



SOUTHERN AFRICA FELLOWSHIP 2020



INNOVATION
LEADERSHIP
EMPLOYABILITY
WELL-BEING



IMPACT REPORT



Executive Summary

WomEng Southern Africa Fellowship is a university-level programme developed using WomEng's expertise in working with the engineering sector and innovators to develop and foster leadership, innovation, well-being and employability skills for women completing tertiary-level engineering and technology studies and preparing to enter the workplace. Since 2019, WomEng Southern Africa Fellowship has been powered by De Beers Group.

After fifteen (15) years of being established as a premier programme for women in engineering, in 2020, WomEng Southern Africa Fellowship was adapted and redesigned from an in-person programme to a blended-learning approach. The transformation of the programme has been part of WomEng's Go Digital Strategy and was accelerated in response to the COVID-19 crisis which was declared a pandemic in March 2020.

Over eight (8) months, between September 2020 - April 2021, seventy-four (74) tertiary-level engineering and technology students from across three (3) countries participated in WomEng Southern Africa Fellowship 2020. By engaging Fellows in four (4) key skills development modules in a fully virtual environment, WomEng Southern Africa Fellowship 2020 successfully achieved an eighty-five (85%) participant completion rate.

This report outlines the programme context, design, feedback from Fellows and learnings for future iterations of WomEng Southern Africa Fellowship. Programme learnings include insights on the growth and development of Fellows, the learnings from running an international virtual programme, and celebrating successes.

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Author: Aditi Lachman

INTRODUCTION

The WomEng Southern Africa Fellowship is a premier programme for top engineering and technology students in their penultimate or final year of undergraduate or full-time post graduate year of study. The programme develops leadership, innovation, well-being and employability skills required by young graduates to succeed in the engineering and technology industry and beyond. WomEng Southern Africa Fellowship has been run annually since 2006. Since 2019, in partnership with De Beers Group, applications have been open to students in South Africa, Namibia and Botswana. The key outcomes on this programme included:

1. Improved leadership, innovation, well-being and employability skills for beneficiaries
2. Increased exposure to industry leaders and networks for beneficiaries and partners
3. Improved insights on industry and employer branding
4. Opportunity to recruit top engineering talent
5. Exposure and profiling of women in engineering within partner companies

Historically, WomEng Southern Africa Fellowship was hosted as a week-long in-person programme in South Africa. In light of the COVID-19 pandemic, WomEng accelerated its Go Digital Strategy by adapting and redesigning the WomEng Southern Africa Fellowship programme to using a blended-learning approach. Digital tools were used to connect with engineering students until such time when in-person group events were permissible again.

WomEng Southern Africa Fellowship 2020 was redesigned as a virtual programme, meaning materials and tools were supplied to participants to learn in their own space and time. This was supplemented with regular online chats via WhatsApp and live master classes on Zoom with subject matter experts. Seventy-four (74) delegates were selected (hereon referred to as Fellows) to participate. The programme ran in modules between September 2020 – April 2021 with an assignment and feedback required from Fellows at the end of each module and at the end of the programme.

The sections to follow highlight the successes, challenges and opportunities from this cohort. This is based on insight, hindsight and foresight towards the continued development and impact of WomEng Southern Africa Fellowship.

PROGRAMME OUTCOMES

1. Improved leadership, innovation, well-being and employability skills for beneficiaries
2. Increased exposure to industry leaders and networks for beneficiaries and partners
3. Improved insights on industry and employer branding
4. Opportunity to recruit top female engineering talent
5. Exposure and profiling of female engineers within partner companies



Section 2

Programme Design

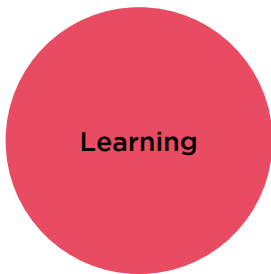




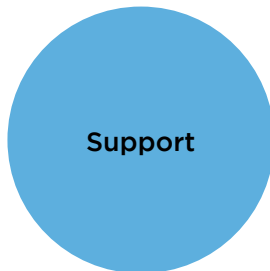
PROGRAMME DESIGN

The WomEng Southern Africa Fellowship programme experience united **learning**, **support** and **community** to build confident engineering and technology leaders.

This was achieved through a combination of various programme materials, master classes, mentor support and continuous community engagement as highlighted in *Exhibit 1*.



Core Training
Live Master Classes
Fireside Sessions
Tools & Worksheets



Mentor Support
Check-Ins



Alumni Engagement
Community Mixers and
Virtual Events
WomEng Circles

Exhibit 1: Programme Pillars

This section provides further details about the design of WomEng Southern Africa Fellowship 2020. Sub-sections covered include:

- Target Audience and Eligibility
- Application Process and Marketing
- Selection and Communication
- Curriculum Overview
- Alumni Engagement
- Monitoring and Evaluation

TARGET AUDIENCE AND ELIGIBILITY

The target audience for this programme included:

1. Engineering, technology and built environment university-level students that identify as women.
2. Eligible applicants had to be studying full-time at a university or university of technology in South Africa, Namibia or Botswana.
3. Applicants that were not citizens of South Africa, Namibia or Botswana were eligible to apply.
4. Eligible applicants had to be in their penultimate to final year of undergraduate studies or full-time postgraduate studies.
5. Eligible applicants had to commit 8-10 hours each month between September 2020 – March 2021 to participate in the programme.
6. WomEng Southern Africa Fellowship alumni were not eligible to apply.

APPLICATION PROCESS AND MARKETING

Applications were completed online. This was done via the WomEng website. The application form was designed for low data usage, taking into consideration high data costs and bandwidth accessibility issues currently being faced by many students. Once applications were received, WomEng, with input from the De Beers Group screened and shortlisted applicants.

Key marketing streams prioritised by WomEng included:

- Mailers to the WomEng network which included alumni, related student organisations and interested individuals.
- Direct messaging via WhatsApp to targeted WomEng Network individuals which included unsuccessful applicants from 2019.
- Direct emails to tertiary institutions for bulk email distribution
- Challenge to 2019 Fellows to nominate 5 people
- Social media (LinkedIn/Facebook/Twitter/Instagram)
- Local media outlets

The target number of applications that WomEng aimed to receive was one hundred and fifty (150). At the close of the call for applications, WomEng received five hundred and twelve (512) applications. This translated into achieving more than three (3) times the target number of applications. The high demand for such programmes was reflected in the 16% chance of being accepted as part of a cohort of seventy (70) Fellows.

SELECTION AND COMMUNICATION

A first-order basic eligibility check was conducted on all applications received. This included reviewing applicants' qualification level, qualification field, year and place of study. An academic bar of 60% was also used as a benchmark for academic performance. Applications were further shortlisted based on a series of evaluation questions utilised by a panel of evaluators that included WomEng Southern Africa Fellowship alumni. Successful applicants were notified in August 2020.

Expected vs. Actual

The target cohort size for this programme was 70 Fellows with an estimated country breakdown of:

- South Africa: 50 Fellows
- Namibia: 10 Fellows
- Botswana: 10 Fellows

Upon final selection, 74 Fellows were accepted with a country breakdown of:

- South Africa: 41 Fellows
- Namibia: 15 Fellows
- Botswana: 18 Fellows

CURRICULUM OVERVIEW

Fellows undertook four (4) modules over an active period of eight (8) months based on the key skills outcomes of this programme. Each module ran for approximately one (1) month and included thinking, discussing, writing and reflecting tasks supplemented by worksheets, tools, videos and short pieces to read. The curriculum was designed to help shape the way Fellows think about themselves as engineering professionals and leaders.

WomEng understood at the planning stage of the programme that many Fellows might have issues with being able to download large amounts of data. WomEng strived to maintain usage of low data tools and resources where possible while providing data bundles to those in need.

Each module concluded with an assignment and feedback survey submission. Fellows needed to submit three (3) out of four (4) module assignments and a final programme assignment and feedback survey to receive a certificate of completion.

Exhibit 2 and 3 highlights the Fellows' programme journey and key aspects covered under each model.



Exhibit 2: Fellows' Journey

MODULE SUMMARY

Module 1 Leadership

Learning Goal

Discovering the power of personal stories and exploring the many definitions of leadership.

- ✓ You will craft your personal vision board
- ✓ How can your story captivate your audience and transform them into supporters of your work?
- ✓ How do you lead yourself and others?
- ✓ Why you need to strengthen your leadership skills?
- ✓ You will clearly communicate your elevator pitch

Module 2 Innovation

Learning Goal

Unlocking your problem solving & entrepreneurial/intrapreneurial mindset

- ✓ What problems do you want to solve in your community, country or the world?
- ✓ How would you solve it?
- ✓ How does the solution create business value?
- ✓ How do you engage a team remotely as part of a new working normal?
- ✓ You will design a solution canvas

Module 3 Well-Being

Learning Goal

Recharging and looking after yourself

- ✓ How do you take time off when it feels like you have no time, and without feeling guilty about it?
- ✓ How do you manage your financial health?
- ✓ How do you manage your physical health?
- ✓ What does it take to feel in control?

Module 4 Employability

Learning Goal

Developing the ability to thrive in the workplace.

- ✓ How do you cultivate meaningful relationships with your networks?
- ✓ Connect with industry mentors
- ✓ Building a supportive community

Exhibit 3: Module Summary

Module 1: Leadership - Unlocking Your Story and Style

Module 1 was dedicated to the power of Fellows' personal stories and exploring the many definitions of leadership. How can your story captivate your audience and transform them into supporters of your work? What do you mean when you speak of leaders and leadership? How do you lead yourself and others? How can you strengthen your leadership skills?

Module 2: Innovation - Developing Skills for the Future of Work

Module 2 was dedicated to unlocking Fellows' problem solving and entrepreneurial/intrapreneurial mindset by developing an engineering business idea to meet one or more of the Sustainable Development Goals. Fellows were introduced to the innovation process, pitching and making business sense of engineering solutions. What problems do you want to solve in your community, country or the world? How would you solve it? How does the solution create business value? How do you engage a team remotely as part of a new working normal?

Module 3: Well-Being - Learning to Recharge and Look After Yourself

Module 3 was dedicated to helping Fellows recharge and look after themselves. Rates of depression, anxiety and burnout among young graduates are growing exponentially across the world. During this pandemic, many are facing added burdens, coupled with uncertainty. How do you take time off when it feels like you have no time, and without feeling guilty about it?

Module 4: Employability – Thriving in the Workplace

Module 4 was dedicated to developing the ability to thrive in the workplace. Key aspects include dealing with imposter syndrome, developing CV and interview skills, learning to negotiate better and creating impactful networks. As part of this module, WomEng hosted a virtual speed mentoring session in virtual breakout rooms with participants from industry including engineering professionals from De Beers Group. How do you cultivate meaningful relationships with your networks and build your tribe?

“Meet the Leaders” Networking Sessions

Country specific sessions were initially planned with De Beers Group in the first quarter of 2021 as in-person networking events. These events were planned based on the assumption of improved COVID-19 health and safety regulations however based on a risk assessment in February 2021, these sessions was adapted and redesigned to be hosted virtually and inclusive of WomEng Southern Africa Fellowship alumni. This event was hosted on 03 June 2021.

Final Assignment and Close Out

At the end of the four (4) modules, Fellows were required to submit an intense reflection on their key learnings, experience as a Fellow, and goals for continued growth. How do you map your dreams and take measurable steps to make them a reality?

ALUMNI ENGAGEMENT

WomEng Southern Africa Fellowship 2019 alumni were engaged during this cohort, providing informal peer mentoring to the current cohort of Fellows. Alumni were also being consulted during the development of the programme content.

MONITORING AND EVALUATION

WomEng builds in feedback at key milestones of its programmes. It provides the opportunity to develop stronger programming and alter the proposed training to meet the needs and requirements of the fellows on the programme. It also provides the opportunity for a higher degree of customisation throughout the duration of the programme. Along with iterating, WomEng used feedback to look at the effectiveness of the training and if the Fellows met mutually decided benchmarks throughout the lifespan of the programme.

All this data and information was collected, analysed and presented in this close out report as a final deliverable for this iteration of the programme. Along with the data captured during the programme that fed into the adjustment of the programme, WomEng used the following key metrics for success:

1. Programme completion rate by participants
2. Increased confidence as a leader in engineering and tech
3. Increased innovative-thinking mindsets
4. Increased confidence in terms of employability



Section 3

Participant Profile

Participant Profile



3 Countries. 7 Nationalities. 15 Institutions.
 15 Engineering & Tech Disciplines. 74 Leaders.
1 Million Possibilities for Growth

A call for applications for WomEng Southern Africa Fellowship 2020 was officially launched on 07 July 2020 and was open for a period of 3 weeks. A total of 512 applications were received from the three (3) eligible countries, namely South Africa (342 applicants), Botswana (119 applicants) and Namibia (51 applicants). Fellows were selected based on a selection criterion developed by WomEng. Basic eligibility considered aspects such as country location, field of study and year of study. This was followed by a detailed qualitative review by a panel of alumni and expert selection committee at WomEng. A total of 74 applicants were selected as Fellows. *Exhibit 4* showcases WomEng Southern Africa Fellows for 2020.

Exhibit 4: Cohort 2020



The data below represents a high-level profile overview of the seventy-four (74) Fellows from South Africa, Namibia and Botswana.

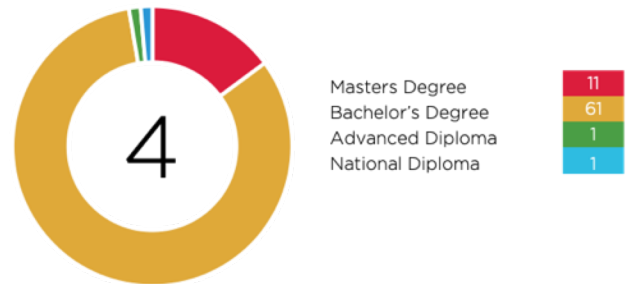
Exhibit 5: Fellows' Profile Summary

Country Location



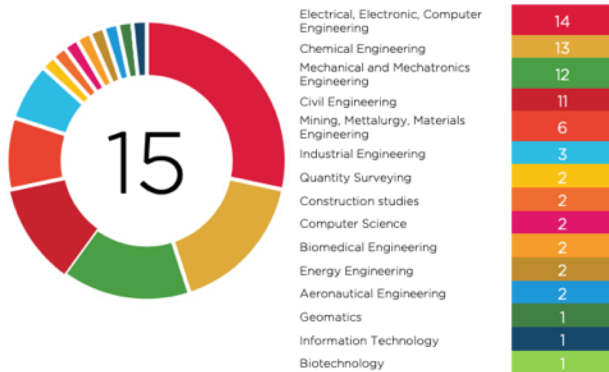
74 Fellows were based in 3 countries in Southern Africa: South Africa (41 Fellows); Botswana (18); Namibia (15)

Qualification Types



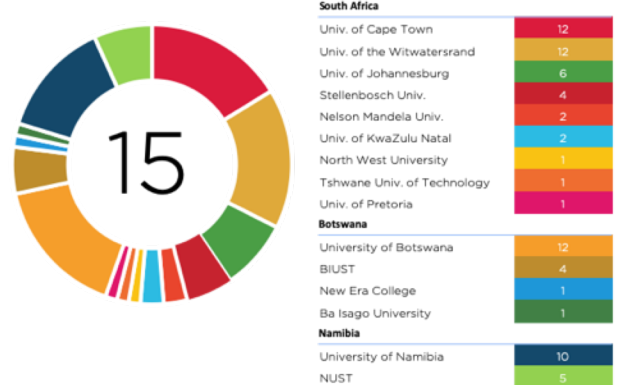
4 levels of academic qualifications were being worked towards by our Fellows.

Study Discipline



15 engineering, built environment and technology disciplines were being pursued by our Fellows.

Institution



15 tertiary institutions across South Africa, Botswana and Namibia were represented by our Fellows.

Academic Year

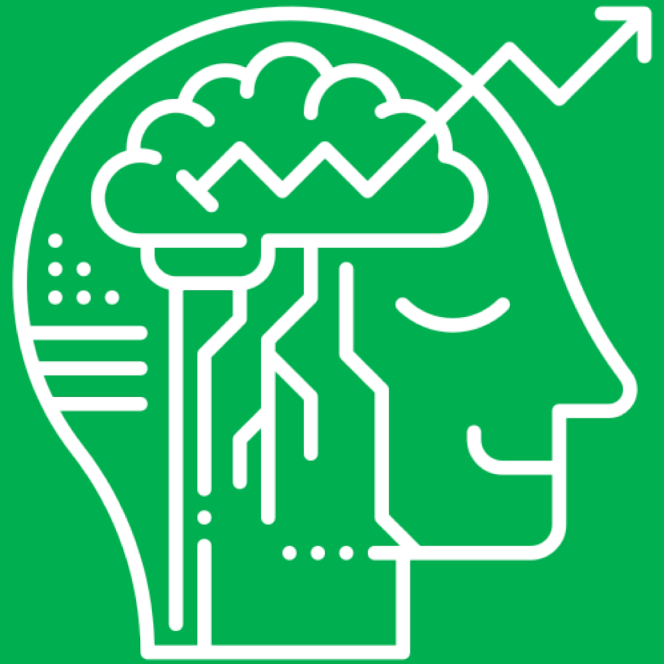


3 academic years were represented by our Fellows, with majority of Fellows in final year undergraduate studies.

Nationality



7 Nationalities were represented at Southern Africa Fellowship 2020.



Section 4

Programme Feedback

PROGRAMME FEEDBACK



Do. Reflect. Do. Reflect. Do.

Feedback was provided by Fellows throughout the WomEng Southern Africa Fellowship 2020 programme. This was done formally through feedback surveys upon completion of each module and a final feedback survey at the end of the programme. Feedback was also received informally through continuous engagement with Fellows, allowing for adaption and delivery of responsive content.

The programme received positive ratings throughout the programme duration. This is particularly evidenced by a final participant completion rate of 85%. The feedback received from Fellows highlights the impact of this programme in supporting and developing soon-to-be graduates during their transition from tertiary studies to the workplace.

The sub-sections to follow provides an analysis of overall programme feedback and thereafter broken down per module.

I enjoyed being a part of WomEng Southern Africa Fellowship. It has taught me valuable skills that I will use in my future endeavors. It has built my confidence, encouraged me to be authentic and renewed my drive for success. I feel empowered to go after my dreams and succeed.

Paulina Ntusi, Namibia



OVERALL PROGRAMME RATING

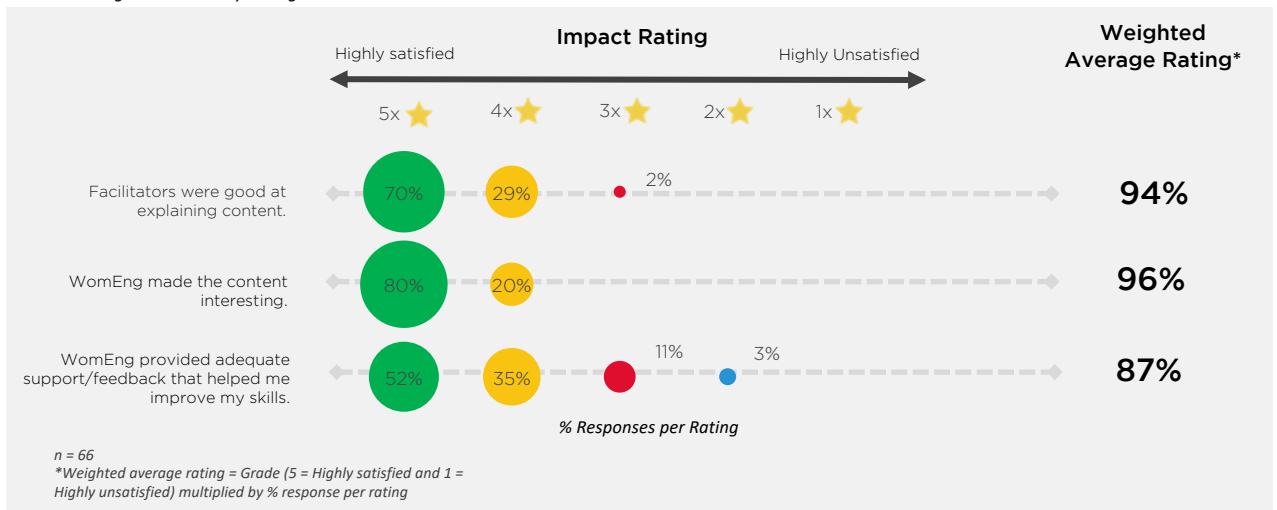
By end April 2021, Fellows provided feedback on their overall experience through a final feedback survey. A total of 66 Fellows (89% response rate) completed the survey. This section details ratings received from Fellows through this survey on the following aspects:

- Programme delivery
- Programme team
- Programme materials
- Programme timing
- Areas for improvement
- Recommendation rating

PROGRAMME DELIVERY RATING

Fellows were asked to rate programme delivery aspects outlined in *Exhibit 6* on a 5-point scale where 5 = Highly satisfied and 1 = Highly unsatisfied. *Exhibit 6* shows that the Fellows valued WomEng's effort to make the content interesting the most. There is also notable room for improvement by WomEng in providing more support/feedback to Fellows.

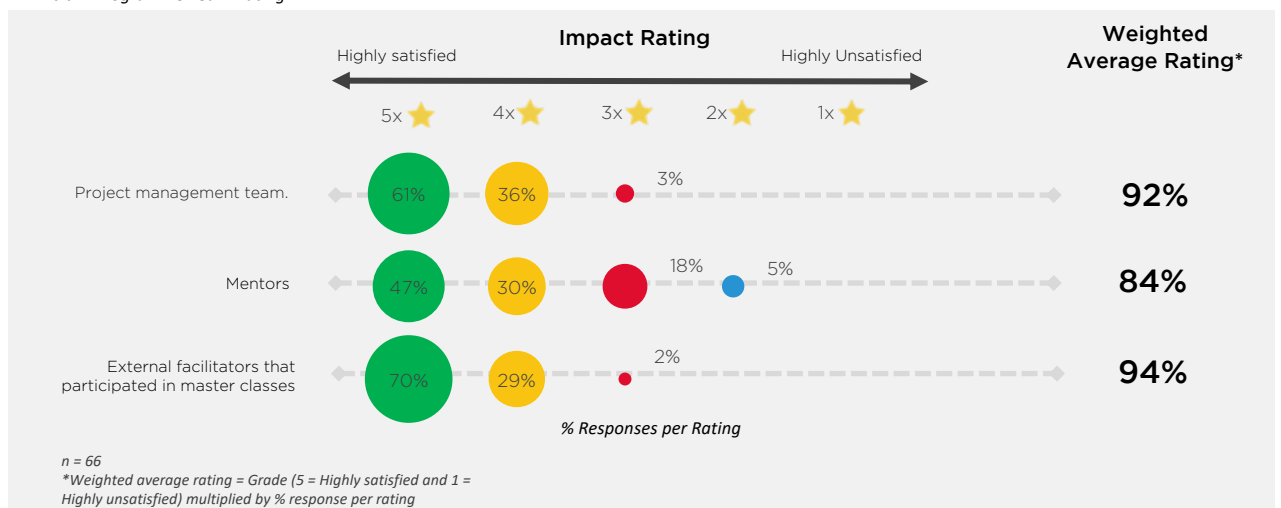
Exhibit 6: Programme Delivery Rating



PROGRAMME TEAM RATING

Fellows were asked to rate the team on a 5-point scale where 5 = Highly satisfied and 1 = Highly unsatisfied. *Exhibit 7* shows that master class experts were rated the highest, followed by the project management team and then mentors.

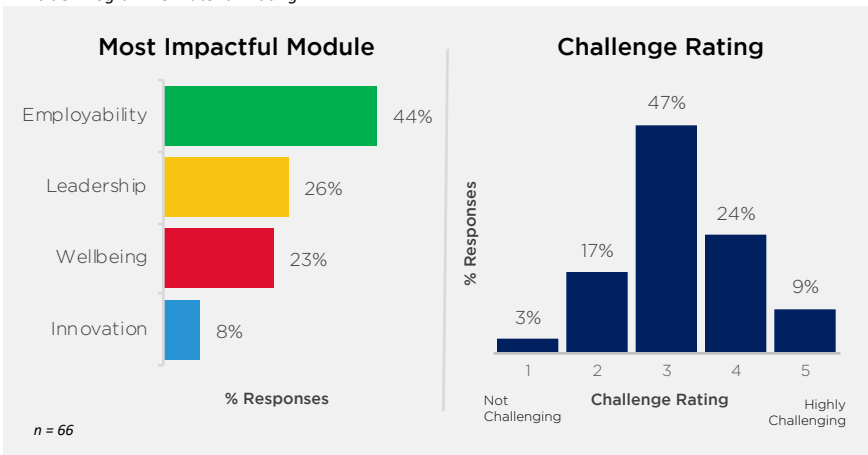
Exhibit 7: Programme Team Rating



PROGRAMME MATERIAL RATING

Fellows were asked, “Which module was most impactful for you?” and secondly, “On a scale of 1 = Not challenging to 5 = Highly challenging, how challenging was the programme to complete?” *Exhibit 8* shows that the most impactful module was Employability and the least popular module was Innovation. The impact rating of the modules have a direct correlation to previous years as the relevance of the topics covered under Employability such as preparing for the workplace, interviews, CVs, etc. are often seen as immediate skills required by Fellows whereas Innovation, though a critical skill in the workplace is still abstract and considered challenging for Fellows. Overall, the distribution of challenge rating shows that the programme provided a good balance of challenge to keep Fellows engaged without overwhelming them.

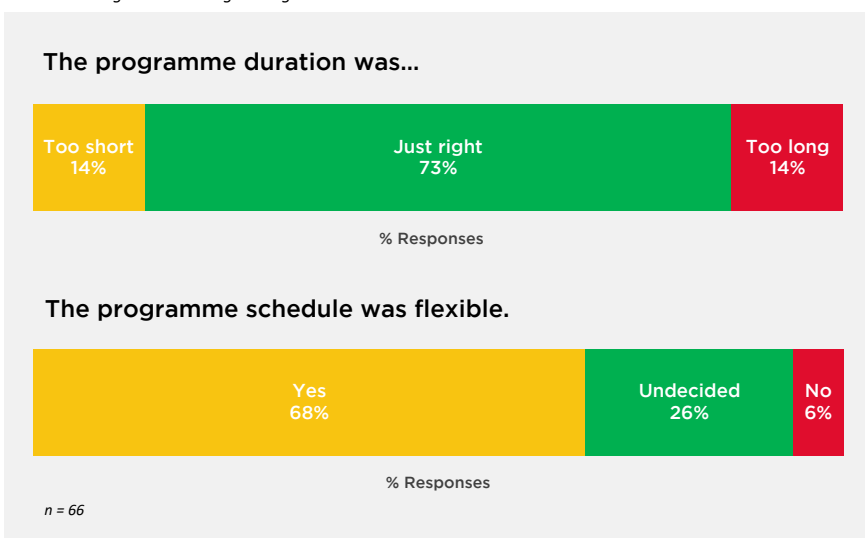
Exhibit 8: Programme Material Rating



PROGRAMME TIMING

Fellows were asked to rate the programme duration and schedule flexibility. *Exhibit 9* shows that 73% of Fellows noted that the duration of the programme was just right. In terms of schedule flexibility, 68% noted that the schedule was flexible. Based on feedback from the various modules, a number of Fellows have requested that consideration should be given in the future for hosting live master class sessions in evenings or weekends to avoid clashes with academic calendars.

Exhibit 9: Programme Timing Rating



AREAS FOR IMPROVEMENT

Fellows were asked for suggestions/comments that will help WomEng make the programme better in future iterations. *Exhibit 10* highlights key recommendations noted.

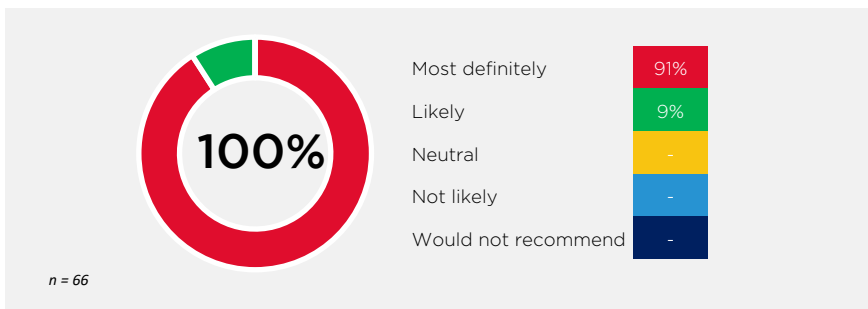
Exhibit 10: Recommended Areas for Improvement

Category	Details
In-person programming	As this was the first year of running WomEng Southern Africa Fellowship virtually, many Fellows drew comparisons to impact stories from alumni about the in-person programming. The COVID-19 pandemic also created an increased urge for face-to-face contact however this was limited due to regulations. WomEng will strive to incorporate in-person components to the programme when feasible.
Expand reach	Fellows have expressed the high level of impact this programme brought them and would like for more students to share in this experience.
Direct employment opportunities	Due to the economic downturn and COVID-19 pandemic, recruitment of new graduates has been stalled by many organisations in the industry, leaving many graduates uncertain about their future employment opportunities.
Care packs	Fellows have suggested that care packs with WomEng branded items be sent to them as part of enriching the Fellow experience.
Individual feedback on assignments.	WomEng did provide collective feedback on assignments and when possible, individual feedback on strategic activities such as mock interviews. Individual feedback would increase individual impact however due to the relatively large size of the cohort, this might not always be possible.

RECOMMENDATION RATING

Fellows were asked, “Considering your complete experience with the programme, how likely would you be to recommend it to a friend or colleague?” *Exhibit 11* shows that 100% of Fellows would likely to most definitely recommend this programme.

Exhibit 11: Recommended Rating



MODULE 1: LEADERSHIP

A key measure of impact was through consideration of learning resources provided, approach adopted and individual impact felt by Fellows. A total of 68 Fellows (92% response rate) provided feedback for the Leadership module. The key data is presented below.

LEARNING RESOURCES: Fellows were asked to rate the Leadership module in terms of the module learning resources provided. *Exhibit 12* shows Fellows' ratings per rating criteria.

Exhibit 12: Leadership Learning Resources Rating



LEARNING APPROACH: Fellows were asked to rate the Leadership module in terms of the module learning resources provided. *Exhibit 13* shows Fellows' ratings per rating criteria.

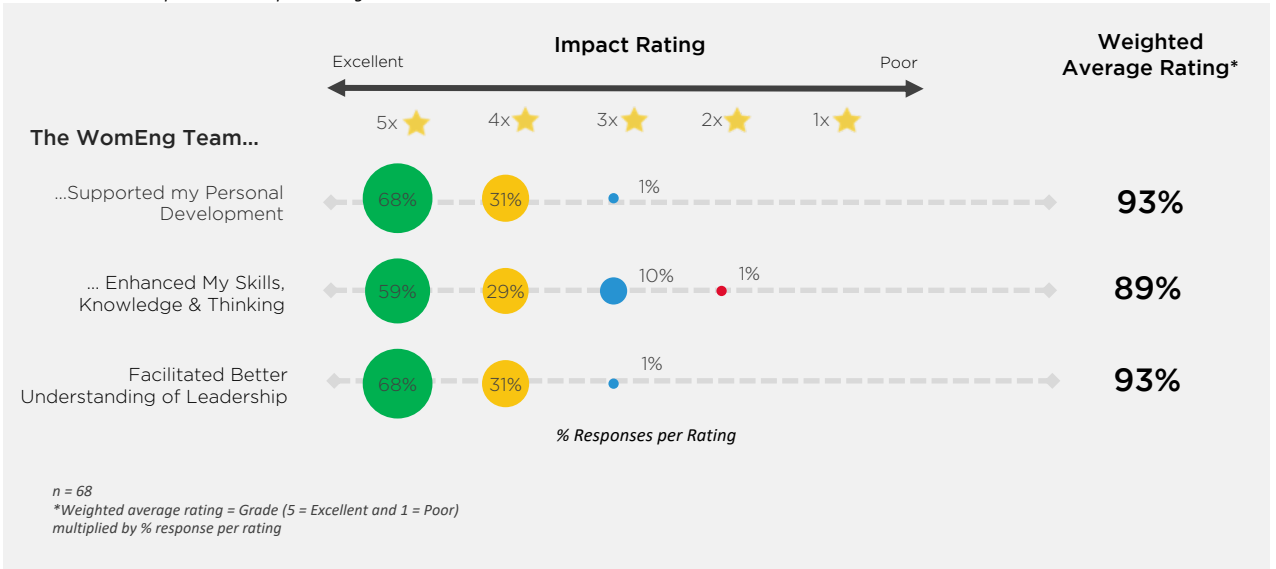
Exhibit 13: Leadership Learning Approach Rating



MODULE 1: LEADERSHIP continued...

INDIVIDUAL IMPACT: Fellows were asked to rate how the Leadership module has impacted them individually. *Exhibit 14* shows Fellows' ratings per rating criteria.

Exhibit 14: Leadership Individual Impact Rating



The highlight of this module for me was... learning that leadership is not subject to position but the activities and things one does.

Oaboloka Seeletso, Botswana



In terms of leadership, I would have liked to learn more about... communication and negotiation skills.

Vivienne Muzila, Botswana



The experience of this module could be more impactful if... more videos were sent out about different leaders and their skills and why they are important.

Beverly Shilongo, Namibia



General Feedback... I think that my mentor played a big role in helping me unpack this module. Also, I really loved how fellows interacted with each other especially considering how delicate personal development is."

Elihle Mngqibisa, South Africa



MODULE 2: INNOVATION

A key measure of impact was through consideration of learning resources provided, approach adopted and individual impact felt by Fellows. A total of 33 Fellows (45% response rate) provided feedback for the Innovation module. The key data is presented below.

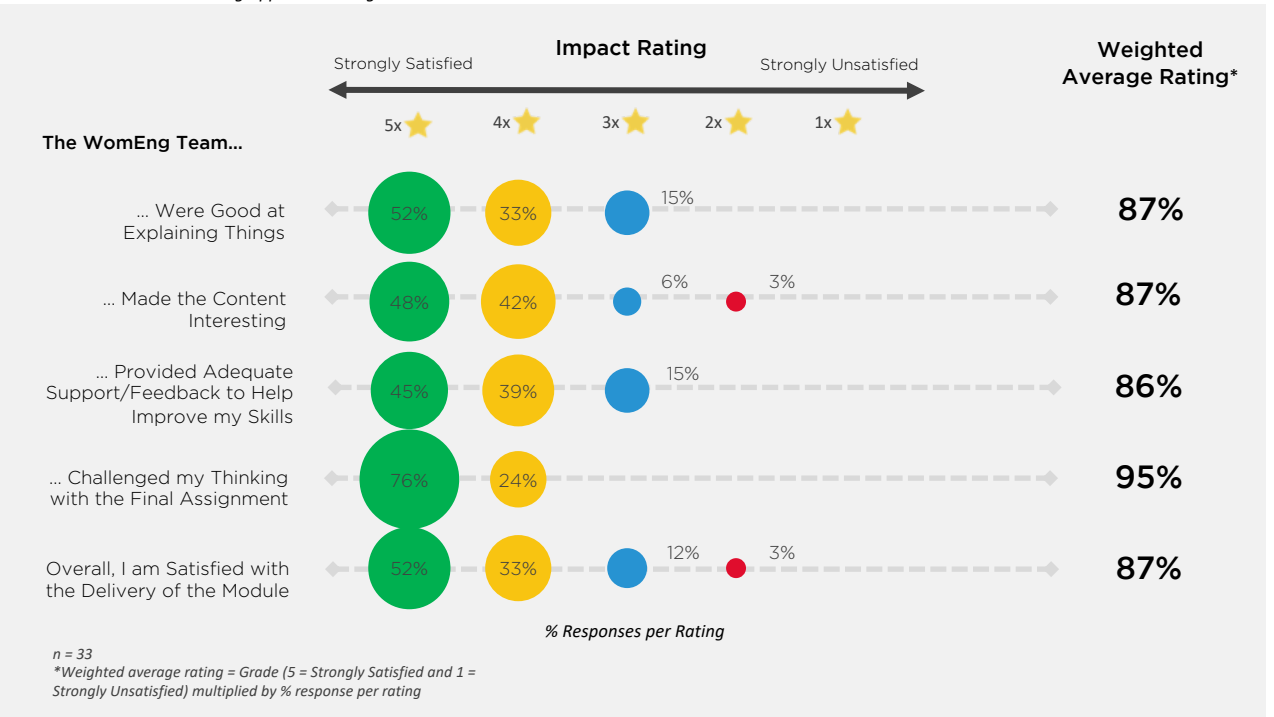
LEARNING RESOURCES: Fellows were asked to rate the Innovation module in terms of the module learning resources provided. *Exhibit 15* shows Fellows' ratings per rating criteria.

Exhibit 15: Innovation Learning Resources Rating



LEARNING APPROACH: Fellows were asked to rate the Innovation module in terms of the module learning resources provided. *Exhibit 16* shows Fellows' ratings per rating criteria.

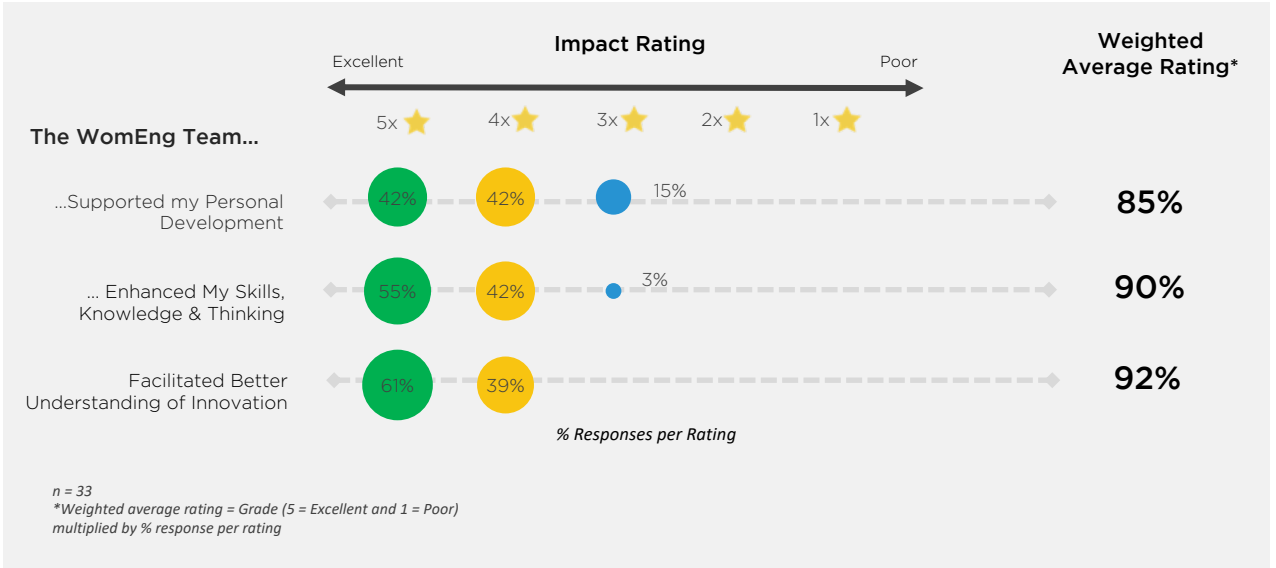
Exhibit 16: Innovation Learning Approach Rating



MODULE 2: INNOVATION continued...

INDIVIDUAL IMPACT: Fellows were asked to rate how the Innovation module has impacted them individually. *Exhibit 17* shows Fellows' ratings per rating criteria.

Exhibit 17: Innovation Individual Impact Rating



The highlight of this module for me was... rethinking how I viewed innovation and being challenged to see the world differently.

Renita Raidoo, South Africa



In terms of innovation, I would have liked to learn more about... tapping into our creative thinking.

Aini Thomas, Namibia



The experience of this module could be more impactful if... we learnt how to deal with failure in innovation.

Boitumelo Sebesebe, South Africa



General Feedback... It was a very challenging module and interesting. It contributed so much to my personal growth and it improved my way of thinking.

Sekao Marata, Botswana

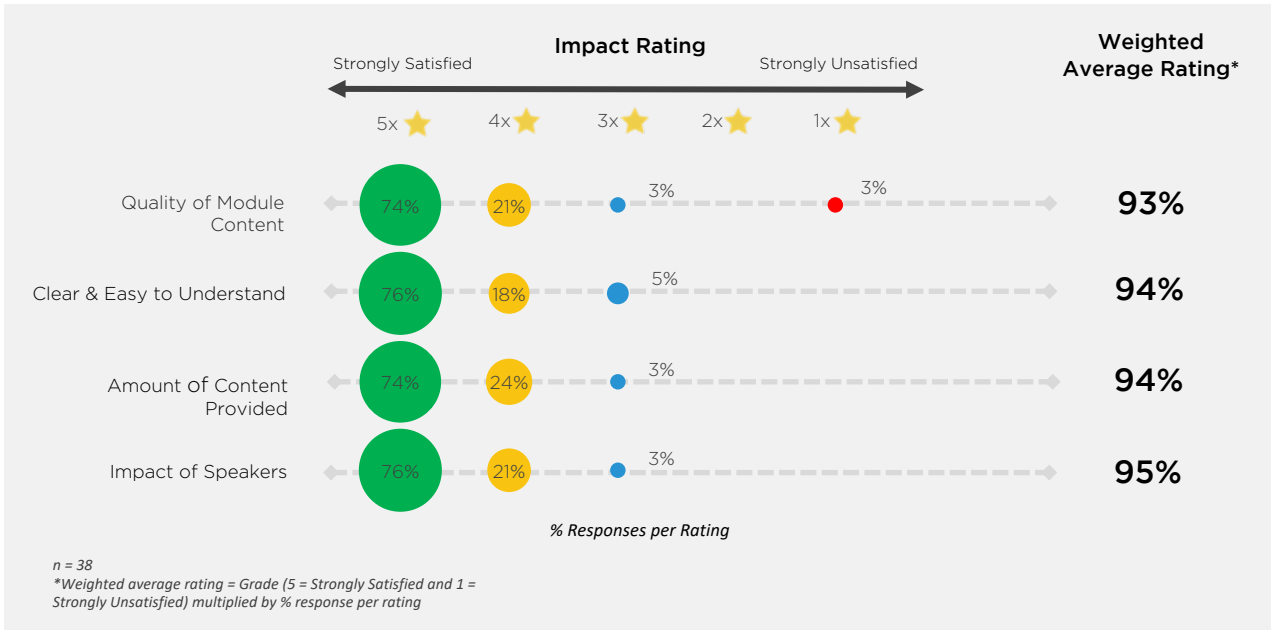


MODULE 3: WELL-BEING

A key measure of impact was through consideration of learning resources provided, approach adopted and individual impact felt by Fellows. A total of 38 Fellows (51% response rate) provided feedback for the Well-being module. The key data is presented below.

LEARNING RESOURCES: Fellows were asked to rate the Well-being module in terms of the module learning resources provided. *Exhibit 18* shows Fellows' ratings per rating criteria.

Exhibit 18: Well-being Learning Resources Rating



LEARNING APPROACH: Fellows were asked to rate the Well-being module in terms of the module learning resources provided. *Exhibit 19* shows Fellows' ratings per rating criteria.

Exhibit 19: Well-being Learning Approach Rating



MODULE 3: WELL-BEING continued...

INDIVIDUAL IMPACT: Fellows were asked to rate how the Well-being module has impacted them individually. *Exhibit 20* shows Fellows' ratings per rating criteria.

Exhibit 20: Well-being Individual Impact Rating



The highlight of this module for me was... that there was so much I couldn't understand about myself and well-being until WomEng put it into perspective for me. Very relatable content.

Zinomtha Gqweta, South Africa



In terms of well-being, I would have liked to learn more about... women stuff. I think there can be relevant discussions on how to balance work and so on when our bodies are not being too nice to us or how to seek help.

Thea Swanepoel, South Africa



The experience of this module could be more impactful if... we had more 'around the room' sharing sessions.

Renita Raidoo, South Africa



General Feedback... This module was well delivered and really helped us. I have never had a discussion on financial well being. This module has helped me to understand a lot.

Hilja Negonga, Botswana



MODULE 4: EMPLOYABILITY

A key measure of impact was through consideration of learning resources provided, approach adopted and individual impact felt by Fellows. A total of 45 Fellows (61% response rate) provided feedback for the Employability module. The key data is presented below.

LEARNING RESOURCES: Fellows were asked to rate the Employability module in terms of the module learning resources provided. *Exhibit 21* shows Fellows' ratings per rating criteria.

Exhibit 21: Employability Learning Resources Rating



LEARNING APPROACH: Fellows were asked to rate the Employability module in terms of the module learning resources provided. *Exhibit 22* shows Fellows' ratings per rating criteria.

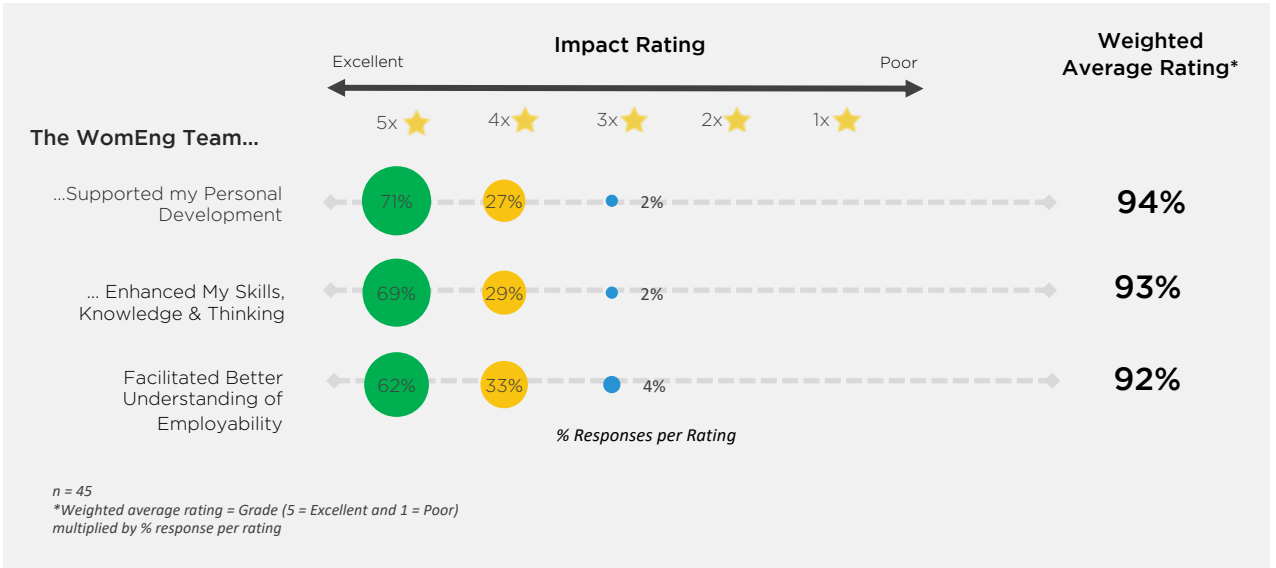
Exhibit 22: Employability Learning Approach Rating



MODULE 4: EMPLOYABILITY continued...

INDIVIDUAL IMPACT: Fellows were asked to rate how the Employability module has impacted them individually. *Exhibit 23* shows Fellows' ratings per rating criteria.

Exhibit 23: Well-being Individual Impact Rating



The highlight of this module for me was... the flash mentoring session. The mentors were friendly and the session helped me get over the discomfort of talking to experts and professionals.

Paulina Ntusi, Namibia



In terms of employability, I would have liked to learn more about... negotiation skills.

Stella Moreba, Botswana



The experience of this module could be more impactful if... we had more time with the flash mentors.

Zahraa Essa, South Africa



General Feedback... I liked the way the mock interviews were conducted. It was really helpful.

Simphiwe Mbatha, South Africa





Section 5

Programme Insights



Programme Insights

Insight Hindsight Foresight

This section consists of three (3) parts, namely:

Part 1: A status update on Fellows at the close of the programme

Part 2: Reflections on key learnings from programme delivery

Part 3: Considerations for the next iteration of WomEng Southern Africa Fellowship

This was such an extraordinarily positive experience. I went from fear to extreme excitement. There are moments I look back to where I felt the growth within myself and a shift in my perspective.

Elihle Mngqibisa, South Africa



Having the opportunity to communicate with people in industry and ask questions benefitted me the most. This made it easier for me to approach and ask people questions that I wouldn't easily do.

Eunickah Badenhorst, South Africa

Would like to thank WomEng for choosing me. I wouldn't be the person I am if it was not for you. Within the past few months I have really grown. And I am really thankful for the opportunity.

Kristine Petrus, Namibia



PART 1: INSIGHT

In April 2021, 66 Fellows (89% response rate) provided an update on their current status in terms of location, employability and top employer of choice. All respondents still reside in South Africa, Botswana or Namibia. The majority of Fellows (55%) are still engaged in their tertiary studies while 16 Fellows (24%) are now working. Thirteen (13) Fellows (20%) are now qualified however are currently not working. The sub-sections to follow provide further details.

LOCATION

Fellows are located across South Africa, Botswana and Namibia. In South Africa, the majority of Fellows are located in Johannesburg. In Botswana, majority of Fellows are located in Gaborone, the capital city of Botswana. In Namibia, the majority of Fellows are located in Ongwediva, a northern region of Namibia and approximately 700 km from Windhoek, the capital city of Namibia. The University of Namibia is located in Ongwediva thus a possible reasoning for such distribution. *Exhibit 24* provides a breakdown of city/town locations where Fellows are based.

Exhibit 24: Fellow Location

Location	No. of Fellows
Botswana	16
Gaborone	12
Jwaneng	1
Palapye	3
Namibia	14
Ongwediva	7
Oshakati	3
Windhoek	4
South Africa	37
Johannesburg	15
Cape Town	11
Durban	3
Gqeberha	2
Pretoria	2
Stellenbosch	2
Witbank	1
Secunda	1



To view in Maps, [click here](#).

EMPLOYABILITY STATUS

Fellows were asked to describe their current status in terms of study/employment. *Exhibit 25* highlights the breakdown of responses received. Majority of Fellows (55%) are still currently studying and will either graduate in June or December 2021. Twenty-four percent (24%) of Fellows are now working.

Exhibit 25: Employment Status of Fellows

Current Situation	No. of Fellows	% of Fellows
I am still currently studying towards an engineering, technology/built environment qualification	36	55%
I have a tertiary qualification in engineering, technology or built environment but currently not working	13	20%
I am currently working in engineering, technology/built environment industry	9	14%
I am currently studying and working in engineering, technology/built environment industry	5	8%
I have a tertiary qualification in engineering, technology or built environment but currently working in another sector	2	3%
Other	1	2%

A concern for WomEng is that 20% of Fellows have qualified however are not currently working. Additionally, 28 out of 36 (78%) Fellows who are currently studying, noted that they do not have any job secured once they have graduated. This is synonymous with current employment trends in the Southern Africa engineering industry due to the current economic climate and the COVID-19 pandemic. Most engineering companies have paused recruitment of new graduates.

ENTREPRENEURSHIP INTERESTS

In terms of entrepreneurial paths, Fellows were asked, “Are you currently or do you have interest in becoming an entrepreneur?” In response, *Exhibit 26* shows that 88% of Fellows have shown interest or thinking about entrepreneurship as a career pathway.

Exhibit 26: Entrepreneurial Interest

Yes 63%	Maybe 25%	No 12%
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As a response to high youth unemployment rates and economic growth in Southern Africa, WomEng is actively investigating ways of developing direct talent attraction opportunities for new graduates within WomEng and our network such as virtual internships and entrepreneurial paths to support women in engineering and technology.

“I am currently a co-founder of an upcoming solar energy company that strives to promote clean and sustainable energy production.”
Aini Thomas, Namibia

“I am a co-founder of a company (Gold N Drop). It was founded in 2020. It is a business that focusses on apiary management as well as sale of natural honey. I also intend on starting an Engineering consulting firm in the next 5 years which will focus on sustainability projects.”
Linda Mwendia, South Africa

I have a registered company that is dedicated to bring the first ever foundry in Namibia. Everything looks promising so far.”
Ruusa Uukongo, Namibia

TOP EMPLOYER OF CHOICE

Every year since 2017, WomEng has surveyed Fellows to establish their top employers of choice. In 2020, the companies mentioned varied greatly between Fellows, creating a diverse number of employer mentions. *Exhibit 27* lists all companies mentioned by Fellows and sorted by the country from which the Fellow is currently located in.

Exhibit 27: Top Employers of Choice

Company	No. of Fellow Mentions	Company	No. of Fellow Mentions
South Africa	41	Botswana	18
Anglo American	4	Debswana	5
WBHO	2	De Beers Group	2
McKinsey & Company	2	Aecom	1
Unilever	2	Anglo American	1
Amazon	1	Bothakga Burrow	1
Astron Energy	1	Botswana Power Corp.	1
Aurecon	1	BTLC	1
Aurecon	1	Dalberg	1
BASF	1	Google	1
BCG	1	Mercedes Botswana	1
CSIR	1	None	1
De Beers Group	1	Pinnacle Geomatics	1
Deloitte	1	SpaceX	1
Eileen Fisher	1		
ESKOM	1	Namibia	15
EY	1	Debmarmine Namdeb	3
Green Building Council SA	1	De Beers Group	2
Intel	1	Roads Authority Namibia	2
Int. Atomic Energy Agency	1	Anglo American	1
Int. Center of Genetics & Biotech	1	B2Gold	1
Khanyisa Projects	1	EBH	1
Maersk	1	Huawei	1
Minerals Councils	1	NamPower	1
Mondi	1	Siemens	1
Ossur	1	Trevali	1
Rand Water	1	Windhoek Consulting	1
Rio Tinto	1		
Sappi	1		
Siemens	1		
The United Nations	1		
Transnet	1		
Turner and Townsend	1		
WomEng	1		
World Bank	1		
Zutari	1		

PART 2: HINDSIGHT

Reflecting on the WomEng Southern Africa Fellowship programme delivery, three (3) key highlights include:

- 1. Navigating the COVID-19 Pandemic:** While the expected outcomes of the project remained the same, the ability to achieve the outcomes, as well as solve new challenges presented by the COVID-19 pandemic changed the programme approach and the way WomEng executed and supported women in engineering and technology through this programme. This project moved from an in-person intervention to a fully virtual rollout with additional support as the pandemic unfolded. The planned outcomes have been achieved while developing new forms of impact and reach.
- 2. Data access and connectivity:** To mitigate the risk of Fellows not having the opportunity to engage on the programme due to high data costs, WomEng provided data to Fellows before each master class however within the African context, network connectivity strength is equally a challenge to high data costs. Zoom was the primary tool used for calls. Across the series of calls, there were a notable amount of disconnections for certain Fellows. The internet connectivity strength of stakeholders' internet connections, the duration of calls and using multiple types of communication mediums e.g. WhatsApp was considered to mitigate this challenge. The master classes were recorded and shared with participants together with downloaded resources, post the event to review. This allowed Fellows to utilise the knowledge in their own capacity and when internet connectivity permitted them to access such resources.
- 3. Building a larger and stronger sense of community:** By redesigning the programme to a virtual roll-out, WomEng effectively increased the number of participants and engagement time with Fellows. The cohort size increased from sixty (60) Fellows in the in-person format to seventy-four (74) Fellows in the virtual format. In addition to this, WomEng Southern Africa Fellowship 2020 spanned across eight (8) months of engagement time. This was done on the understanding that it is not effective to directly translate four (4) days of in-person programming into four (4) days of virtual programming. The extension of programme time was also purposefully such that WomEng could be a support system for Fellows during a very uncertain period in everyone's lives due to the COVID-19 pandemic. This assisted in building a stronger sense of community with Fellows which is reflected in the positive feedback provided by Fellows.

PART 3: FORESIGHT

Looking towards the next iteration of WomEng Southern Africa Fellowship, the following aspects will be taken into further consideration:

- 1. Complimenting academic calendars:** In 2020, students predominantly worked from home due to COVID-19 lockdown regulations. This created two assumptions that WomEng took into consideration with the programme design. Firstly, the majority of Fellows would have flexible schedules to attend live master classes during normal work hours. Secondly, the risk of Fellows not having access to strong internet connectivity and data cost implications was higher as most students often rely on uncapped internet connectivity on campus. In 2021, circumstances have adjusted. During the 2021 programme period, it is assumed that the new cohort of Fellows will most likely be on campus and will have academic commitments during working hours while access to high speed internet connectivity for Fellows will be more readily available on campus. In light of this, WomEng will take into consideration hosting live sessions on weekday evenings or weekends such that it compliments vs. disrupts Fellows' academic commitments.
- 2. Migration to a learning management system :** WomEng is currently developing a learning management system for implementation of online courses. This platform will be utilised as the main workspace for Fellows to access resources and keep track of their progress on the programme.
- 3. Increasing alumni engagement:** Due to COVID-19 regulations, the networking events with De Beers Group towards the end of WomEng Southern Africa Fellowship 2020 had to be adapted from initially being planned as in-person to being hosted virtually. This created an opportunity to engage more people including alumni from 2017 - 2019. Based on the positive response shown by alumni, WomEng will ensure that more opportunities as such to engage alumni will be included in the next iteration.

CONCLUSION

The key objective of WomEng Southern Africa Fellowship was to equip engineering and technology students with skills to become confident leaders in industry. The primary skills that the programme focused on included leadership, innovation, well-being and employability.

Through the adaption and redesign of the programme from in-person to fully virtual, the programme ran successfully with all planned outcomes being achieved. WomEng used the following key metrics for success:

- **Programme completion rate by participants:** 85% of Fellows (63 Fellows) completed all the necessary requirements to receive completion certificates. Completion of the programme required Fellows to submit at least three (3) out of four (4) module assignments and feedback surveys and the final assignment and final feedback survey.
- **Increased confidence as a leader in engineering and tech:** Under the Leadership module feedback, 88% of Fellow responses provided an impact rating of (4) or more out of five (5) when asked to rate how the module “Enhanced my skills, knowledge and thinking”. This resulted in a weighted average rating of 89% for enhancement of leadership skills, knowledge and thinking.
- **Increased innovative-thinking mindsets:** Under the Innovation module feedback, 97% of Fellow responses provided an impact rating of four (4) or more out of five (5) when asked to rate how the module “Enhanced my skills, knowledge and thinking”. This resulted in a weighted average rating of 90% for enhancement of innovation skills, knowledge and thinking.
- **Increased confidence in terms of employability:** Under the Employability module feedback, 98% of Fellow responses provided a rating of (4) or more out of five (5) when asked to rate how the module “Enhanced my skills, knowledge and thinking”. This resulted in a weighted average rating of 93% for enhancement of innovation skills, knowledge and thinking.

The overall feedback from Fellows was positive. Programme highlights included the high level of engagement from Fellows throughout the programme as well as support provided from the WomEng team, mentors and expert guest speakers.

While the impact of the COVID-19 pandemic affected the overall implementation of the programme, it provided an opportunity for WomEng to provide critical community support for Fellows during a period that could have been considered as isolating and mentally and emotionally challenging for most.

Learnings from successfully running WomEng Southern Africa Fellowship 2020 with the support of De Beers Group, alumni, mentors and subject matter experts allows WomEng to continue supporting women in engineering and tech to become confident leaders, to thrive in the workplace and grow in a community. This will ensure diversity and inclusion exists within engineering and technology industries.



For more information, connect with us at:

-  info@womeng.com
-  [@_WomEng](https://twitter.com/_WomEng)
-  [WomEng](https://www.facebook.com/WomEng)
-  womeng.org



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