

Good afternoon principals, ladies and gentlemen...

Introduction

I am actually a bit nervous standing in front of so many principals. But luckily, my awesome principal, Mr Crompton, always spare time to talk to me, so I know principals are not that scary.

It's a great honour to be standing here today. In ordinary circumstances, it's the principal standing on the stage and the students sitting down to listen to the principal. And now, it is the reverse. I feel surreal.

About Me

I seldom tell people what I am studying unless they ask because I notice that at least 90% of the people look confused after hearing my answer. But today is different, everyone here is highly intelligent...

So, let me introduce myself and tell you a bit about what I've been up to...

Last year, I completed Year 13 Cambridge maths which enabled me to get into the University of Auckland at the beginning of this year. I took two maths papers and the current mark for my stage 2 paper is about 99%...

So, this year I have been both a student at university and also at Ficino School. But I also self-study Cambridge year 11 and year 12 English and Physics, and I have just finished all these exams last week. So, it's year 8, year 11, year 12, uni stage 1, stage 2... at this point, I could normally see baffled looks on people's face. But I can't see any here today...

Websites

It has been a very busy year for me. Besides academic things, I have numerous talks and interviews. And I actively help the New Zealand Association for Gifted Children. I have also set up two websites for electronic-based teaching. I produce maths lesson videos for uploading from time to time.

1. Tristan's Learning Hub

Firstly, Tristan's Learning Hub.

After giving a talk at Pt England School, a decile 1 school in Glen Innes, the students asked me if I could teach them maths. I thought about it, but I was busy with school and university classes. So I decided, with the encouragement from my mentor Andrew Patterson (*he is here today...*), to make a website. I spent my previous summer holiday making this. I make lesson videos from time to time and upload these to Tristan's Learning Hub.

At first, I wasn't sure if it was working or not. However, the feedback I've had is very encouraging. One 12-year-old viewer told me that she felt smart in front of her class when the teacher asked about the total interior angles of a triangle, she was the only one who could answer because she had watched my video the day before.

Another example is a woman who had a fear of maths, and after watching my feature on TV, she wrote to me saying she was very curious as to how a young boy went about learning and teaching himself and others on how to understand maths. She then went to my website and had finished Geometry Lesson 1 and 2. She enjoyed it, so she wanted to let me know. She also said she is going to go through every lesson one by one until she understands what I teach because, despite her fear of maths, she believes she can do it with a boy like me online helping people to think about what maths is all about. She kept thanking me for my help and allowing people like her to realize that perhaps she could learn the mysteries of maths.

Also, I am delighted to know that some schools have put my website onto their school learning resource list.

Some of you may have seen the montage video at the Festival of Education in March this year, would you like to see it now? ...

[PLAY VIDEO]

As you can see I go through maths topics strand by strand using videos. So in the example you saw I start off with a topic such as triangles, and then I progress up this strand and cap it off with trigonometry. The learners will be surprised how quickly and how easily they can grasp the concept by adopting this vertical approach of learning. This is the reason I didn't specify the year levels in my videos to remove the learners' psychological barriers.

2. Quest-is-fun

My other website is Quest-is-fun. After the talks at the schools, I realised that peer-to-peer influence actually exists and is indeed a very powerful tool. I received lots of positive comments saying that they were inspired by me! They were inspired in the way that they started to believe in themselves.

I am very pleased to know that many of them started planning for their own future. Some of them set their own goal to be musicians, or athletes, or programmers.

So I created Quest-is-fun with the aim of letting more and more young people know that we should have confidence in ourselves. We should set goals for ourselves and follow our own passion.

Education

Because of my multi-levels studying, people always ask me what I think about learning and education ...

1. My way of learning

In our existing education curriculum, the same topic is scattered over a number of years, and there are also jumps between topics. I know some of my friends find it hard to see the connections between each topic.

To me this method is like reading a chapter of a story book but you have to wait until the following year to find out what happens next! It is extremely frustrating. As for me, I like to understand the whole story or picture, and achieve a complete ending.

I have my own way of learning. I call it “vertical and in-depth learning.” I started my education pathway before I was two. I knew nothing about what year levels meant. I simply kept exploring upwards in a very in-depth manner. When I was nearly five, I started to go through the maths topics strand by strand. The strands are: numbers, measurement, geometry, algebra, and statistics. When I finished the strand of “number”, from the year 1 to the year 13 book, I moved onto the strand of “geometry”, and so on.

Because I was eager to find out what happened next in the strand “story”, I finished all 13 books in only a couple of weeks. I then had many years to strengthen my knowledge and skills on the harder topics.

2. *A Great Teacher*

In the recent Mensa's interview, the interviewer asked me, "*What makes a great teacher?*"

I think this is a very good question, and I would like to share with you my answer, although it may be a bit odd to talk about this topic in front of a whole group of experts...

In my opinion, a great teacher is a person who can support a students' curiosity, and this will foster their love of learning. Knowledge will definitely result from this learning.

We are living in the 21st century digital age, and all facts and information can be obtained from the internet. We need the teacher to inspire and influence us to explore the world and follow our passion, instead of the teachers spoon-feeding us. We will then become lifelong learners.

We need to learn how to learn? Or more exactly, we need to love learning. In my opinion, the world is changing so rapidly that by the time we leave school, most things we have learnt may already be outdated ... If we have a love of learning, we would just follow our passion to keep learning on our own. We will then be able to face new challenges independently. A love of learning has to be the most important trait that a teacher can impart to a student. I am lucky enough to have many great teachers who influence me to love learning.

3. Money spent on Education

Another interesting question they asked me was, ***“If you were in Government and had a billion-dollar surplus, what would you do with it?”***

If I were in government, I would spend money on education because children are New Zealand’s future.

1. I believe we’re still clinging to an outdated education system. It may have worked in the last century but not now. I believe that the 21st century is truly the digital age. It has fundamentally changed everything. Technology enables us to not only learn more, but to learn more effectively, and at our own pace. If our schools embrace the e-learning global trend, I believe education standards will be lifted significantly.

So, I would spend one-third of my billion dollars on improving the internet network, buying enough digital devices for all schools and students, training teachers to use technology, investing money into education software and so on so forth.

2. The second third of the budget will be spent on implementing the “flipped classroom” model where students do the conceptual learning at home and class time is used for problem solving and discussion. They could watch their teachers’ pre-recorded videos, Khan Academy, TED ed videos, or even Tristan’s Learning Hub. And at school, they do their homework with the teacher as the facilitator. They can find learning more interesting as they can take a more active role.

I have read Sal Khan’s book, *The One World Schoolhouse*, and this has supported my idea of making Tristan’s Learning Hub. Sal Khan has 15 million students using his website at any point in time and more than 2 billion lessons having been downloaded from his website in just three years, he is clearly doing something right that connects with students like myself.

3. The third portion of my budget will be spent on an education reward programme at the low decile schools. This reward is something that meets people's basic needs. That is...food! Students who do well at school, for example, getting good marks accumulated weekly, or 100% attendance during the week, will go home with a basket of food on Friday instead of getting a paper certificate. If a child behaves well or works hard at school, he or she will help the whole family! The whole family will feel proud and also learn that working hard and behaving well is rewarding. So these family members will become good citizens.

This reward programme can achieve two goals – (1) food for the whole family, and (2) learning to be a responsible person, and thus to solve the child poverty problem.

I have actually submitted my idea to the Auckland Council, but I'm not sure if they will implement my idea. But I will definitely make it happen. I will set up a charitable foundation very soon and supply the low decile schools with non-perishable food for good students to take home. The initial funding will probably come from the sales of my own book.

Next Year

Where do I go from here?

1. Academic

Well, as for my own academic pursuits, I haven't decided what papers I am going to take next year yet. In terms of choosing a science major, I'm leaning toward Medicinal Chemistry because this can help so many people. I'm also interested in Physics, and maybe research on Astronomy to help solve global issues.

I'm quite attracted to a new programme called "Science Scholars" being offered at the University of Auckland which is going to launch next year. This programme is run by one of my favourite scientists Dr. Cather Simpson, the head of the Photon Factory. She explained that there are more than 1,000 students in the science faculty every year. The ones sitting in the right corner of the lecture hall may not know the ones sitting in the left corner, even though they may have similar interests and thinking. Her programme aims to bring these like-minded people together and train them to work and think like a research scientist as they work toward their Bachelor of Science.

I know it's not easy to enter this programme, but I will certainly try.

2. Others

Besides my studying, I will keep on writing my own book, implement the reward programme. I will also keep on with my maths videos with some modification of the format. I may add some more interesting elements onto it such as animation and interactive features. I will also keep working on the 40th Anniversary special project of the New Zealand Association for Gifted Children. I hope there will be more support and awareness of the needs for gifted children... I will leave some flyers here and I hope your school will come to join us next July at the University of Waikato...

Since I'm not going on to any high school next year. My time will be much more flexible by then. I will follow my mentor Andrew's footsteps which is going to help at schools regularly.

To be exact, each Monday next year, I will accompany him to the schools he is visiting. While he is delivering the confidence building programme he has developed to the students he is working with, I will help other students with maths or deliver talks.

I am deeply moved by Andrew's passion for unlocking the full potential of young people. All this work is not related to his own job. He uses his own time to help young people unconditionally because he believes young people are New Zealand's future. I hope we can visit lots of schools. I want to inspire other students to achieve their goals too.

I really can't wait to get started!

Conclusion

I like our education system. It's very balanced in its approach: academic, sports, music, personal development are equally weighted. But I admit I'm a bit greedy! I want to have a better NZ and a better quality of life for everyone in the future. I believe education is crucial to achieving this goal. With higher education, people can earn their own living and be more responsible citizens.

There's an old African proverb that says "it takes a village to raise a child."

In my village, I've been very fortunate to have lots of people support me in my education.

Today, I represent all the other children in this country who want that same opportunity for themselves.

I believe principals are the most important people in the country. You all have a very important role to play as the people who can mould and shape our lives and destinies which obviously has a big impact on shaping our country's future as well.

My hope is that we can all work together to deliver that opportunity to all young people. I believe we can!

Thank you