

# ENGINEERUS

Circulation: 41,000

School of Engineering newsletter • Issue 40 • July 2012

**Polys are  
a stepping  
stone to  
University**

**P2**

**Aerospace**

**@ TP**

**SAR-147  
certified**

**P16**

**COVER  
STORY**

**YESSSSS...  
Finally!**

**P9**

**Males  
more likely  
to have  
hearing  
problems**

**P14**

**Solve  
a puzzle  
& WIN a  
thumb-drive!**

**P11**

# EDUCATION **Spotlight**

**With more opportunities for Polytechnic diploma holders to pursue a degree locally, the spotlight is now on how well a Poly education can prepare students for University.**

A polytechnic education used to be the choice of those who either could not qualify for a junior college, or who do not intend to pursue a university education. But not any more.

Today, a polytechnic education is a viable stepping stone to a university degree. In fact, a university degree coupled with a polytechnic diploma actually enhances one's employability and career prospects, compared to having only a degree. This is because employers today like the practical-oriented training offered by polytechnics. In addition, it has been said that employers find poly diploma holders more adaptable, docile, and willing to learn.<sup>1</sup>



More poly students will be able to get a degree locally (Photo: NTU)

## More going to university

In the 1990's, only about 5% of polytechnic diploma holders were able to enter a local university (at that time only NUS and NTU). Today, this figure has gone up to 15%, thanks to the setting up of SMU in 2000 and just this year, the Singapore University of Technology and Design (SUTD) which can accommodate up to 4,000 undergraduates.

The Singapore Institute of Technology (SIT), offering 2-year degree programmes in partnership with top overseas universities, was also set up in 2010 to provide more university places for poly diploma holders. At steady state, SIT would have 3,700 undergraduates.

Eventually, about 25% of polytechnic diploma holders would be able to pursue a degree in a government-funded local university – and this does not include other privately-funded institutions such as UniSIM which offers part time degree courses for working adults.

## Preparing for university

With more university places now open to polytechnic diploma holders, it is no longer enough for 'O' level school leavers to solely look at the content of a course when choosing their polytechnic diploma; the focus is now also on how well a polytechnic can prepare them for university.

Besides inculcating students with life skills, problem-solving skills and the ability to communicate well – generic skills which are needed in further studies and the world of work – polytechnics must also prepare students for university by exposing them to the university curriculum and challenging them with more advanced concepts.

## University Preparatory Programme @ TP

For example, the School of Engineering in Temasek Polytechnic (TP) offers a specialised University Preparatory Programme (UPP) which trains students in university-level Mathematics, Physics or Chemistry, so as to smoothen their transition from polytechnic to university.

Students who complete the UPP will be awarded a Certificate in University Preparatory Maths / Physics / Chemistry, which can earn them credits or exemptions in their first year at university.

The UPP is also open to former TP graduates who intend to further their studies, but these alumni members need to pay \$358 for the 16-session course. There is no charge for current TP students.

## University-centred training @ TP

TP students can also opt to take "Higher Engineering Skills" or "Special Project", which offers additional training to develop their higher order skills and problem solving ability through a hands-on project work.



A poly education at TP is a viable stepping stone to university

<sup>1</sup> "Why poly grads are more marketable", *The Straits Times*, 4 Jan 2010.

# GETTING ATTACHED

In line with the Ministry of Education's initiative to encourage teachers to be attached to companies and institutions for short stints to get an idea of the R&D work and resources in the industry, 12 secondary school teachers attended the one-day immersion programme called the "Poly Awareness Programme" conducted by the School of Engineering on 30 May & 1 Jun '12.

Besides visiting Centres of Excellence such as the Interactive Digital Centre Asia (IDC Asia) and the Clean Energy & Research Centre, the participants also had hands-on experience in designing fuel cells (a clean alternative energy source that uses hydrogen to generate electricity), learning how to create their own Android App, and trying their hands at flying an aircraft – virtually, of course!



Teachers from Bedok Green, Ping Yi, Springfield, CHIJ St Nicholas, Deyi and Unity Sec Schools at the "Fuel Cell Wonder" workshop



Mr Tan Teck Hock and Mr Lim Shi Hao (Broadrick Sec) having a go with the Cesna flight simulator

## BE INFORMED!

Putting on 3D glasses to immerse themselves in virtual reality, piloting an Airbus A320 aircraft, and riding in a motor-boat powered by fuel cells – these were some of the fun activities which 80 students from Teck Whye Sec School enjoyed when they visited the School of Engineering on 23 May '12.

It was nothing like Universal Studios at Sentosa, of course... but the students came away more aware of the programmes and facilities in the School, which would help them to make more informed choices on their further studies after their 'O' levels.



# INGENIOUS INVENTIONS

Due to their weight or design, walking aids meant to help the elderly and infirm often hinder rather than aid the user. The paraplegic walker, for instance, only allows the user to take extremely small steps each time, because planting the walker too far ahead would not provide the necessary support.

Realising this, two students from the Diploma in Business Process & Systems Engineering modified the paraplegic walker by adding an extra moveable leg to its main frame, thereby enhancing its stability.

Their ingenious invention won them a Silver medal at the annual Tan Kah Kee Young Inventor's Award competition, held in May 2012.

Two other inventions by our students, namely the "Self-inflating Bicycle Tyre", and the "Car Seat Aid" won the Merit award, while the "Sports Wheelchair", the "Bathroom Wheelchair", a "Mathematical Ruler for Primary School Pupils", and a power-saving plug-in device for home appliances called the "Eco-Click", were each given a Commendation award.

In all, our students took home 1 Silver, 2 Merit and 4 Commendation awards.



*Serene (left) and Eileen showing how their modified paraplegic walker works*



*Mechatronics students and supervisors with their winning inventions*



*The eco-friendly students with the model of their winning concept*

## GREEN IDEA TURNS TO GOLD

Who do you call when you need to plan an eco-friendly town with a sustainable future? Well, the students from TP's Diploma in Green Building & Sustainability of course!

Applying what they had learnt in their diploma course, a team of 8 students proposed an eco-friendly concept for a town in Hanoi, Vietnam, when they took part in the Youth Leadership for Sustainable Future Competition held on 18 Mar '12.

Their "green" model of the town included proposals to allow only environment-friendly public transport vehicles and bicycles into the city, the building of solar panels and wind turbines in the suburbs to serve the capital's energy needs, as well as the installation of a huge water pump to clean up the polluted Hoan Kiem Lake. Their idea clinched the Gold award in the tertiary institutions category.

# FLYING HIGH

Aerospace students achieved their best ever result in the annual Singapore Amazing Flying Machines competition, taking home 5 Gold, 2 Silver, and 2 Bronze medals, as well as the “Best Team Spirit” award at the competition held from 15 – 17 Mar '12.

Team “HawxVision” even beat teams from other polytechnics with more established Aerospace courses, emerging overall champion and clinching the Gold for Best Performance in the “Automated/Semi-automated” category.

In addition, a fully original flying machine, designed by our Aerospace lecturer, Mr Matthias Christian, also won the “Most Creative Award” (Gold), impressing the judges with its unique configuration and autonomous ability.



*Team HawxVision flying their amazing invention*



*Matthias Christian with his original award-winning invention*



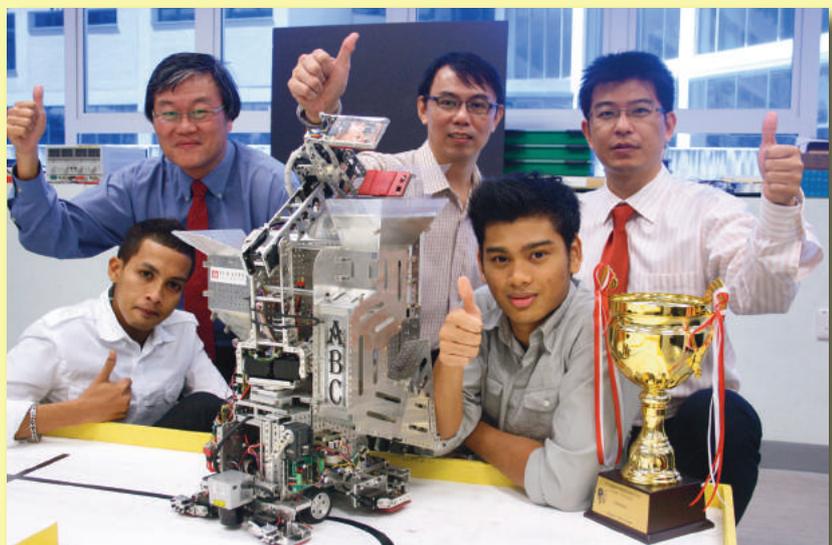
*Team Prime won the Silver for Best Performance in the “Unconventional” category*

## INTELLIGENT HAT-TRICK

For the third consecutive year, Engineering students proved their invincibility by clinching the Gold medal in the “Intelligent Robot” category of the annual Singapore Robotic Games competition held from 31 Jan – 2 Feb '12.

Also making the news was the School’s champion, “Scorpion King” which was edged out into second spot for the first time in many years. A defiant Mr Lim Hock Beng, the School’s robotics veteran and mastermind behind the “Scorpion King”, sounded the ultimate challenge to his rivals: “We will be back!”

In all, the teams from Temasek Polytechnic secured 1 Gold, 2 Silvers and 1 Commendation award.



*Golden boys Naufal (left) and Nasiruddin, with their project supervisors and intelligent robot*

# GRADUATION 2012

About 1,650 Engineering students received their diplomas over 4 graduation ceremonies held on 21 & 22 May '12 at Temasek Polytechnic's Convention Centre.





# I BELIEVE IN ME!

This year's top students have demonstrated that the key to success is hard work, effort and the refusal to accept failure.

Believing that “without effort, there can be no significant result”, top student **Dominic Koh Ming Rong**, who had failed to enter Nanyang Junior College after his 'O' level exams, settled for a Poly education. It turned out to be the right move, as Dominic blossomed at Temasek Polytechnic, graduating with a Diploma in Biomedical Informatics & Engineering and winning the Lee Kuan Yew Award with 25 Distinctions, 6 A's, and a perfect GPA of 4.0. He has accepted an offer to read Life Sciences at NUS.



For **Christina Lee Wei Ting**, it was a case of “third-time lucky”. Despite not doing well in her 'O' level exams, and dropping out of another polytechnic due to unsatisfactory performance, she was accepted into the Diploma in Computer Engineering course at Temasek Polytechnic. Grateful for being given another chance, Christina worked hard and clinched the Tay Eng Soon Gold medal, awarded each year to the top student who was formerly from ITE.



Another top student, **Michelle Elaine Jauw**, from the Diploma in Mechatronics, showed that it was possible to balance an active co-curricular activities (CCA) schedule with her academic work. The Vice-captain of our Polytechnic's bowling team won the Lee Kong Chian Award for All-Round Excellence.



WELCOME

FRESHIES!



The April semester began with a bang, as more than a thousand new students were welcomed with an Orientation programme held from 18 – 20 Apr '12.

Screaming and shouting slogans wherever they went, the Freshies took part in mass dances, telematch games, and the traditional Regatta, during which the polytechnic's 6 academic schools competed in a dragon boat race at Bedok Reservoir. Showing their spirit of excellence and kicking off the new semester on a winning note, Engineering Freshies emerged champion in both the boys and girls categories.

The Freshies also met their Care Persons and were briefed by their Course Managers, before letting their hair down at the jam & hop after sunset.



## AVIATION TRAINING @ TP GETS A BOOST

Against the backdrop of a booming aviation industry, Temasek Polytechnic has ramped up its aviation training by collaborating with key aviation partners.

The School of Engineering will work with Changi Airport Group (CAG) and Scoot, the new subsidiary of Singapore Airlines, in sharing knowledge, expertise and teaching resources. There will also be mutual staff and student exchange programmes, study visits, and collaboration on joint projects related to airport management & operations. Students from the Diploma in Aviation Management & Services (AMS) will also benefit from internship opportunities in CAG and Scoot, which may in turn open the doors for them to establish future careers in these two organisations.

This was formalised by two Memoranda of Understanding (MOUs) signed with CAG on 20 Mar '12, and with Scoot on 24 Apr '12.



School of Engineering's Director, Mrs Lay-Tan Siok Lie, and Mr Foo Sek Min, CAG's Executive Vice President of Airport Management, sealing the agreement



Principal and CEO of Temasek Polytechnic, Mr Boo Kheng Hua, signing the MOU with Scoot's CEO, Mr Campbell Wilson

# DREAMS COME TRUE

**McDonald's** and **Subway** open outlets in Temasek Polytechnic, finally realising the dreams of fast-food-loving students.



*Raising their glasses (oops, cups!) to celeb the arrival of Macs & Subway are (from left): Rachel, Sharlene, Yi Cong and Alvin*

For years, Temasek Polytechnic students who had a craving for fast-food would have to trek 300 metres to the nearest McDonald's or KFC outlet across the road, braving the sun and rain. But not anymore.

Finally, on 7 May '12, McDonald's opened an outlet in the campus, followed quickly by popular American sandwich maker, Subway, on 11 Jun '12. Both outlets are located at the newly built Garden Fiesta, an alfresco dining area near the Koi Pond.

"Just in time before I graduate!" remarked final-year student Sharlene Poh, from the Diploma in Business Process & Systems Engineering (BZE).

However, both fast-food outlets are thronged with huge crowds practically round the clock, even until closing time at 8.30pm. Pent up demand, coupled with a 15 – 20% permanent discount, result in long queues and waiting times of up to 15 minutes.

Self-confessed fast-food lover Everline Teo, a second-year student from the Diploma in Media & Communication Technology (MET), complained: "They should open more counters!" Her course-mate, Elizabeth Tan, agreed: "Macs should hire more staff," she added.

But some students don't seem to mind: "Queuing in campus is at least better than queuing at another outlet

300 metres away," remarked BZE student Alvin Wong.

However, those who had already graduated and left the polytechnic were not too amused, going by their ranting on the School's Facebook:

Matthew Ng (AEG, 2009): "Why only after I graduate?!?!"

Lee Poh Boon (MTN, 2009): "It's always been like that for me since primary school... I graduate, they upgrade!"

Evonne Wang (BZE, 2007): "Aiyo...jealous... now I graduate then Mac open in TP?!!"

*MET students Elizabeth (left) and Everline (right) chilling out at Macs @ TP*



# TRICKING HIS WAY TO A **GOLD MEDAL**

The scars on his arms and legs bear testimony to the years of hard work, pain and sweat. But for **Bryan Koh ZhanRong**, 21, they are well worth it.

The first-year student from Diploma in Aerospace Engineering represented Singapore in the Thailand Slalom Series inline skating competition held in Satun, Thailand, on 11 & 12 May '12, clinching the coveted Gold in the "freestyle slide" category – a first for Singapore.

In the "freestyle slide", the skater is given 10 metres to run and execute tricks, scoring points for technical difficulty and duration of the tricks.

"Speed gives me an adrenalin rush," exclaimed Bryan, who started roller-blading at the age of 6. "The satisfaction of being able to execute a trick successfully is immense," he added.

Bryan recommends inline skating: "It's an excellent form of exercise, improves your flexibility and helps you to lose weight too!" he declared.



Bryan (top centre) with fellow participants



Trick and treat: executing his stunts during the competition

## PICKING THE RIGHT DIPLOMA COURSE

The Common Engineering Programme (CEP), launched in 2011, allows students to do a common first semester before they choose their diploma course. **ENGINEERUS** finds out why it was the top choice of some students.



Showing the way to success are (from left): Zhi Wei, Rong Rong, See Yee and Nurul, with their Course Manager, Chang Hark Loong

Tan Zhi Wei, now a second-year student in the Diploma in Aerospace Engineering, had opted for CEP when he enrolled in 2011. He said: "Not many students know about this "trick", but if you fail to meet the cut-off-point (COP) of popular courses such as Aerospace Engineering or Aerospace Electronics, you can still get in via CEP, which has a less demanding COP."

For Nurul Asyiqin Jamaludin, it was a case of being torn between two lovers. She had wanted either Clean Energy or Biomedical Informatics & Engineering. "CEP gave me the time to explore these two courses before making a decision," she explained. Nurul eventually chose the later.

Another student, Ho See Yee, chose CEP and then branched into Clean Energy. He said: "I didn't have particularly good 'O' level results, so CEP allowed me to get into the polytechnic first, and from there, I had 10 diplomas waiting for me. It's like using the joker in a pack of cards!"

# LET MATHS SOLVE YOUR PROBLEMS

**W**hat is Singapore's optimum population in 2018, and how can we reach this target? Ideally, how many elderly-care facilities does Tampines need?

Stumped? These were some of the problems which Engineering students had to solve in the Mathematics Modelling Project competition held in June 2012.

Working in groups of three, the students were given a month to decide on their approach, gather the necessary data, derive a mathematical formula which can be applied to solve the problem, and finally to validate their formula by testing it with various parameters.

Guided by lecturers, in a process known as "mathematical discourse", the contestants had to exercise their creativity and problem-solving skills, so as to transform a physical problem into a solvable mathematical model. They then presented their findings to judges on 13 Jun '12.

Beverly Tan, a member of the winning team from the Diploma in Aviation Management & Services, said: "Taking part in this competition has made me realise that Maths is actually extremely relevant to life!"



Guest judge, Assoc Prof Ang Keng Cheng (2nd from left), Head of Mathematics at the National Institute of Education, with members of the top 3 teams

## FIGURE IT OUT...

And win a limited edition wooden thumb-drive!

	F	O	R	T	Y
+			T	E	N
+			T	E	N
	S	I	X	T	Y

Each letter in the table represents a digit (from 0 to 9). The letters in the top 3 rows are added up and the letters in the bottom-most row correspond to the answer. Addition starts from the extreme right column and if the total is greater than 10, then "1" is "carried over" to the next column on the left (just like in normal arithmetic addition).

If E = 5 and N = 0, then what digit does each of the eight remaining letters represent? (Note: the same letter must represent the same digit.)

This contest is open to secondary school and ITE students only. Email your answers, with name, school, and HP number, to: [cheeseng@tp.edu.sg](mailto:cheeseng@tp.edu.sg) with the subject title, "**ENGINEERRUS Maths Puzzle 3**".

The first 10 correct entries drawn after the closing date (1 Dec 2012) will each win a limited edition hand-crafted wooden thumb-drive.



### ANSWER TO QUIZ #2

There are **2,047** ways.  
Given the **4** letter word **MATH** has 15 ways ( $2^4 - 1 = 15$ )  
An **11** letter word **MATHEMATICS** will have  $(2^{11} - 1) = 2,047$  ways.

### Winners:

Ang Chee Meng (Bt Panjang Govt High),  
Ang Zeng Jin (Swiss Cottage),  
Danish Khan (Naval Base),  
Dhinesh s/o Paramalingam (Naval Base),  
Loganathan Jayasree (SCGS),  
Sun Yuzhong (Coral),  
Tan Hong Kiat (Ang Mo Kio).

# PERFECT 10!

The Diploma in Business Process & Systems Engineering (BZE) started in 2002. Today it is 10 years old. Lee Pei Ning reports on the group's 10<sup>th</sup> Anniversary celebs.

By Lee Pei Ning (BZE)

For current and past BZE students who attended their diploma's 10<sup>th</sup> anniversary celebrations on 11 May '12, it was back to "old school" days – in more ways than one.

Besides speeches and a certificate presentation, there were dance items with the Britney Spears-inspired "old school" theme, put up by organising committee members. Dressed in white shirts with tie or bow, suspenders, short skirts and knee-high socks, they jived to "Roly Poly", and a medley of "Beautiful", "Look At Me Now", and "Glad That You Came", while alumni members and staff teamed up to sing "Top of the World" (omg, so dated!) and 细水长流 (also dated!).

In the finale, party poppers fired into the air and balloons descended on the audience as the cake was cut by Course Manager Chia Sie Yong.

Despite inviting all BZE students from the past 10 years to the event, we were initially worried that not many would turn up. Imagine an empty auditorium with our Course Manager singing to himself, and nobody to eat the huge 3kg birthday cake!

So on that evening, for every guest who walked into the auditorium, we could feel our stress easing by one megawatt! In the end, the turnout was beyond our expectation! We had 168 current students, 72 alumni members and 20 staff – enough to fill the entire 250-seater auditorium!

6 months! Yes, that was how long it took us to plan for this celebration. But the success of the event, as well as the fun which everyone had, made it all worthwhile.

To all BZE students – past, present or absent – thank you for being a part of our unique and wonderful BZE family...We luv ya all!



★ Pei Ning (centre) performing her Roly Poly dance



★ Staff and alumni members exercising their vocal cords



★ BZE camaraderie

# WE HAVE A HEART TIME

While most students, worn out and tired after a day in campus, make their way home to rest and relax, Fong Han Ling makes her way to Tampines West Community Club every fortnight, where she spends 1½ hours tutoring primary school pupils – without pay.

The second-year student from the Diploma in Business Process & Systems Engineering is one of 70 Engineering students who volunteer as a mentor to primary and secondary school students who need help financially or socially.

Started in 2008 with only 6 student mentors, the scheme was the brainchild of Mr Masagos Zulkifli, Minister of State (Home Affairs & Foreign Affairs).

Han Ling said: “Besides helping the children with their school work, we also serve as role models and a big sister or brother who takes care of their social and emotional needs.”



Han Ling tutoring a primary 5 pupil



Mr Masagos, with some of the mentors from TP School of Engineering during a training session

## GOING GREEN IN TAMPINES

**LIFE (Love Initiative From Engine)**, a community interest group in the School, has organised 65 community-related activities for students since its inception in 2008. Brendan Lim reports on the most recent, **Project Eco Trail**.

By Brendan Lim (CER)

It was a scorching day on 19 May '12, as 167 Engineering students fanned out across the Tampines neighbourhood to collect recycled materials to raise funds for charities under SG Cares, an organisation of the National Volunteer & Philanthropy Centre.

Competing with the professional *Karang Guni*, the students went door to door to collect newspapers, books and old clothing, lugging them down to a collection point. “We even received ice-cream and drinks from some residents who saw how tired we were!” exclaimed Anthear Lee, a second-year student from the Diploma in Green Building & Sustainability (GBS). “That really touched and motivated us,” she added.

A collection exercise was also held within the School, from 14 – 18 May '12, during which staff and students deposited materials for recycling at a collection point along the concourse.

In total, 13.7 tonnes of recycled materials was collected, netting \$828 for charity.



For its commitment to community service, LIFE Group received the “Blaze of Passion” and “Institutional Partner” awards from nEBO, the youth arm of NTUC, at a presentation ceremony held at St James Powerhouse on 21 Apr '12



eco



Dear Helpers,  
THANK YOU  
for being so kind &  
nice to those in need.  
I hope these will help.  
Have an awesome  
weekend ahead!!  
Lynette

From a resident

# DEVICES OF MASS DESTRUCTION

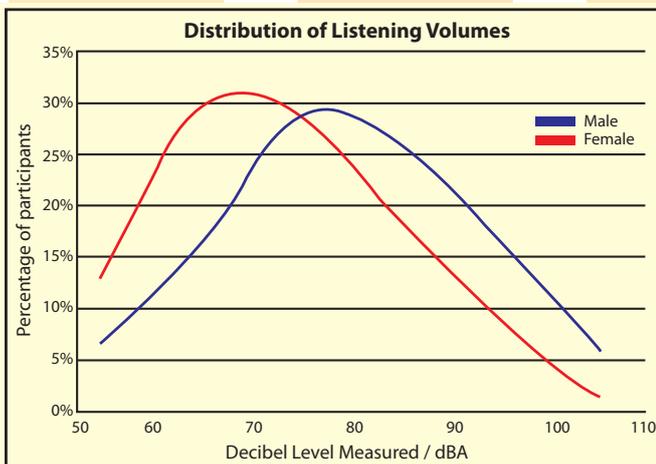


If you are a male, then you are 7.5% more likely to suffer from noise-induced hearing loss, as compared to females.

That was one of the findings in a study done by staff and students from the Diploma in Biomedical Informatics & Engineering (BIE) at Temasek Polytechnic, in collaboration with the Department of Otolaryngology at the Singapore General Hospital.

In the study, which was conducted on 1,928 Engineering students in the polytechnic in 2011, respondents were made to listen to a song from a standard MP3 player through insert-ear-phones for 30 seconds, at their own preferred volume. The MP3 players had been calibrated beforehand, in order to obtain the corresponding decibel (dB) level.

It was found that the average listening volume of males was 79.7 dB, compared to the female average of 73.5 dB. In other words, males tend to listen to music at higher volumes, thereby putting them at a higher risk of hearing loss caused by loud music.



Distribution of male-female listening volumes

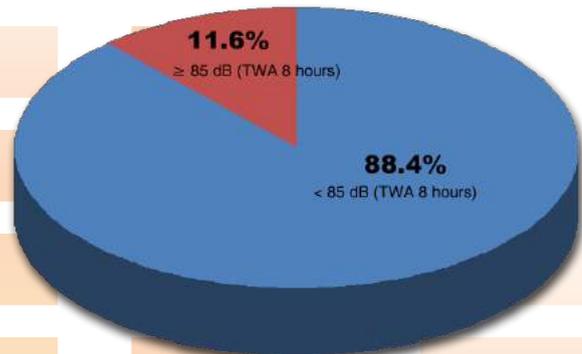
Among the races, it was found that Malays were at the highest risk of suffering from noise-induced hearing loss, as they recorded an average listening volume of 82.2 dB compared to 76.3 dB for Chinese students.

## Time Weighted Average (TWA)

For purpose of comparison, a volume of 85 dB over a period of 8 hours was used as the base, because many countries including Singapore consider it an occupational hazard if an employee is exposed to at least 85 dB of noise for more than 8 hours.

After asking students how long they spent listening to their music devices each day, the time weighted average (TWA) for each student, based on an 8-hour listening duration, was then calculated.

It was found that 14.4% of males exposed themselves to a  $TWA_{(8hr)}$  of 85 dB or higher, compared to just 6.9% of females who did the same.



Distribution of all respondents with TWA (8 hours) below and above 85 dB

## Conclusion

Excessive noise (or music) can desensitize one's hearing ability, causing what is known as a "threshold shift", which can be hazardous physically and socially. About 10% of our youths are at high risk of suffering from this. Including other factors such as loud music from attending concerts, clubbing and computer gaming – which were not considered in this study – the actual risk could even be much higher.



BIE student Angeline Yi administering the test on an Engineering student



# YES, I DO...

For most students, the next step after graduating with a diploma would be to look for a job or further their studies. For **Rachel Yang Shuang**, it was to get married.

The 23-year-old tied the knot 6 months after graduating with a Diploma in Business Process & Systems Engineering (course silver medal) in May 2011.

“At first, I thought marriage would bond me for life, which was scary. But I was wrong. Marriage has given me a more stable and blissful life,” says the Singapore permanent resident.

Currently an Allied Educator at Tao Nan Primary School, Rachel teaches Chinese to pupils with learning difficulties and special needs. Asked about her teaching experience, she replies: “Can you imagine a class of Primary 1 pupils with different needs and abilities asking you questions, complaining about others and telling you stories at the same time?”

But Rachel is thankful that her diploma training has come in handy: “The thinking, planning, leadership, analytical and language skills which I’ve gained from my diploma training help me to connect with my pupils and fellow teachers,” she smiles.



Rachel (arrowed) with her course-mates at NIE



## BAD BOY COMES GOOD

In 1999, **Viknish Krishnan Kutty**, then an Electronics student, sneaked an “outsider” into the swimming complex, got caught by the Life Guard, and was made to repaint the yellow lines around the pool as punishment.

The errant student also deliberately blew up a capacitor in the Electronics lab because he was bored. Connecting the +ve and -ve poles, he attached it to a power supply and gradually increased the voltage until it exploded. (Don’t try this at home!)

But perhaps those pranks were a form of Art, an expression of a highly talented mind. Viknish went on to obtain a Bachelor in Engineering from Stony Brook University (USA), and a PhD in Bioengineering on a scholarship at NUS.

Today, the 32-year-old Scientific Officer at The BioFactory Pte Ltd does research & development in the lab and evaluates potential biomedical projects for commercialisation.

“My Electronics diploma from TP gave me the basics which allowed me to grasp new knowledge more quickly and to understand the experiments which I now do,” he says gratefully.



With his mother (left) and godmother on Graduation Day at Stony Brook

**T**emasek Polytechnic (TP) has been certified by the Civil Aviation Authority of Singapore (CAAS) as a SAR-147 Approved Maintenance Training Organisation (AMTO) – the first and only institute of higher learning to have achieved this certification.

### What does this certification mean?

This means CAAS recognises that TP's Aerospace training programme has met the required high standards in terms of qualified instructors, rigorous curriculum, state-of-the-art facilities and effective quality management system.



### Benefits for Aerospace students

Aerospace students in TP can get direct credits when they go for further Aircraft Maintenance Licence (AML) training, which thereby shortens the time taken to become a Licenced Aircraft Engineer (LAE) by up to 13 months.

Potential employers also look up to this certification, because it means certain standards have been met and it guarantees that specific modules had been covered, so that future employers do not have to retrain TP's Aerospace graduates in these areas. This could result in huge cost savings for companies.

## SCHOOL OF ENGINEERING DIPLOMA COURSES

- |  |   |
|--|---|
| ▶ 3D Interactive Media Technology        | ▶ Infocomm & Network Engineering                |
| ▶ Aerospace Electronics                  | ▶ Integrated Facility Management                |
| ▶ Aerospace Engineering                  | ▶ Mechatronics                                  |
| ▶ Aviation Management & Services         | ▶ Media & Communication Technology              |
| ▶ Biomedical Engineering <b>NEW!</b>     | ▶ Microelectronics                              |
| ▶ Business Process & Systems Engineering |   |
| ▶ Clean Energy                           | <b>SPECIAL PROGRAMMES</b>                       |
| ▶ Computer Engineering                   | ▶ Common Engineering Programme                  |
| ▶ Electronics                            | ▶ Electrical & Electronic Engineering Programme |
| ▶ Green Building & Sustainability        | ▶ Mechatronics & Aerospace Programme            |

### COURSE ENQUIRIES

Tel : 6780 5144 / Email : [enghotline@tp.edu.sg](mailto:enghotline@tp.edu.sg) / Website : [www-eng.tp.edu.sg](http://www-eng.tp.edu.sg) / Facebook : [www.facebook.com/TP.Eng.Sch](http://www.facebook.com/TP.Eng.Sch)

## EDITORIAL TEAM

**Editor:** Edwin Loo

**Photographers:** Don Lim, Sarayutt Koh, Johan Ng, Beverly Tan, Tommy Lobinhoot Low

**Email:** [engineerrus@tp.edu.sg](mailto:engineerrus@tp.edu.sg) **Website:** [w3-eng.tp.edu.sg/emag](http://w3-eng.tp.edu.sg/emag)

**Join us as student journalists or photographers! Training will be provided.  
For enquiries, please email: [engineerrus@tp.edu.sg](mailto:engineerrus@tp.edu.sg)**