

What About the Boys? Electric Girls at Isidore Newman School

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Abstract: The importance and benefits of female-only spaces is largely undervalued. Flor Serna, a student at Loyola University New Orleans, created an organization aimed at introducing young girls to electrical engineering and other hands-on science applications. She named the organization Electric Girls to reflect the gender exclusive space the organization creates. Newman School inquired about Serna's program and asked her to make an exception for their school by allowing boys to join the program. This case examines whether Serna should allow for this exception in order to reap the benefits that come from being connected with a prestigious school like Newman? Or should she stay true to her mission of educating female leaders in science, technology, engineering, and math (STEM) subjects in a girls-only space? Do gender-specific spaces fight for women's right to have a safe place as an underrepresented group in STEM or do these spaces only reinforce gender differences currently existing in STEM fields? Do girls-only STEM spaces discriminate against boys and decrease the number of available students for STEM careers? Newman School's status as an elite private school in Uptown New Orleans could provide a powerful connection for Serna's organization and propel it towards further success. Serna ultimately decided against allowing Newman School to use her all girls program for co-education practices. This case demonstrates the importance of gender exclusive spaces in the context of helping women succeed in fields where there is a significant gender gap, such as science, technology, engineering, and math.

Flor Serna and Newman School

Flor Serna¹ had never felt more confident in her life. A student in her senior year at Loyola University New Orleans, Serna had crafted a hypothetical organization as part of her community-focused honors thesis. Electric Girls is an organization dedicated to introducing school-aged girls to technological skills in an all-female environment. Serna was contacted by Isidore Newman School in Spring 2015 about bringing the program to the school's campus. With interests in widening the reach of Electric Girls and intrigued by Newman's interest in creating a relationship with Electric Girls, she agreed to a meeting with school officials.

Serna arrived at Newman to meet with several administrators, including the extracurricular activity director for Newman. After a small exchange, the activity director revealed the predicament the school faced in regard to bringing Electric Girls to campus: it was *only* for girls. This puzzled Serna. She explained the organization's mission and the reasoning

¹ Serna, Flor. Personal Telephone Conversation. 15 October 2018.

behind the girls-only space. Several research studies indicate girls are hesitant to enter Science, Technology, Engineering, and Mathematics (STEM) spaces due to the presence of males (Cheryan et al. 2017). The dynamic that follows does not allow girls to fully develop their skills as the environment becomes male-dominated. Female-only spaces are crucial for allowing girls to explore their STEM interests and to develop the necessary leadership skills to succeed in related fields.

While acknowledging this view, the board voiced the reasoning behind their concern. Upper administration would not be fond of the fact that only part of the school's population would have the opportunity to participate in the program. The board clearly wanted the learning opportunities presented by the Electric Girls programming to benefit the entire student population, rather than just girls. Presenting this opportunity to the entire student body would allow Newman to reside at the cutting-edge of STEM education. The board believed a compromise could be reached between the two parties. Would Serna be willing to rework the program at Newman to operate as Electric Kids, therefore allowing for inclusion of the entire student body?

STEM in Louisiana

The state of STEM education in Louisiana raises concerns about the future of STEM industries in the state. STEM is a lucrative and essential career field, quite pivotal to the functionality of society. There is an increasing demand for STEM workers and there are currently 2,400 open computing jobs in Louisiana (Sentell 2018). The number of Louisiana STEM jobs is only expected to rise, indicating a need for students in the state to be proficient in STEM disciplines to fill these positions. Approximately 51% of Louisiana students indicated an interest in STEM subjects (Louisiana Department of Education 2018). However, according to ACT's Louisiana STEM report, only about 10% of student standardized test scores reveal preparedness for STEM at the college level (Louisiana Department of Education 2018).

In response to concerns about the lack of resources and STEM preparation, the Louisiana Department of Education implemented the Louisiana Stem Initiative. Comprised of the Louisiana Board of Regents, Louisiana Department of Education, LaSTEM council, and the Governor's office, the initiative strives to introduce more applied STEM topics beyond typical math and science curriculum as early as elementary school and hopes to provide resources through college (Louisiana Department of Education 2018). The 2017 Legislative Session in Louisiana signed Act 392 into action, creating the aforementioned LaSTEM advisory council to deliver STEM programs throughout the state (Louisiana Board of Regents 2018).

The state of Louisiana operates the Jumpstart Initiative, a career and technical education program for students. Within this initiative lies the STEM Pathways, a program aimed at providing hands-on opportunities in STEM to students interested in pursuing a related program at a university or technical school (Louisiana Department of Education 2018). Topics such as Pre-Engineering, Digital Design and Emergent Media, and Environmental Protection and Sustainability are available for students to partake in concurrently with Louisiana State University (LSU) via the STEM Certification Program (Louisiana State University 2018). In the works are Biomedical Sciences, Computer Science, and Cyber Engineering programs. Pathways challenges both students and educators, as educators for these courses are required to complete specific LSU Pathway training courses and maintain necessary credentials (Louisiana State University 2018).

Another incentive Louisiana is offering to its students is a special distinction on high school diplomas. The program aims to encourage students to enhance their STEM skills and become better equipped to handle STEM courses in college (Sentell 2018). This recognition, in the form of a gold or silver medal decoration on the diploma, highlights the additional STEM courses students took during high school (Sentell 2018). The necessity of STEM education for all groups of students is apparent and a top priority for the state of Louisiana in order to alleviate the STEM pipeline shortages the state faces.

Issues Girls Face in STEM Fields

Girls face a unique set of challenges in regard to entering STEM fields. Young women often internalize failures due to feeling like “outsiders” in certain spaces; this occurs frequently in male-dominated spaces, such as computer science classrooms. Girls often do not feel the knowledge they possess is adequate or believe in their ability to thrive in STEM subject areas. To counteract these beliefs, it is important to reinforce the idea that other students also struggle (Cabot and Walravens 2018). This theory presented to students helps with the retention of female students and encourages them to not drop STEM majors due to concerns about struggling (Cabot and Walravens 2018).

The belief that STEM fields are void of creativity and imagination may also push some girls away; 91% of girls and 80% of women describe themselves as creative (Kesar 2017). This may lead to girls being less likely to identify with STEM, as the desire to create is not readily apparent in a technical field. Girls have also stated that giving back and making the world a better place is an important job component. Many are not aware of the opportunities in STEM to not only be creative, but also assist people around the world with their work. However, opportunities in STEM are increasingly showcasing the imaginative side of the field and the ability and importance of the work to make the world a better place, such as creating coding programs with medical applications. Currently, approximately two-thirds of women employed in STEM fields believe their work allows them to make a positive difference in the world (Kesar 2017).

What is most concerning is that many girls do not believe they have a place in STEM. Parents and teachers influence the ways girls see their strengths and weaknesses, as “more than half of middle school and high school girls say they’re often encouraged by their moms and teachers. Less than half, however, say their fathers offer encouragement” (Kesar 2017, 6). Lack of encouragement from male figures unconsciously reinforces existing gender disparities. While female role models are crucial for girls to envision themselves succeeding in STEM, positive reinforcement from male figures, especially those working in STEM areas, can help girls discard incorrect thinking about gender differences in the subjects.

Girls’ STEM Education

Carnegie Mellon University (CMU) provides an example of how female faculty members are helping destroy gender norms in technological fields. Women comprised 49% of computer science students in fall of 2016, up from 12% in 1994 (Cabot and Walravens 2018, 185). Graduation rates are near identical for men and women —89.5% of men and 88.9% of women graduate in six years (Cabot and Walravens 2018, 185).

Surprisingly, the curriculum did not change at the school but rather the culture surrounding computer science. Lenore Blum, a distinguished mathematician, joined the CMU faculty in 1999 as a computer science professor. She has worked tirelessly to solve gender

disparities all her life, previously founding a mathematical and computer science program at Mills College. In addition, Blum started a program called Expanding Your Horizons (EYH) to help engage middle school girls in math and science fields. The program continues today, even after 40 years. Despite this, Blum acknowledges issues are still present for girls in STEM. The culture shift at CMU began when examining applications for the next undergraduate computer science class. Instead of focusing on previous accomplishments in computing, admissions decided to look more at the leadership skills students possessed. The team decided prior experience in computer science isn't necessarily needed to complete degrees in computer science. The motivation behind this was to not focus on an applicant's previous computing experience, but rather to aim at admitting students with the potential to succeed in computer science.

Many women are attracted to computer science as an avenue for maximum social impact (Cabot and Walravens 2018). Programming specifically for girls interested in STEM is crucial, as it helps break down misconceptions about what it means for women to be in STEM and to open girls' eyes to the possibilities existing in STEM-related fields (Cabot and Walravens 2018, 187). Girls lack a self-confidence in STEM-related activities that their male counterparts often have. This poor self-image can be traced back to the lack of role models for girls in STEM. A lack of role models in STEM leaves interested women feeling hopeless about succeeding in the field (Cabot and Walravens 2018). They have no one to look up to, field questions to, or find support through. This is why around the same time CMU rethought their admissions process for the school of computer science, Blum and her female graduate student Frieze noticed that women also needed extra support in the computer science program. Most professors at the school were male, providing male students with support and leadership opportunities (Cabot and Walravens 2018).

Frieze and Blum created Women@SCS (Women at the School of Computer Science) to assist women in their pursuit of a computer science degree and to connect them with other women in the program. Not only did women feel more empowered by the programming put on by the organization, but the way male peers viewed women in the classroom changed (Cabot and Walravens 2018). Men believed that having a woman partner was an asset, as females tend to have better organizational skills and are more on-task (Cabot and Walravens 2018). Today, it is normal to have equal amounts of men and women in computing classes and labs at CMU.

Women@SCS evolved beyond CMU's campus. The club mentors middle schools girls in computing, which allows them to encourage younger women to also pursue computer science. CMU women act as role models for the girls, demonstrating how it is possible to succeed as a woman in STEM. Thirteen-year-old Caroline Kenney, a participant in the Tech Nights hosted by Women@SCS, stated "We need more women. For all of history, girls have been told they are not as good as boys, but if we can get ahead with programming and STEM, we can show the world what we can do" (Cabot and Walravens 2018, 186). All-girl STEM spaces allow girls to connect with others with similar interests and provides an encouraging space to navigate the gender issues in STEM. Female role models are crucial to encouraging school-aged girls to further develop their interests in STEM. Without mentors to guide girls through male-dominated fields, many are too worried about or impacted by stereotypes to pursue STEM careers.

Role of Stereotypes for Girls in STEM

Gaining girls' interest in STEM is only half the battle; the other half is comprised of combatting outside influences preventing girls from further pursuing these passions. Negative

stereotypes are spread to young girls via authority figures. Girls' mathematical abilities can be negatively impacted by stereotypes propagated by parents and teachers (Shapiro and Williams 2011). These negatively changed attitudes resulted in lower math performance.

Stereotype threat is defined as "concern or anxiety that one's performance or actions can be seen through a lens of a negative stereotype" (Shapiro and Williams 2011, 3). A person's belief that their individual performance can confirm negative stereotypes leads to underperformance. Shapiro and Williams identify gender as an influential variable in terms of math testing (2011). Girls historically underperform when gender is introduced prior to the test. For example, when test moderators read statistics about men performing better than females on math tests before the exam begins there is a decrease in the level of performance by females when compared to females who did not hear the statistic. This is believed to be due to distraction by the threat of the stereotype (Shapiro and Williams 2011).

The situational nature of stereotype threats can immensely impact the thought process of affected individuals. Removing these barriers would help remove the negative stereotypes through avenues such as self-affirmations, role models who defy the believed stereotypes, and reductions in group boundaries. All of these factors would help girls to see themselves as similar to the males in the group, breaking down preconceived notions of inferiority.

Importance of STEM Learning Outside the Classroom

Science and math topics discussed in typical classroom settings convey information in a passive fashion. There is typically less hands-on activity (with the exception of lab projects) when learning these topics, which do not engage the student population. Girls state their level of STEM topic understanding increases after participating in a related after-school club or program (Kesar 2017). Almost twice as many girls experience feelings of empowerment when they learn in a space outside of their normal classroom compared to only learning in a school classroom (Kesar 2017). For example, 74% of girls who participate in extracurricular STEM programming state they are considering a career in STEM, compared to 48% of girls who did not participate in an after-school program (Kesar 2017). While additional barriers to accessing such programs exist, such as living in rural areas with little STEM presence, or lack of funding, the extracurricular opportunities that do exist help decrease the gender gap present in related fields. An outside program like Electric Girls assists female students by allowing them to experience STEM in an active fashion. This provides them with a deeper understanding of the opportunities that lie in studying STEM subjects.

Newman School

German immigrant Isidor Neumond arrived penniless in New Orleans on November 7th, 1853, at the age of sixteen (Konigsmark 2004). Neumond Americanized his name to Isidore Newman, per the request of his uncle, whom had immigrated to New Orleans years prior (Konigsmark 2004). Newman lived with his uncle and cousins after arriving in the United States. His uncle owned a currency exchange business, but Newman instead worked at a general store in Harrisonburg (Konigsmark 2004). This employment allowed him to save up enough money to send for his brothers in Germany (Konigsmark 2004). Upon their arrival, the group of men started their own business with limited success. Isidore Newman finally found work in investment banking after working as a bookkeeper for his first cousin's husband, Harry Stern (Konigsmark 2004).

Newman became quite wealthy working in investment banking. He continuously donated to organizations in need around the community and has been credited with keeping New Orleans financially stable during the post-Civil War period (Konigsmark 2004). In 1874, Newman joined the board of directors of the New Orleans Association for the Relief of Jewish Widows and Orphans, along with other family members (Konigsmark 2004). The organization formed after New Orleans's desperate need for assistance for orphaned children and widowed women as a result of the 1853 Yellow Fever epidemic (Konigsmark 2004). His involvement in the association led to the eventual founding of the Newman School.

The Jewish Children's Home initially educated children in-house. As the size of the home grew, children began attending public schools and received supplemental instruction from tutors at the home (Konigsmark 2004). The quality of education the children, specifically the boys, were receiving came into question. People in charge at the Jewish Children's Home believed the boys' current education did not provide them with skills to become future successful members of society (Konigsmark 2004). The likelihood of finding jobs after leaving the home did not appear favorable. Girls, on the other hand, learned homemaker skills from the home matron. Members of the board did not show concern over the level of education girls received through public schools since girls were usually destined for homemaking careers (Konigsmark 2004).

On May 4, 1902, Isidore Newman offered money to establish a manual training school for children of the Jewish Orphans' Home to take the place of the education they received in-house; construction began the next year (Konigsmark 2004). Newman School would be a separate entity from the Jewish Orphans' Home but would serve those children in their educational pursuits. The manual training school would educate the children of the Jewish Children's Home as well as other students in the area. Manual training schools combine traditional curriculum with skills related to the industrial and trade industries. Such schools provide students with a diverse background of skills and prepare students for a variety of academic and career paths. Land purchased for the school sat on what is now Jefferson Avenue in Uptown New Orleans, a convenient location to the Children's Home on St. Charles Avenue (Konigsmark 2004).

The Isidore Newman Manual Training School opened its doors on October 3, 1904 (Konigsmark 2004). Enrollment numbers for the first day included 102 boys and girls from the Children's Home and 23 students from private homes (Konigsmark 2004). These outside students typically came from middle to upper class households (Konigsmark 2004). Isidore Newman specified that Newman School was not to serve as a Jewish school or an orphan school; he simply wanted the institution to operate as a New Orleans school, open to all (Konigsmark 2004). Newman's wish came true as the first co-educational, non-sectarian, college preparatory school attained a reputable name in the New Orleans community (Konigsmark 2004). The school employed hands-on approaches, such as teaching girls sewing and boys printing skills.

Today, Isidore Newman School is considered one of the most elite private schools in Louisiana. Tuition caps at \$25,796 per academic year for Newman juniors (Newman 2018). Educational instruction is available for Pre-K through 12th grade with a total enrollment of 1,055 students (Newman 2018). Additionally, children ages six weeks to four years old are welcomed at the Green Trees Early Childhood Village. The school boasts that all graduating students go on to pursue higher education, many at prestigious colleges and universities, such as Notre Dame, Brown, UCLA, Princeton, and Northwestern (Niche 2018). Alumni of Newman have gone on to become respected political figures, authors, actors, and athletes, most notably including actor Bryan Batt, historian Walter Isaacson, author Michael Lewis, and athlete Archie Manning's sons,

Cooper, Eli, and Peyton. Isidore Newman School has long educated the brightest minds in the New Orleans area, accumulating respect from the community. This respect could be comprised if a suspected gender discrimination case involving Electric Girls arose.

Electric Girls

Flor Serna attended Loyola University New Orleans, graduating in 2015 with degrees in Music Technology, Business Administration, and Computer Science. Serna began recording music in her bedroom at age 16 and wanted to continue this passion in college. During her undergraduate years, Serna worked as an audio recording engineer at Loyola's recording studio, Vital Sounds. The ability to combine her two passions, music and technology, seemed like a dream come true. While employed at the recording studio, Serna experienced a number of difficulties being the sole female sound engineer at the studio. One day, a school came to tour the studio. Serna began the tour by introducing the students to the sound booth, detailing the function of the blinking buttons and switches. To her surprise, one of the students quipped "You're the engineer?" upon seeing that Serna, a woman, operated the studio. Other issues of sexism emerged from interactions with clients she recorded. While being interviewed for The Sexism Project, Serna revealed "Once I was finishing a recording session and it had gone super well, but the client then said to me, 'Flor, I honestly had major hesitation about recording with you because you're a girl but you did awesome!'" (Sikora 2016, n.p.). The disparities and blatant sexism Serna experienced during her time as a sound engineer inspired her to research the gender gap in STEM (Serna 2018). This passion-fueled research eventually led her to working with school-aged girls to instill leadership and engineering skills in them, in hopes they would grow up to break down gender barriers in STEM.

During her senior year at Loyola University, Serna developed an organization aimed at addressing the lack of girls entering technical fields, such as engineering, as part of her community-focused honors thesis creating an outreach organization aimed at serving girls in the New Orleans community. For Serna, simply writing about and imagining an organization aimed towards developing leadership skills and STEM interests did not satisfy her—she wanted it to transcend the idea into reality to enact true change. While still a full-time college student, Serna paired with student Maya Ramos to co-found Electric Girls in 2015. According to the organization's LinkedIn page, the mission of Electric Girls is as follows:

Electric Girls strives to create confident, young female leaders in STEM (Science, Technology, Engineering, Math) by giving them fundamental skills in electronics, audio, programming, and design, and giving them the guidance and resources to use these new skills in their own creative, self-directed projects. Electric Girls is an experiential education program that provides young women and girls (ages 9-14) with an open and motivating educational environment where they can confidently build, program, and create at the intersection of arts and technology (LinkedIn 2018).

The organization provides girls the opportunity to "learn with and from each other" (Electric Girls 2018, n.p.). Peer mentorship is encouraged utilizing a badge reward system, similar to Girl Scout achievement badges (Electric Girls 2018). The organizational model of Electric Girls is designed with the hopes that older girls who have gone through the program will return and be able to assist the current students. This allows a collaborative environment for young girls to develop their skills in and further teaches teamwork and cooperation. Programs

are held during the summer and school year at participating schools. Skills are taught in operating tools such as soldering iron, wire cutters, multimeters, solder suckers, wood saws, drills, laser cutters, and 3D printers (Electric Girls 2018). Participating girls develop their skills as collaborators, learn proper safety precautions, how to problem solve, computer programming skills, grow in independence and gain community (Electric Girls 2018).

Electric Girls did not develop into a full-time job for either Serna or Ramos until two years after the founding of the organization. Serna and Ramos' work establishing Electric Girls operated on a volunteer-basis, demonstrating the sacrifice and dedication required to push the organization into the nonprofit sector.

Mission Creep

Organizations, both for-profit and nonprofit, are guided by an established mission statement. This set of guidelines enables an organization to plan a course of action to achieve their predetermined goals. A common issue occurring throughout organizations is the problem of mission creep. Mission creep is the shifting of a group's stated mission for a variety of reasons, including funding and publicity motives (Jonker and Meehan 2014). A poorly constructed mission statement, such as one that is too broad or unfocused, can delay a group's work (Jonker and Meehan 2014).

A major reason for mission creep lies in the issue of funding. Some organizations allow their mission to shift in order to qualify for specific grant opportunities. Serna describes how mission creep is especially prevalent in educational organizations:

An example is that a lot of huge foundations that give grants for nonprofits are really starting to shift their focus to early childhood education (ages 0-5) for learning so we've had foundations tell us [that they] decided to make our focus early childhood education. Mission creep would be organizations saying they provide services geared towards early childhood education now and sort of crafting a new mission because of opportunities that exist (Serna 2018, n.p.).

If Serna considered making an exception for Newman by adjusting the Electric Girls curriculum to cater to both boy and girls, the work of the organization would no longer align with the mission statement. While the immediate benefits of connecting with an elite, private school would push the organization forward, the long-term effects could pose serious consequences. An ever-shifting mission statement holds the possibility of framing Serna, and the organization as a whole, as undedicated and ambivalent about the purpose of Electric Girls. This could potentially confuse or deter future customers from the program.

Electric Girls at Newman

Serna felt puzzled at the request of Newman School to operate her organization, designed specifically for girls, as a co-educational group. Serna believed the aim of her organization indicated an adamant position on the criteria for participants. After all, the title of the organization was Electric *Girls*. Serna felt concerned about her ability to run and expand a successful, educational organization designed solely for girls. Would the public disrespect the mission of Electric Girls and the single-sex space? Comments had been made by people adamant that an organization aimed towards a single-gender could not succeed. Some told Serna that she would exhaust the available market in New Orleans within seven to eight years. Others detailed

the impractical nature of the business for other gender-related reasons. The most notable of the negative comments discussed how Serna's idea would not work because "girls just aren't interested in stuff [STEM] like that" (Serna 2018, n.p.).

While Serna knew these opinions were not fact and did not doom her organization to failure, it did raise concerns about if she possessed the necessary skills to make her plans a reality in New Orleans. Serna had not graduated college yet at the time of Newman's offer but held grand dreams of making the hypothetical organization of her honors thesis reality. The pessimistic opinions making their way to Serna had her reconsidering Electric Girls as a whole. Had she truly not thought the idea through?

Administrators at Newman felt conflicted when discussing the idea of Electric Girls as an afterschool program for their students (Serna 2018). Newman's history is rooted in hands-on learning, as showcased in the original purpose of the school as a manual training institution. Over the years, the school has attempted to continue this tradition, allowing students to explore interests and passions through active participation. Gender plays a role in the subjects pursued by students. In the early years of Newman, female students learned sewing skills and homemaker techniques, whereas male students participated in printing courses. A student's gender identity previously allowed Newman to choose classes and activities for students in a clear-cut manner. As rigid gender roles slowly came under criticism, the way schools evaluated which students did what activities began to change.

Serna commented how schools tend to make decisions based on the parents' probable reaction. She believes it unwise to cater to someone's potential comfort or discomfort (Serna 2018). Unfortunately, this practice is quite prevalent in private school systems. Parents are customers of the school, who are purchasing a service (the education of their child). This makes it important for the institution to please the parents, who ultimately fund the school. While public schools have groups such as parent and teacher associations (PTA) to allow parental involvement in school events, private schools are more inclined to give parents a voice in how the school itself runs. Newman School administrators must take into consideration the reactions of parents if Electric Girls were to arrive on campus and only be offered to girls. Adverse effects, such as parents claiming discrimination against their sons, was of great concern to Newman and they believed a valid reason for asking Serna to create a gender inclusive Electric Girls program at Newman.

Does the predicament Newman faces justify the school's request for Serna to allow boys into the program? Should Serna make an exception for Newman School due to its elite status and the possible assistance that Newman could offer in propelling Electric Girls to the next level? Do the benefits of single gender education outweigh the potential cons of it?

Epilogue²

While the points discussed were logical and made sense from a privately funded school's point of view, Serna knew the personal and professional consequences she faced if she allowed Newman to be the exception. Electric Girls' mission clearly stated its focus on educating girls in technology and aiding in the development of related leadership skills. Allowing boys into the program posed a significant threat to achieving the goals outlined by the organization. Despite the benefits partnering with Isidore Newman School promised, Serna stood rooted in Electric

² All from Serna, Flor. Telephone Conversation. 15 October 2018.

Girls' vision. During the meeting, Serna declined the offer to host an Electric Kids program at Newman. Understanding of the reasoning behind her decision, administrators accepted the answer.

Soon after the meeting, Newman contacted Serna with a job offer. It remained clear that Serna's work with Electric Girls had gained traction and success in the community. The school wanted Serna to join Newman's staff as an after-school technology and robotics teacher, completely separate from her work at Electric Girls. Surprised by the offer, Serna took time to collect her thoughts about the position. Around the same time, McGehee, an all-girls independent school in the Garden District, contacted Serna about being a technology teacher. While Newman's position existed solely as a part-time, after-school opportunity, McGehee wanted a full-time staff member to assist with STEAM (STEAM includes art to the already present STEM programming) education for middle school students.

Serna accepted the position at McGehee, which allowed her to support herself while also working towards her passion of working with young girls in STEM education. During this time, Serna continued her work on Electric Girls and built up the organization. She left McGehee in 2016 when Electric Girls became a full-time, paying position. Electric Girls now works exclusively with public and charter schools in New Orleans in order to provide opportunities for girls who otherwise would not have them. Newman has not inquired about Electric Girls again, but instead created their own summer camp aimed at introducing students to STEM fields.

This decision by Serna allowed for her to stay true to the mission statement of Electric Girls and protected the all-woman's space intended by the organization. Had Serna allowed Newman School to invite boys into the Electric Girls programming, the carefully crafted single-sex space would have dissolved into a typical mixed-gender environment, which carries negative implications when it comes to the STEM education of girls. As Serna stated in an interview, STEM spaces become male-dominated when boys are present in tandem with girls, not allowing girls to explore their full potential in STEM topics (Serna 2018). As Serna's experience exemplifies, women's leadership is especially crucial in organizations involving programming for girls or women.

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