

# WOMEN IN STEM

AUGUST 2019

Awareness Initiative

**BY NANKHOO CONSULTING ENGINEERS &  
HANSLAB ENVIRONMENTAL CONSULTANTS**

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## INTRODUCTION:

The technical team of ladies from Nankhoo Consulting Engineers and Hanslab Environmental Consultants decided to educate the youth about the women in our industry. We decided to visit a school in Durban to encourage female students to pursue careers in the STEM field. We specifically targetted grade 9 girls because they would be choosing subjects at the end of 2019. The aim was to encourage them to choose Mathematics and Physical Sciences to ensure they are able to choose a career path within the STEM fields.

At Nankhoo we are proud to say that our company is 50% female owned. Hanslab on the other hand has all their high positions filled by females, namely, their CEO, managing director and senior consultant.

This article highlights some of the information we shared with the students.

# Meet the Presenters...

The female staff of Nankhoo & Hanslab who have qualifications within the STEM fields.



## **NOMONDE MAZIBUKO**

- Engineering Technician
- National Diploma in Civil Engineering
- Studied at the Mangosuthu University of Technology



## **SHRIYA NANKHOO**

- Environmental Consultant
- Bachelor of Sciences in Environmental Earth Science
- Studied at the University of KwaZulu- Natal



## **JASHMIKA MAHARAJ**

- Environmental Consultant
- Bachelor of Sciences in Environmental Science
- Studied at the University of KwaZulu- Natal



## **YAJNA NANKHOO**

- Civil Engineer
- Bachelor of Sciences in Civil Engineering
- Studied at the University of KwaZulu- Natal



## The Discussion

- What is STEM
- The Role of Women in STEM
- Experiences of Women in STEM
- Advantages of choosing a STEM field
- The importance of Maths & Science
- Questions & Answers Session

## WHAT IS STEM?

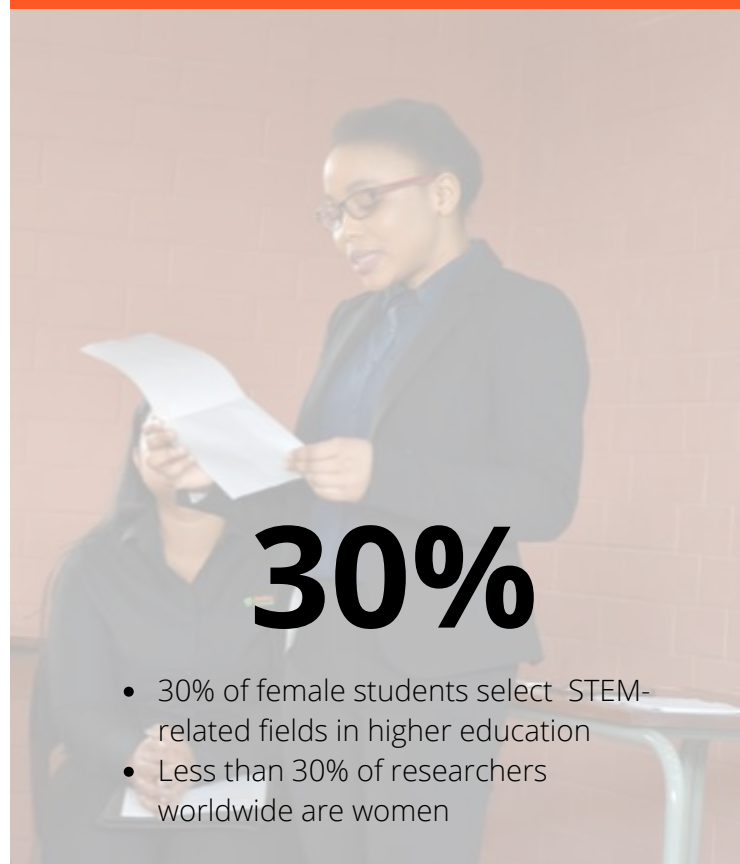
NOMONDE MAZIBUKO

STEM is a acronym used to group together the academic disciplines of Science, Technology, Engineering and Mathematics.

Females historically have not been raised with the expectations of becoming an engineer, doctor or scientist. Certain jobs have been traditionally marked on a gender basis. For instance, a man will be a doctor and a woman a nurse.

There is a shortage of skills in most of these fields and very few women enter them. Women in developing countries tend to be under-represented in STEM fields, despite the significant gains made by women in higher education in the past decades, there is still a gender gap when it comes to the fields that men and women choose to study.

Females in STEM are in high demand. Your country and the world need you. It's time we leveled the playing field.



# 30%

- 30% of female students select STEM-related fields in higher education
- Less than 30% of researchers worldwide are women



## The Role of Women in STEM

According to the UNESCO Institute for Statistics, women make up less than 30 percent of the world's researchers.

The importance of STEM goes beyond gender equality, its not simply about making the work environment fair or equitable. We need more women in STEM in order to make scientific innovations more useful and safe.

For example, the popular fitness watch brand FitBit recently came under fire. They designed a menstruation tracker and limited the cycle to 10 days. This locks the entire female population into a 10 day period, it just makes me wonder how many women were involved in designing this feature.

Therefore more women should be present and participate in these decisions, this will ensure the progression of STEM innovations and discoveries.



"Succeed in the face opposition, bring your unique perspective and talents to the table and no one can refuse you a seat".

## Advantages of choosing a STEM field

JASHMIKA MAHARAJ



Growth Potential



Impact Society



Higher Salaries



Flexibility



Job Satisfaction



Ethnic & Gender  
Diversity

### GROWTH POTENTIAL:

Everyone cannot do without technology, especially WiFi and our smartphones. This growth in technology globally presents many career opportunities to develop such technologies which can be achieved by choosing a career in STEM.

### HIGHER SALARIES:

As a student/ graduate you look forward to your first pay cheque. Careers in STEM offers some of the highest paid salaries, which includes careers such as mathematics, statisticians and engineering.

### JOB SATISFACTION:

Research indicates that people working in the STEM field are happy in their working environment, for example people working in the mathematics field ranked much higher in terms of job satisfaction than English majors.

### IMPACT SOCIETY:

STEM careers allow you to work in a field such computer technology, medicine, engineering, design and robotics and you may be the first to make an ingenious discovery.

### FLEXIBILITY:

For example, an engineering student can pursue chemical engineering, computer science, environmental science to name a few.

### ETHNIC/GENDER DIVERSITY

Pursuing a STEM degree offers increased opportunities for women of diverse ethnicities, and this also gives any STEM graduate a rich and diverse environment for working and learning.

# Mathematics & Physical Sciences

YAJNA NANKHOO

*The World Economic Forum ranked South Africa poorly with regards to the quality of Maths & Science teaching hence it is essential that we encourage the youth to choose these subjects at school in order to realize their full potential.*

## The relevance of these subjects

From an engineering perspective, Maths and Science are the fundamental tools in which the field is based on.

From first to third year of university, you complete several modules of pure maths and physical sciences.

## E-Learning Methods:

The use of E-learning has rapidly taken over the world of education and self-study. There are two organizations which offer free services to students. Firstly, Khan Academy is an international organization for multi-disciplinary learning. Click Maths on the other hand is a local organization who work with the Department of Basic Education and Khan Academy. It is also translated into local languages to provide free data services for this site for Telkom users, making it more accessible to students directly from your phone or tablet!

## How to to efficiently plan your future

1. Know your academic status
2. Identify your goals
3. Create a strategy and
4. Then implement it!

**WWW.KHANACADEMY.ORG**  
**WWW.CLICKMATHS.ORG**



**FROM THE  
LEFT:**

Mrs. Ramjee, Shriya Nankhoo,  
Jashmika Maharaj, Nomonde  
Mazibuko, Yajna Nankhoo and Mrs.  
Amin.





YN

"From the positive responses we received from the girls- I feel more inspired to encourage the youth to pursue STEM careers"

JM

"It was fantastic to see young ladies with so much of potential and to know that I am playing a small part in encouraging the future of talented doctors, engineers and scientists simply by sharing this short talk"

NM

"It was a great experience, being able to speak to young girls and giving them a sense of direction regarding their future"

SN

"I felt fulfilled as I believe we sparked enthusiasm in some of the girls. I know that we motivated them to break the stereotype and persevere to realize their full potential"

## SOME FEED BACK FROM THE GIRLS...

"I love the idea of women empowerment."

"I am interested in Zoology because I would like to protect and conserve animal species."

**"I think STEM is important for women."**

"We need women empowerment and equality."

"I want to pursue a career as a Marine Behaviourist"

"It was enjoyable."

**"It was inspirational."**

"Love seeing women in STEM work forces."

**"It was motivational."** "It was an exciting experience."

"I want to pursue a career as a Biologist."

"I want to be an architect, I love to design and create new and ecofriendly buildings with amazing architecture -this is my passion!"

**"We need more women in these fields."**

"I want to pursue a career in Chemical Engineering"

**"I want to pursue a career in Civil / Mechanical Engineering because I am good at drawing, building and designing."**

"We should have more women in male dominant careers."

"It was informative." "Women are the future!"

**"It was so inspirational to see women passionate about STEM."**



# Male Perspectives:

In the aim of highlighting the role and importance of having women in STEM fields, we asked some of our male colleagues to tell us their thoughts about the topic.



AVI-NASH SUKURAM

"If we want to attract, develop and retain the best and brightest minds, we need to stop considering only half of the potential workforce. We are in the fourth industrial revolution and it's about time we dispel the stereotypical images of what engineers do and look like."



RAKESH SARJU

"I have found that the presence of women in an engineering team has only had a positive influence on the company and individual team members. Women bring a collaborative and social culture to the company, while still maintaining first-rate professionalism combined with their keen intellect."



FRANK TOMKINS

"In today's world, no women should accept being stereotyped by outdated past perceptions! Their clear goals, diligence and determination should be rewarded by them being the best they can .... including in the engineering profession!"

## IN A NUTSHELL

**To conclude the 2019 Women's Month project proved to be a successful inspiring experience for both the presenters and the students. We shared personal experiences and imparted knowledge to them which will hopefully impact their career choices in a positive way.**

**Nankhoo & Hanslab will strive to motivate the youth in more awareness initiatives in the near future.**

