



Assistance for early childhood development

Enviromental factors affecting early age development in El Monte

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Introduction

The EL Monte Promise Foundation is a nonprofit organization that “unites the community’s efforts to create a seamless cradle-to-college pathway in the greater El Monte region”. Throughout the year's El Monte Promise Foundation has created the El Monte Union Pledge, Scholars Savings Program, EMPF internship program, and Parent Financial Literacy. Having these methods implemented into the organization, allowed it to flourish throughout the years.

Main Objective

El Monte Promise Foundation's main objective is to unite parents, students, and community leaders from school districts, colleges, local governments, businesses, nonprofits, and private foundations

to actively coordinate systems and mobilize resources for the educational benefit of local students. These efforts ensure that the community works together to increase the expectation that all students can attend and succeed in college.

What is EDI ?

EDI collects information about kindergarten age children in participating geographic areas and provides information about children in five developmental areas that are known to affect well-being and school performance:

- Physical health and well-being
- Social competence
- Emotional maturity
- Language and cognitive skills
- Communication skills and general knowledge

How does EDI help improve children's early years?

The EDI and the Early Years

El Monte EDI score

Developmentally Vulnerable on One or More Domains	Physical Health and Well-being	Social Competence	Emotional Maturity	Language and Cognitive Development	Communication Skills and General Knowledge
0% - 19%	0% - 6%	0% - 4%	0% - 5%	0% - 4%	0% - 4%
20% - 25%	7% - 11%	5% - 8%	6% - 9%	5% - 8%	5% - 8%
26% - 32%	12% - 15%	9% - 12%	10% - 14%	9% - 13%	9% - 12%
33% - 38%	16% - 20%	13% - 16%	15% - 18%	14% - 17%	13% - 16%
39% or more	21% or more	17% or more	19% or more	18% or more	17% or more

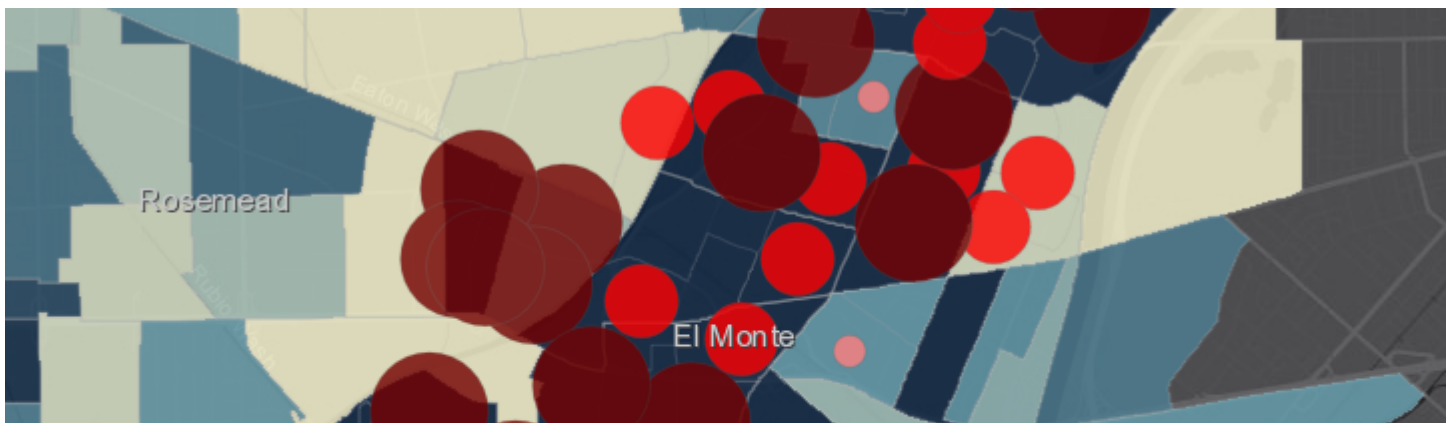
El Monte EDI Scores

After viewing the data provided, we felt that it was necessary to shed light and improve the EDI scores of children. We plan to do this by identifying the deficiencies and barriers that hinder kids from attaining expected EDI scores. We also hope to provide some possible solutions as early childhood development is necessary because it plays a huge role in the progress of our education and society.

Map

We feel it is important to include the socio-economic status, education, access to public spaces, basic needs, environmental pressures, language barriers, race and ethnic backgrounds to determine what and how the EDI is affected.

To address this dire situation, we had to come up with a possible solution by finding a correlation between EDI results provided by El Monte Promise Foundation and environmental factors that affect the EDI results. These environmental factors are poverty, parks, libraries, crime, noise, health centers, fast food places, child care, and early childhood education. With the help of Professor Li, we were able to find data at Los Angeles GeoHub. Los Angeles GeoHub is an open data platform meaning that the public has access to the city's location-based data. To analyze the data, we decided to use ArcGIS due to the ability to visualize and analyze spatial data.



Esri, HERE

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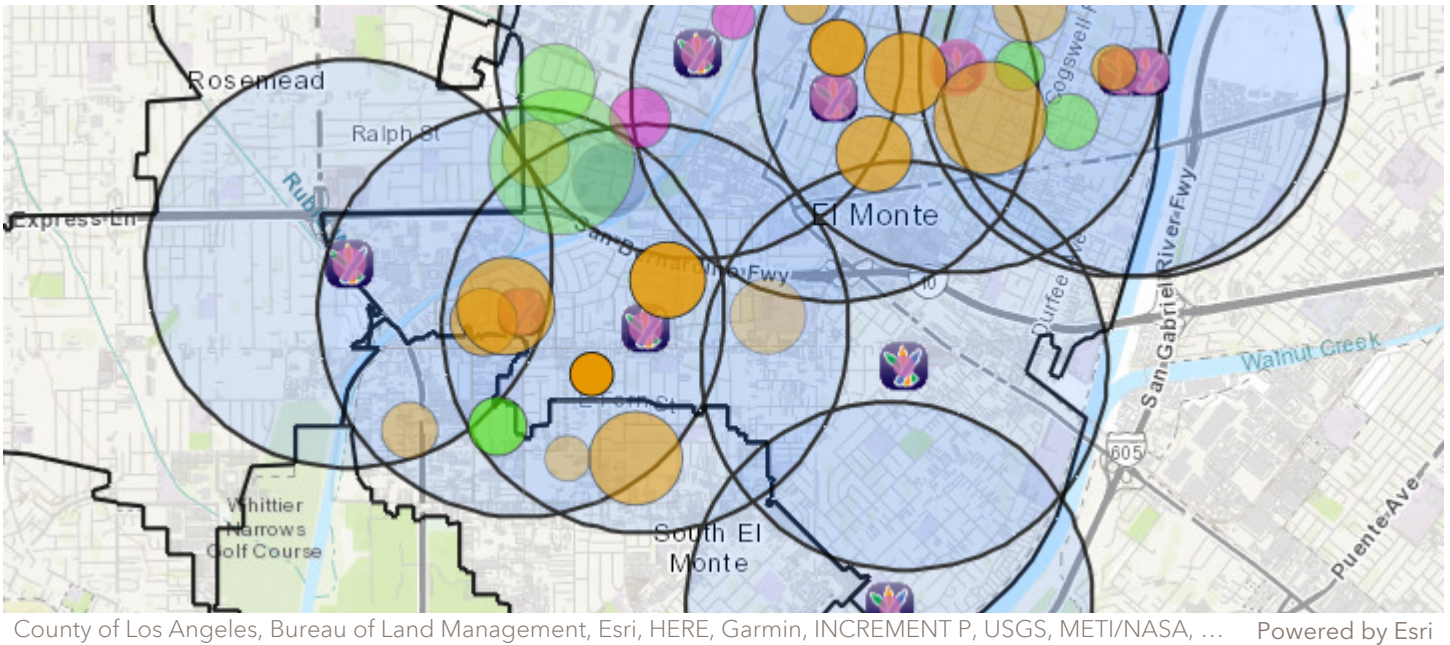
This map contains information on the poverty level of El Monte and the percentage of students not on track based on EDI domains. Poverty plays an important factor in a child's development. For example, by having a high poverty level it can lead to children's physical, emotional, social competence, and general knowledge to be awful. This will be due to the poor school environment, home environment, lack of parks, etc...



County of Los Angeles, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, ... Powered by Esri

This map displays the current park and recreation centers available in El Monte within a one-mile radius. According to the data set there are only eight parks in the city of El Monte. Having only eight parks may leave room for children to miss out on early childhood development. When looking at the map, you can see that the percentage of those not on track for emotional maturity may not have been so high due to the fact that there are parks in the surrounding neighborhoods. An increase in the amount of parks and

recreation centers can possibly create a positive impact on the percentage of those not on track for this specific domain. It will give the children a better chance of developing in this area.



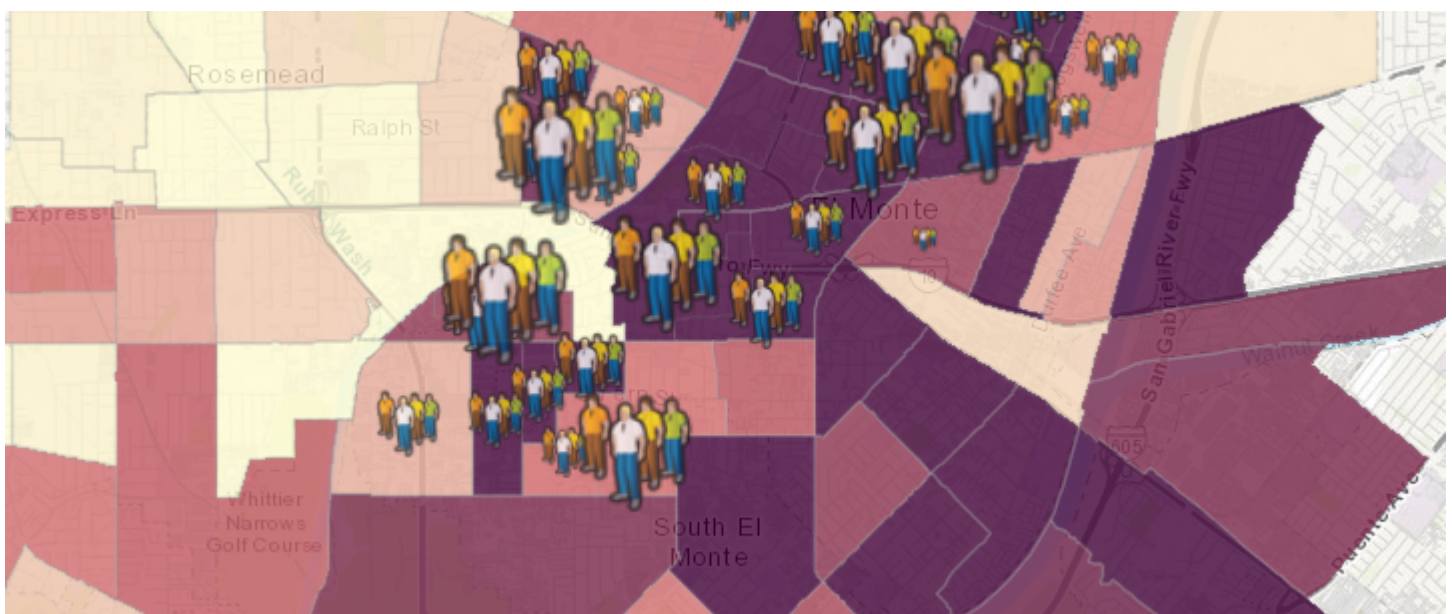
This map displays the current early child care programs in the city of El Monte within a one mile radius. According to the data set, these are foundations for early childhood education ranging from ages three to five. The colored circles represent the percentage of children not on track in four different developmental domains listed in the legend. It seems that there are lower percentages of children not on track in the four domains within the areas that occupy early childhood education programs. There is only one area where all four colored circles are present, and this area does not have one of the early childhood education programs. If more of these programs are implemented and families are better informed of such organizations, I believe it is possible to reduce the percentage of children who are not on track for the four domains.



Esri, HERE | Food and Nutrition Service (FNS)

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In this map, we see enriched EDI Results and filtered food and meal sites. When looking at the physical domain, we see that the percentage of students not on track for physical well-being is not that high. The highest is 33, the average is around 20, and the lowest is 0. Having meal sites all over El Monte is having a positive effect on children's development. We believe that absence of disease, impairment, and disabilities can be the outliers on why there may be some percentages not being met. To better improve this we need to tackle this problem by accommodating children with disabilities.



County of Los Angeles, Bureau of Land Management, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, ... Powered by Esri

This map displays the Hispanic residents and the language barrier. The Data shows densely populated Hispanic suburbs correlating with the high percentage of language expectation not being met; this is due to most Hispanic parents not being bilingual and can not help kids meet this goal. Parents could be sensitized about taking basic adult English classes, and kids encouraged to be bilingual by taking Spanish classes to better communicate with their parents about their needs.

Conclusion

Overall, the project was embarked upon to shed more light on the barriers affecting kids from attaining the expected EDI in this region. The factors considered were poverty level, parks and recreation , early childhood education, filtered food and meal site, and Hispanic resident / language barrier. It was observed that poverty level did affect kids because of the high percentage of at risk kids in this area, much as language barrier was seen affecting more of the Hispanic community. It is suggested that Hispanic parents are encouraged to take language classes to better communicate with their kids in order to improve EDI Scores. An increase in the amount of parks and recreation centers will create a positive impact on the percentage of kids on track for emotional maturity. Throughout this big data process we have learned that there are different types of factors affecting children's EDI scores. We also realized that analyzing data is very important when tackling real world problems due to being able to use data to visualize issues.