

## **SHE CODES FOR PEACE – GIRL EMPOWERMENT THROUGH CODING**

### **ANGOLA**

#### **THE COLLEGE OF IDAHO**

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#### **Part A: NARRATIVE REPORT**

She Codes for Peace is a 5-week project for young girls in Luanda, Angola, aimed at promoting girl-child education and encouraging them to pursue careers in the STEM fields to bridge the gender gap in the industry. With this project, we hope to make a change by helping these girls explore the different opportunities the world has to offer, and not be close-minded regarding what they can be and how they can change the world.

Having been privileged to attain education abroad and in disciplines that are known to be dominated by men, we wanted to give back to our communities by enabling young girls to take up space in these fields such as the tech industry. Growing up we observed that very few women took the science route and specifically computer science and engineering. Therefore, we planned on empowering young girls to pursue careers in STEM by teaching them the basics of Python in a fun and enjoyable manner. Without this project, most of these girls would not have had the opportunity to learn more about computers and programming and be able to get comfortable in a men-dominated area.

We chose the media library (Mediateca, Luanda, Angola) because it was accessible to most of the girls since it is in the centre of the city and close to the homes of most of the girls. The library is also equipped with the resources we needed for each class and provided a suitable environment they can always visit even after the project. Also, the library has a computer lab equipped for informatics lessons which were essential for the project and teaching Python. Lastly, the girls were provided with library cards which can be used in this library and every other media library in the country that is part of this library network (there are 10). This gives them access to all the content that was studied during the project and resources, including computers, for a year enabling them to continue learning the different principles of coding.

During the project, we faced many challenges. We planned on having two sessions daily (morning and afternoon), however, the library was unavailable in the mornings, so we had to meet once a day with the girls whose schedules fit this time (afternoon). In Angola, classes in most schools were in two sessions, so this was a disadvantage to the project because the only group of girls who could participate in the project were the girls who had school in the mornings. Another change we made was the number of times we met in a week. Originally, we also planned on meeting five times a week, but during the project, we could only meet three or four times, because we could not have access to the library on certain days. Initially, there were supposed to be weekly encounters with mentors throughout the project, so that the girls could have more knowledge of what it is like being in the STEM field and ways to navigate those struggles, especially as African women, however, we were only able to have two mentor-mentee meetings. This was a setback because we wanted the girls to

have as many encounters as possible with the mentors as this would be an opportunity for the girls to also build a network connection with other women. Even though we had only two of these meetings, we realised how they were very empowering and the impact they had on the girls. The girls were very excited to meet mentors who shared similarities with them and were encouraged to explore all these areas they had little to no information about. The mentors were from different areas of STEM but mostly engineering students, medical students and three biologists. After the introduction and some icebreakers, most of the meeting was fluent conversation because the girls had a lot of questions about the different areas. They connected in small groups and one on one and exchanged contact information for future meetings.

There are very few opportunities for continuing to work on this issue with partnerships and networks, but through the project we also connected the girls to a society of Angolan women in tech and engineering, which is a project started by one of the speakers during the pandemic to help support women in tech and encourage other women to join. They shared that even though they have limited resources and opportunities since they just founded the group, they would always reach out to the girls when an opportunity comes up. Since the aim of the society aligns with the objectives of the project, we told them we are willing to help them, in case they want to contact the girls for any opportunities or even assist in helping them organise meetings for the girls, if necessary. Peace, to us, means coming together and making positive changes so that a supportive environment is created for each of us to thrive. Through this project, the girls have been able to interact freely with one another and with their mentors and speakers, irrespective of their different backgrounds and beliefs. Our project will help the girls be agents of peace in society, by being active gamechangers and contributing positively to the world. Undertaking this project and interacting with the girls made us realise how we as individuals in society can be tools for change. It has made us realise how the educational gap between the different genders, especially in most African countries is deeply rooted in a lack of resources and opportunities. The girls showed enthusiasm from the beginning of the project. All the girls were very eager to learn and made so much progress over the weeks when they were given the right resources and push. We observed a change in the girls from not knowing much about computers and anything about coding and programming languages to a curiosity that drove them to explore further than what was taught in class. To this point, they would talk more openly about their dreams of being engineers, scientists and science teachers. With this, we believe that the project has helped, inspired and empowered them to pursue these careers. And by pursuing these careers they will share their learning with others and inspire their female friends and peers. In the long term, the girls were also eager to learn English as they quickly realised there is a language barrier for them to fully understand coding. Their intent and effort to learn English show their commitment to continue this path and enrich their careers with programming languages.

It is rare to have girls or women at any age in Angola having coding skills, these girls are already a big step towards reaching the goal of closing the gap in gender inequality, representation and access to education for girls in technology. The further impacts of the project were also clear while interacting with and hearing from the speakers. It was clear that there was a need for similar projects. The speakers made us realise that Angolan society is not only far behind in technology but

also in women's empowerment in technology and other STEM areas. By sharing their experiences, we were able to reflect and reinforce that the change is more likely to be sustainable if girls participate in projects like this from a young age like these girls. The speakers all shared how important and necessary coding skills are. Across their different work environments, they have been prompted to do tasks that were only possible due to their coding backgrounds. Additionally, two field engineer speakers commented on how it gets even harder when a woman gets pregnant and the only way to keep up with her male counterparts is by having programming language skills so they can do bench work. With this, the girls and us could reflect on many situations that we have encountered due to our gender, and how that is very limiting since we are regarded as not competent enough to take up certain roles. From the first sessions, the girls had already shown awareness of the double standards in our society which has created this disparity in access and representativity of women in STEM. It was unanimous that they would repeat lines that were said to them mostly in school such as "you [women] belong in the kitchen", "Mathematics is for boys", and "girls shouldn't do this and that". This brought us back to the root of the problem, and one more reason this age group was chosen, is the mentality of our society and the environment girls are brought up in does not only limit them but reinforces their way of thinking about what they can or cannot do. Although they could say and state that they could do anything they want when asked about a few challenges that come with the careers they want, they would fall back into the mentality that "I can't do that because I'm a girl". Being able to help them see and think outside of that was very gratifying as we could see them thinking for themselves not conforming to stereotypes, they have been brought up with.

## **PERSONAL STATEMENTS**

### **SUELY SANDRA CARDOSO SOEIRO**

The project gave me a strong feeling of accomplishment and duty. Being able to guide young girls towards taking action in their future and growing a desire for self-improvement, as well as a desire for social justice, was empowering for me. Each time we had a session with a speaker, listening to them getting more engaged and keener about the possibility of a future where they are tech or STEM professionals of success would inspire me further. Inspire me to come the next day telling them what else they learn and who else they could be. It was gratifying to see them learning, opening their minds to the possibilities and being aware of their role in women's empowerment and towards gender equality with equity.

### **EMILY AZAASUMAH FREKO**

This project was a remarkable experience due to many reasons. I hope that this project makes a huge impact on the lives of the girls and that the encounters they have made with the speakers and mentors will help guide them navigate their career lives. I also believe that the girls would be great tools for change not only in their communities but in the world at large. Handling the different obstacles, we faced during the project was a great learning experience for me. I am glad to have been part of this wonderful journey of encouraging the girls to learn more and to push themselves to attain the best.