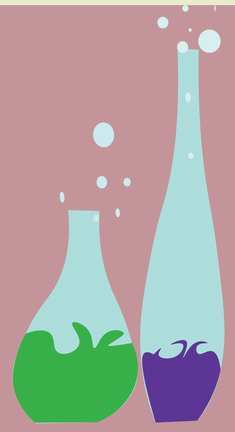
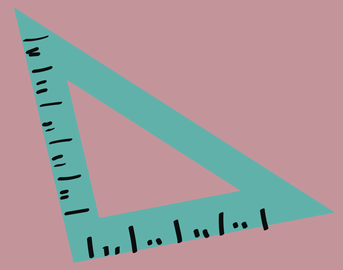


Access to technology and its effects on Latinx STEM education



Research question:
Does the lack of access to public technology affect the underprivileged Latinx population when pursuing a stem degree in college.

Abstract

With a rapid increase of technology around the world especially in 1st world countries like America, it is becoming quite normal to have access to phones or computers within our own houses. However is that the case for everyone in America or just the higher class. How are children from all over the country able to keep up with technological advances when they don't have the opportunity to ever encounter those assets. Could this lack of access to technology cause a learning gap if students in a higher social class have better access to technology in their education system. These factors could all contribute to the lack of minorities in high education especially STEM fields. The lack of resources low income students get might have to do with low representation of minorities in STEM education. My research will determine the obstacles the Latinx community faces when pursuing STEM career, and if the lack of access to technology before college creates gaps in their learning compared to more privileged students.

Methods of Inquiry

The way I conducted my research was by assessing peer reviewed academic journals like Sandra L. Hanonson's "STEM Degrees and Occupations among Latinos: An Examination of Race/Ethnic and Gender Variation." , as well as reviewing chapters from books like "Social Inclusion and HIgher Education" by Terrell L. Strayhorn.

Results

Latinos and African Americans' internet access through their phones is being used for more entertainment than empowerment.

"This and previous Bayer Facts surveys confirm something I've long known- that interest in science is genderless and colorless." Dr. Mae C. Jemison, astronaut, medical doctor, chemical engineer.

24% of underrepresented minorities earn a degree in STEM within 6 years of initial enrollment

compared to 40% white.

Conclusions

It was very interesting to read about the causes that impacted the lack of Latinx involvement in STEM. It has become such a far fetched idea for Latinx groups, especially when living in poverty, to think of a future in STEM thanks to this underrepresentation making Latinx kids have no one to look up to in this field. Other than the underrepresentation, it is harder for low income minorities to get a fair education system that will prepare them for the hard classes required in a STEM career. Something I found in my research was that although many minorities do have access to technology, they are not being used in proactive ways. Instead they are being used more for entertainment purposes without any restrictions. As a rapidly increasing minority group in America, it is crucial to provide better education to all groups of people, and find ways to make kids look at technology as more than an entertainment source, considering technology can be such an amazing tool to learn new skills.

Bibliograhy

Hanson, Sandra L. "STEM Degrees and Occupations among Latinos: An Examination of Race/Ethnic and Gender Variation." Race, Gender & Class, vol. 20, no. 1/2, 2013, pp. 214-231. JSTOR, www.jstor.org/stable/43496915. Accessed 16 Mar. 2020.
Using Data from the National Survey of College Graduates the author shows the extent to which race and ethnicity play a role in the success of students interested in STEM programs, specifically Latinos. The author focused on the lack of representation of minorities in STEM programs and how that will impact the society since Latinos are the fastest growing minority. She concluded that minorities are in fact less likely to pick a STEM based career, however the number of Latinos picking STEM careers has increased over time. She also found that although machismo might seem like a likely reason for Latinx woman to stop their education, the data in fact shows Latino woman catching up to Latino men with regards to college degrees. This data can help illustrate the perspective of a young Latinx individual when looking into the demographics of the STEM environment they want to go into. It also shows the underrepresentation of the Latinx community involved in STEM and poses the question as to why?

McBay, Shirley M., and Laura-Lee Davidson. "Achieving Quality Education for Minorities in Mathematics, Science, and Engineering." Journal of Science Education and Technology, vol. 2, no. 3, 1993, pp. 487-496. JSTOR, www.jstor.org/stable/40188557. Accessed 16 Mar. 2020.
This journal introduces an organization called Quality Education for Minorities (QEM), looking to enhance the opportunities in for minorities in order to create a more equal environment in the education system. This organization sets a plan on how the whole education system must be transformed to begin to equate the opportunities that people from different socioeconomic statuses have access to. The authors expose the reality of low income minority families and how it affects negatively the education of the children. This organization focuses on mathematics, science and engineering. Teaching these subjects would increase the likelihood for minorities people to be more interested in STEM without feeling unprepared for the courses. Having the extra support from this organization will prevent minorities from feeling inferior to other students and then there might be an increase in representation of the Latinx population with successful careers in the STEM fields.

Strayhorn, Terrell L., et al. "Broadening Participation among Women and Racial/Ethnic Minorities in Science, Technology, Engineering and Maths." Social Inclusion and Higher Education, edited by Tehmina N. Basit and Sally Tomlinson, 1st ed., Bristol University Press, Bristol, 2012, pp. 65-82. JSTOR, www.jstor.org/stable/j.ctt1t89nnl.8. Accessed 16 Mar. 2020.
This chapter from the book Social Inclusion and Higher Education, describes the social inequalities that might prevent minorities from feeling capable to succeed in STEM fields such as Math, Science and Engineering. The chapter looks at factors like lack of representation for minorities in these types of fields and how that might diminish the confidence in the student's own academic abilities. This could cause lack of interest which could be why there is a lack of minorities in higher education and even less in pursuing STEM careers. Another factor pointed out by the authors is that the environment might not be welcoming for minorities seeking STEM education. Since there isn't a lot of people pursuing these fields it will obviously be hard for a student to find people who can relate to them, which can in turn make a minority student feel lonely. These are interesting factors that should be taken into consideration when looking at why the Latinx community doesn't have much representation in STEM education.

Subramaniam, Mega M., et al. "Reimagining the Role of School Libraries in STEM Education: Creating Hybrid Spaces for Exploration." The Library Quarterly: Information, Community, Policy, vol. 82, no. 2, 2012, pp. 161-182. JSTOR, www.jstor.org/stable/10.1086/664578. Accessed 16 Mar. 2020.
The author searches for new ways that have contributed to student's growth in STEM subjects using the school libraries. This article looks at how with the increase of technology kids have found new and innovative ways to stimulate themselves scientifically by playing a game like World of Warcraft. The access to technology could be a useful gateway for students to apply teachings from class into fun games that will enhance their learning without them even knowing. The idea that school libraries can use technology to accelerate the learning students and also be able to engage them in STEM, would be a very useful tool to increase interest in STEM in minority groups. This article talks about the inequalities in technology that low income communities have to deal with, that creates a divide in the likelihood in choosing a STEM career.

Malcolm, Shirley M. "Women/Minorities in Science and Technology." Science, vol. 214, no. 4517, 1981, pp. 137-137. JSTOR, www.jstor.org/stable/1686547. Accessed 16 Mar. 2020.
The author exposes the disadvantages minorities experience in their education system. The author emphasizes the lack of good education low income families have access to. This is described as being the responsibility of the state and local governments according to the federal government. Since the quality of public school is usually based on tax money, it is impossible to give the same quality of education to every socioeconomic class in the United States. However education should be something that is equal since it serves as a foundation and it can create more opportunities for different income people.

Taborn, T. (2010). STUDY SHOWS LACK OF MINORITIES IN STEM: MINORITIES DISCOURAGED FROM PURSUING STEM CAREERS. Hispanic Engineer and Information Technology, 25(1), 7-7. Retrieved April 24, 2020, from www.jstor.org/stable/44843164

Arcidiacono, P., Aucejo, E., & Hotz, V. (2016). University Differences in the Graduation of Minorities in STEM Fields: Evidence from California. The American Economic Review, 106(3), 525-562. Retrieved April 24, 2020, from www.jstor.org/stable/43821463