools as well as locations of family homes also fit perfectly into our use. We wanted to be able to identify where schools were located and were students were in relation to them and that's what was provided by the Archdiocese. The information was also very up to date and complete. Our data on Charter schools was also a good fit for our use because it again provided an up to date and complete list of schools that we needed.

4.4 Data Acquisition Constraints

Though the data we did receive was fit for our use, there was a lot of data that we didn't receive that caused constraints on our project. Data pertaining to individual student characteristics would have been helpful as well as a history of locations of the Catholic Schools up for review. Finally Constraints were attributed to Census data fitting in with Archdiocese data. As mentioned above, the Archdiocese data was current, from 2007, but the Census Tract data is only current to 2000. A seven year difference in data leads to constraints as well as inaccuracies.

5. Data Analysis

5.1 Introduction

On the very first day, our Client, Daniel Foertsch of the Chicago Archdiocese asked us to create several maps of schools within the Archdiocese tracking the location of their students. He mentioned looking more closely at income and ethnic make-up of the areas where the schools were located as well as offering information on how to improve these schools in order to make them more marketable to student enrollment. After meeting with our client a second time, he introduced his want to explore charter schools in the Chicago area that have in some places have taken enrollment away from Catholic schools for the more exclusive public schools. At this point our project goals have remained the same, generate maps of location of students in schools of the Archdiocese of Chicago, as well as a map of Charter schools in the Chicago area near Catholic schools in the Chicago area. Also to create maps that identify the race and income of census tracts of the location of Catholic school students and offer some improvements to schools of the Archdiocese.

5.2 Analysis Plan

Map of Schools with Student Addresses



To create this map we gathered information from the Archdiocese and geocoded the data to develop a map of the schools with their corresponding student addresses. We used information from the Archdiocese on the addresses of students in their schools as well as the address of the schools themselves. We also used the dataset of from TIGER and the Cook County road address locator specifically.



Map of Charter Schools and Archdiocese Schools

To compare the location of Charter schools to Catholic schools we mapped the location of the schools of the Archdiocese given to us by the Archdiocese of Chicago as well as the information about Charter schools we got from the Chicago Public Schools Website. We again used TIGER information to geocode the locations of both types of schools.

Map of % Non-white by Census Tract



In analyzing race in terms of the students and/or potential students of schools of the Archdiocese, we decided to focus on the percentage of non-white individual census tracts. We believed that most of the marketing of the schools was already geared toward whites, because of the higher probability that they would be Catholic. We also saw that within Chicago, Catholic schools were located in more non-white areas. We generated a choropleth and used the races of white, black, Hispanic and Asian in our analysis. We divided the results into 8 categories based on equal interval distribution.

Map of Income by Census Tract



To analyze the income by census tract, we used data from the 2000 US Census. From this data we determine to identify the percent of a census tract that had an income of less than \$60,000. The expense of tuition of Catholic schools is an expense that some simply cannot afford. As the Archdiocese continues to lose enrollment in its schools, it is important to identify groups and areas that have a larger income in order to pursue a Catholic education. We determined that \$60,000 would allow a household, combined income of all members of the household, would be sufficient to allow for an exploration into enrollment in a Catholic school.

6. Results

6.1. Introduction

In this section we will detail the results we found including an example of maps that we created.

6.2 Findings

From our research we found that there is little consistency between where schools are located and where students are located. For some schools, for instance St. Ann's, the students lived as far as ten miles away from the school itself. Other schools, such as ST. Thelca, had students highly clustered within a 2 mile radius of the schools. We also found a difference between schools in more rural neighborhoods having a broader student following as opposed to urban schools, which had more of a clustered effect. There was also a difference in neighborhood makeup between rural and urban environments, rural areas having less diversity around them and having a higher percentage of income. Differences occurred in the location of students in relation to schools between the high school and elementary school levels as well. High schools, due to their infrequency as well as their high caliber of service attracted people from a broader area as opposed to elementary schools which had their pool located near the site.

Our data also showed that every Charter School within the city of Chicago, whether elementary or secondary was located within one or two miles of a Catholic School. The schools also shared the same demographic makeup as Catholic schools because of their proximity.



Charter Elementary Schools











8. Summary, Conclusions, Recommendations

In order to get our results, we created several maps that identified the location of schools and student family homes. We also created maps detailing where Charter schools are located, and helped identify where these schools were in proximity to Catholic Schools. We also identified the makeup of neighborhoods around the student family homes of Catholic Schools.

Though we worked hard to deliver all we could to our client and more, several obstacles impeded us from completely all of our project goals. The maps and student locations were all completed and there were designed to the specifications of our client, who was happy with our results. However, we did not have the full data available to us to take the project to the next level. The archdioceses was not able to give us the information, demographic characteristics of individual students and locations because of the sensitive nature of the data. We were also unable to compare and contrast past family sites to current family homes because of the lack of data. Time constraints also hindered our depth into our research. Much more information could have been obtained if every project member had an access of time per week to work on this but as college students with full classes and schedules this was not a realistic possibility. However, we were able to give the clients as much information as we could and what we provided will be helpful to them in the future.

Reccommendations for future studies into Catholic schools would be to have more information. Demographic characteristics, change over time, programs offered at individual schools, resource sharing, etc are all examples of data needed for research. Not asking too much of the project or of the project members is another recommendation. We tried to do too much with too little and we ran into trouble. If in the future the focus could be placed on one attribute such as race in Catholic Schools, a more in depth and complete outcome could be achieved.