

This year was filled with so many memorable quotes that resonated with the energy and motives behind the work we were doing.

1. “Education is the most powerful weapon which you can use to change the world.”

--Nelson Mandela

Zolile Hector Pieteron was 12 years old when he was killed during the Soweto uprising of 1976 in apartheid South Africa. The community was protesting the government initiative that subjects be taught in Afrikaans (as opposed to the native languages), which was the language of the controlling party.

Police opened fire on the protesters. 10 people died, including Hector Pieteron. This was the backdrop and context of the first day of TABSA workshops where fittingly, only students attended. There were roughly 70 students, almost all of them young women by design in order to support STEM participation and representation in STEM fields by women.

The message that day on the anniversary of Youth Day / Hector Pieteron Day, was that Hector Pieteron and his fellow compatriots were fighting for the future of South Africa's youth. Fighting for South Africa's future within the arena of education which is all-important. Mandela's quote is that “Education is the most powerful weapon which you can use to change the world.” They were fighting to arm themselves and future generations.

Thus, through Yunus's speech, the connection was forged. He imparted the message on the students attending the workshop that they were there representing the future generations of South Africa. And as we gathered on Hector Pieteron Day, they were told that whether they knew it or not, the work they were putting in was in the same spirit of fighting for a better future in South Africa. They were upgrading their skills and deepening their knowledge which are means through which they can change the world. The matric exams are just that as their results directly determine which careers they can and cannot pursue.

So the work our TABSA teammates and the students did that week was critical.

2. “In a few years, any of the local South African teachers could do what I do. But I know I could not do what they do.”

--Mike Hu, former TABSA member (and my fantastic Chemistry teacher)

The local teachers face incredible challenges. No electricity, no running water, broken windows in the classrooms, freezing temperatures, class sizes of 80 students, broken classroom furniture, roofs blown off in high winds, etc.

But they make it work and they are brilliant. I know my resilience isn't up to par.

I love sharing jokes in class, and the teachers there took up my cue and brought in jokes of their own. Walker (his nickname was Moon Walker) had a rabbit joke involving a cute drawing on the board.

Borotho (a veteran of our TABSA workshops) asked a wonderful question which I actually hadn't ever thought of when we were discussing and practicing constructions. He asked after we had bisected an angle with compass and straightedge, can we trisect an angle / arc? I was stunned. Luckily I had a TABSA teammate Brittney to help me research this very interesting topic.

Teachers asked questions and got the answers needed to build their toolkit. Melejane (photos shared here: <https://photos.app.goo.gl/4CX36WkP8BtHRTan6>) and I had a wonderful time testing and visualizing nets. Danstein asked a wonderful question on the perpendicular bisector construction, which led to a very cool process.

Encouraged in his inquiries, and I think after having built trust with him, he asked me about pie charts and he spent a few moments of his tea break growing his confidence with protractors. He walked away knowing exactly what to do.

Mike Hu is one of my heroes. He was my teacher and made learning fun and exciting. He was spot on when he said, "In a few years, any of the local South African teachers could do what I do. But I know I could not do what they do."

That makes the South African teachers real life heroes in their own right. And I mean that and won't forget that.

Seobi, a teacher I was speaking to in Brittney's session, used some advice I had given him (namely, to try to visualize the formula for the algebraic sequence in the diagram itself), and he completely blew my mind by applying it to the perimeter of the diagrams. (A connection that I did not consider, and even after his presentation to all of us teachers in the room, it was still so deep but of course 100% correct.) I applauded him and thanked him for opening my eyes. As evinced here, the learning of course went both ways in these workshops.

Neo was "clueless on constructions." Now, he said he was confident he could do anything. It's so gratifying to take part in these workshops for building capacity.

A quote frequently shared this workshop was...

3. "Each one, teach one."

What Yunus frequently points out (correctly so) is that the difference between the local teachers in general and the TABSA side lies in opportunities. But we came together to level the playing field. Everyone including us was elevated. "Raising the bar, closing the gap" is the motto of the department of education in Free State.

We all paid our knowledge and experience forward. And that's most fulfilling.

Moqhodi Sephooa is a teacher and colleague of ours who definitely stood out for his leadership during presentations and when he shared his insights. TABSA team was encouraged (and a good idea it was) to have some of the local teachers lead portions of our workshops.

Moghodi, who was nicknamed M-squared, was the teacher I asked to facilitate on the last day of week 2. And he did a fantastic job. Of course! As Mike says, given a few years (or in this case, a few hours), the local South African teachers could do what I do. The proof was right there. What I loved about M-squared's presentation was that I gave him an outline but he made it his own and took the session in a different (though perfectly logical and important) direction (teaching counting principles in probability and emphasizing how important counting is). The local teachers were better off for it and I'm sure learned a lot.

He made statements like, "Our students struggle with probability. So we have to help them with these concepts." Everyone nodded in agreement and was on the same page.

He wrote this for us in an email.

Many thanks to you, my colleague. I cannot stop thinking about the great moments I experienced in my life. Really I'm humbled by the experience you brought into our country. Our district director on Monday the 24th during her speech said, 'leadership is not about power but empowering.' Thanks for identifying me and I must say that I'm really humbled. Right now I feel like also empowering others. Many thanks to your co facilitators Brittney, Carly and Extra Extra Erick. (M SQUARED) here.

He was a super star. They all are.

I'm so happy we were encouraged to give the local teachers this hands-on experience.

It reminds me of the major strategy we all want for our students in the classroom. We want our students to see things and learn things and discover things themselves. A wonderful quote by a local South African science teacher was this: "Teach me and I will forget; show me and I will learn; let me do and I will remember forever."

4. "What TABSA does is make our journey shorter." --testimony from a South African colleague

What else are we here for but to support and be supported.

This was a year of many reunions and we saw how our work has benefited theirs. (Of course we know how their work has benefited our lives.)

I ran into James Khubos who co-authored a paper with Jim and myself on constructions. We hadn't seen each other for 7 years. He looked his wonderful self! What a smile and what energy. His first words to me when he saw me was, "We'll continue our good work on constructions this year right?"

A teacher named Peters we also met in the past. He's 58 years young and 2 years from retirement. I had great conversations with him and we even sat down to work on a problem his daughter who's in university sent him and asked for help on. We were both thrilled when we found a solution.

I loved my interactions with Peters--during our chats, he mentioned to me he wants to run workshops after he retires. I was curious and asked him follow up questions. Was this his company? He revealed it will be completely non-profit, voluntary, open to teachers and students. Just like TABSA. I was stunned. He said,

just like you guys taught me--to help the community. His design was to help struggling students and teachers. How noble is that? As if he hadn't already paid his dues many times over.

He wanted to thank me and my friends and family in Hawai'i, but I of course thank him. He shared how wonderful things worked out bringing us together around the world in a small town in South Africa to do this work changing the future.

There were reunions with a superstar 12th grader last year and now university student this year. Keke. (photo included: <https://photos.app.goo.gl/4CX36WkP8BtHRTan6>)

Thuto from last year--a Tsotsoletso student, who became a Tsotsoletso teacher, and now a subject advisor. Thokozani marveled at his quick ascent. We recognized each other immediately, and greeted each other with a big hug.

Last year, he told us, "I don't want to lie--I learned a lot. I'll use what I learned for the rest of my life." This year, he said he's living what he's learned and has improved a lot because of the workshops (though of course, we should give him credit as well for leveling up by dint of his own hard work, and gaining hard-won experience as a teacher).

5. "To whom much is given, much is expected."

Yunus shared this quote in his opening speech one week and also at the closing ceremony. Indeed, we were given opportunities, so it's only right we do something with them.

The tradeoff is that in giving, we receive.

We did receive so much. I myself learned a lot and feel so gratified at making a difference. Yunus and TABSA has enabled me to find and serve a higher purpose of helping others.

Mr. Sunday a very charismatic superhero teacher of South Africa had such kind words to share with us.

I made new friends, correction family. Mr. Brad and Erick, your mentorship has made a significant impact on my understanding and appreciation of the subject i.e., moving away from being abstract to be more practical and inclusive effective and efficient.

Your patience, encouragement, and ability to explain complex concepts in a clear and concise manner have been invaluable to me and I promise to plant a seed wherever I go. Your dedication and passion for maths are contagious and have inspired me to work harder and strive for excellence.

Thank you for the opportunity you have awarded me and helping me build and increase my confidence in maths. I am grateful for the time and effort you invested in our Maths team and appreciate the positive impact you've had on my academic journey.

Two very awesome evaluations to let us know we tried our very best and reaped the benefits of solid results.

Tick a box in every row:

1- Strongly disagree; 2 - Disagree; 3 - Slightly Agree; 4 - Agree; 5 - Strongly Agree

Goals and outcomes were clearly stated	1	2	3	4	5
The content was relevant to my teaching needs	1	2	3	4	5
I will use the demonstrated activities in my daily teaching	1	2	3	4	5
Demonstrations helped me to understand how to teach content	1	2	3	4	5
The facilitator used teaching resources effectively	1	2	3	4	5
The facilitators were professional and well prepared	1	2	3	4	5
The facilitators listened to our concerns and questions	1	2	3	4	5
The facilitators demonstrated activities clearly	1	2	3	4	5

NEW INTERESTING THINGS I HAVE LEARNED THROUGH THIS WORKSHOP:

Probability - I gained a lot especially on working ^{my (we)} more than one event eg on yellow & black. I even had a chance to explain to the class. Transformation I was happy to see that I could use a tracing paper & have learnt how to reflect or even enlarge a 2-D shape (Eric).

ANY OTHER COMMENTS OR SUGGESTIONS:

I thank the whole team for thinking of us as well as our kids. I was at first reluctant to come but I don't regret to come to this workshop. I've gained a lot. Thank you!

*Write on back if needed

1- Strongly disagree; 2 - Disagree; 3 - Slightly Agree; 4 - Agree; 5 - Strongly Agree

Goals and outcomes were clearly stated	1	2	3	4	5
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NEW INTERESTING THINGS I HAVE LEARNED THROUGH THIS WORKSHOP:

Probability rule: When two events follow each other we multiply the probability. The surface area was also superb. The decimal was out of this world. Thanks to my facilitators Brad and Erick, Director and Deputy Director

ANY OTHER COMMENTS OR SUGGESTIONS:

We thank the whole team and the Department of education for empowering us. Thanks very much. May God richly bless and strengthen you on the good work you are doing

I love how the teacher on the left got a chance to present a wonderful solution.

We learned so much and grew ourselves in the process. We may have improved the lives of others, but we most certainly improved our own in the process.

Concrete things I learned have already been mentioned. But within our TABSA math team.

I learned some really cool transformation ideas from Brittney (using patty paper to teach and perform transformations; using flashlights to demonstrate dilation and similarity; teaching algebraic sequences, making it fun by creating a "secret #" for the 0th term).

I learned a wily and fun 3 number math puzzle from Carly that could easily launch an algebra lesson and spark interest in students.

I learned AVID strategies and a student tutorial protocol from Derrick that can really assist student-centered and student-directed learning.

And I learned a cool dice probability experiment from Erick.

6. "Philanthropy can mean a lot of things. It can mean starting a non-profit or donating money but it can also mean contributing your ideas, your time, your energy, to a mission that is larger than yourself. All of you have so much to give and I hope you will find your own unique ways to make a difference because life really is much bigger than the court."

--Roger Federer

Thank you, TABSA and thank you, Yunus and Laurie and Thokozani and teammates for helping me seek and serve a higher purpose. For me, that's helping others and improving the lives of others. The great blessing here is that we enrich our own lives in the process. In giving we truly do receive. Mahalo!

7. "Teachers reflect eternity. We never know where our influence ends." --Member of the Executive Council (MEC) for Education, Free State, Dr. Mamiki Maboya

In her remarks during the closing ceremony, Dr. Mamiki Maboya reminded educators of their role as change agents for the public good; agents that effect change for the future. That's a tall task! But it's true.

Our influence extends far and wide. Farther than anyone will know. (Case in point: everyone has at least one inspiring teacher they'll remember forever--whose lessons may survive deep into the future.)

This was a month-long immersion in mathematical thinking and community service.

We workshopped over 500 local teachers and 70 grade 11 and grade 12 students (95% of whom were female, as that was the focus: to build women STEM leaders in South Africa).

Over the next 2 years, assuming each teacher has about 200 different students per year, that means over 100,000 teachers and students directly and indirectly impacted by TABSA.

This is incredible outreach.

I am grateful for the opportunity to learn and also contribute to building a more just and equitable world.

I give the last word to Mr. Sunday, as I try to live it myself. "I promise to plant a seed wherever I go."