

ANNUAL REPORT



QMEA ANNUAL REPORT 2016

TALENT PIPELINE INTO THE RESOURCES SECTOR

The Queensland Minerals and Energy Academy (QMEA) is Australia's largest and most successful industry/education schools partnership. The academy is operated in partnership between the resources sector represented by Queensland Resources Council and the Queensland government through the Gateway to Industry Schools Program.

Through its operations QMEA has delivered hundreds of programs and experiences to:

- Increase understanding and broaden knowledge of the sector for both teachers and students and attract more students into science technology engineering and mathematics (STEM) subjects
- Provide pathways for young people in years 7 to 12 into the resources sector and other STEM careers





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2016 HIGHLIGHTS

- In 2016, 72 events involving more than 3000 students, 576 teachers and 200 industry representatives were delivered.
- The first QMEA-delivered apprentice on-boarding program was held in February.
- In March the QMEA/Alexandra Hills SHS Centre of Excellence in Automation was launched.
- The QMEA Outstanding Female Student of the year award was introduced to the Queensland Resources Council Resources Awards for Women with Tara Toshack the award recipient from Dysart State High School.
- Two new schools; Good Shepherd Catholic College and Rockhampton Girls Grammar School joined the QMEA family.
- The inaugural 'Resources sector apprentice/trainee employability skills for school leavers' report was completed following input from 17 resources sector companies.
- On average, since 2005, 21% of QMEA students entered this preferred pathway of study and employment compared to 13% of non-QMEA school students.



An apprentice participates in the QMEA/BHPB Work Readiness Program



Rockhampton Girls Grammar were one of two new schools to join QMEA in 2016



Our inaugural 'Resources sector apprentice/trainee employability skills report



IN 2016:

OF STUDENTS ENTERING ALL FIELDS OF STUDY OR EMPLOYMENT:

18%

QMEA STUDENTS ENTERED ENGINEERING OR RELATED FIELD OF STUDY

COMPARED TO

11%

STUDENTS FROM NON-QMEA SCHOOLS

OF STUDENTS ENTERING A BACHELOR DEGREE:

11%

QMEA STUDENTS ENTERED ENGINEERING OR RELATED FIELD OF STUDY

COMPARED TO

9%

STUDENTS FROM NON-QMEA SCHOOLS

OF ALL STUDENTS EMPLOYED AS APPRENTICES OR TRAINEES:

9%

QMEA STUDENTS WERE EMPLOYED IN MINING SECTOR

COMPARED TO

1.7%

STUDENTS FROM NON-QMEA SCHOOLS

OF STUDENTS ENTERING A BACHELOR DEGREE:

6.7%

QMEA STUDENTS WERE EMPLOYED IN MINING SECTOR

COMPARED TO

0.7%

STUDENTS FROM NON-QMEA SCHOOLS

'Being an ambassador and participating in QMEA events has opened my eyes regarding the mining and energy industry through first-hand experience; along the way I was able to gain tips in which I can use to further my career aspirations.'

Duta Adyatma, former QMEA Ambassador, First Year Engineering University of Queensland 2016

^SOURCES: QUEENSLAND DEPARTMENT OF EDUCATION AND TRAINING, NEXT STEP DESTINATION DATA 2015



ABOUT US

36 SCHOOLS

Alexandra Hills State High School
Anglican Church Grammar School
Biloela State High School
Blackwater State High School
Bundamba State Secondary College
Chanel College Gladstone
Chinchilla State High School
Cloncurry State School
Dalby State High School
Downlands College, Toowoomba
Dysart State High School
Emerald State High School
Gladstone State High School
Good Shepherd Catholic College,
Mount Isa
Kirwan State High School, Townsville
Middlemount Community School
Miles State High School
Moranbah State High School

Moura State High School
Nanango State High School
North Rockhampton State High School
Oakey State High School
Pioneer State High School, Mackay
Pittsworth State High School
Rockhampton Girls Grammar School
Roma State College
Spinifex State College, Mount Isa
St John's School, Roma
Tannum Sands State High School
Tara Shire State College
Taroom State School
Toolooa State High School,
Gladstone
Toowoomba State High School
Wadja Wadja Community School
Wandoan State School
Wavell State High School, Brisbane

QMEA BOARD MEMBERS

Ian Macfarlane (Chair)
Chief Executive,
Queensland Resources Council

Bevan Brennan
Assistant Director General,
Dept Education and Training

Martin Breen
General Manager, Government &
External Affairs, ConocoPhillips

Vincent Cosgrove
Head of External Affairs, Hastings
Deering

Helen Huntly
Deputy Vice-Chancellor (Industry &
VET) Industry, Vocational Training and

Access Education Division,
Central Queensland University

Matt O'Neill
Chief Mining Officer, Copper Assets
North Queensland, Glencore Mount Isa
Mines

Melanie Teterin
Manager Training Coal & Asia, BHPB

Deryn Vahlmeyer
Assistant Dean International and
Engagement, Science & Engineering
Faculty, Queensland University of
Technology

FROM THE QMEA BOARD CHAIR



The Queensland Minerals and Energy Academy (QMEA) was launched more than a decade ago by the resources sector in partnership with the Queensland Government and has since then enjoyed bi-partisan government support.

Over this time the QMEA has proven to be a leader in industry/education partnerships, and has grown substantially from 18 to 36 schools across Queensland's resources regions.

Through partnerships and sponsorship from resources sector companies, the QMEA has offered its students and teachers a diverse program of learning experiences to increase their overall knowledge of the resources sector and create career pathways into industry.

Hosting more than 70 events for more than 3000 students in 2016, the QMEA has demonstrated to the workforce of tomorrow the many and varied opportunities available within the resources sector. Leading edge technologies are the pathway to the future of the resources sector, and these students and their teachers now have a head start into this new world.

This year marked the launch of the ground-breaking QMEA/Alexandra Hills State High School Centre of Excellence in Automation and Robotics. The centre inspires QMEA students to pursue careers in coding, computer science and robotics, while helping them to be ready for the challenges of the future job market, where it's expected almost two-thirds of current jobs will become automated.

Teachers at QMEA schools have also begun learning about the interesting world of robotics and automation through the delivery of new digital programs. Alongside technology education experts QMEA teachers have been taught the skills to bring robotics into their own classrooms to enhance student learning in all science, technology, engineering and mathematics (STEM) subjects.

I would like to extend my thanks and appreciation to the QMEA Board, our industry sponsors, including two new sponsorships this year from Hastings Deering and the Society of Petroleum Engineers.

Without their support, outstanding outcomes such as a rate of 21 percent QMEA students entering STEM related fields of study or employment, would not be possible. This statistic is in comparison to the state average of 13 percent of students from non-QMEA schools.

The QMEA plays a vital role in ensuring Queensland's resources sector can attract and train the skilled workforce it requires to continue to contribute one in every \$5 of the economy and one in seven Queensland jobs.

Ian Macfarlane,
Chief Executive, Queensland Resources Council

'I would like to extend sincere thanks to QMEA for enabling the recent robotics professional development at Good Shepherd Catholic College in Mount Isa. It is a rare thing for teachers in our location to have access to this quality learning.'

Teacher, Good Shepherd Catholic College



FROM THE QMEA DIRECTOR



In its Interim review of STEM education in Queensland state schools the Queensland Government has called for an expansion of STEM partnerships to enhance teacher capability, student engagement and student participation. It also goes on to say that such partnerships have the capacity to provide students with real world examples of the role of STEM in society.

The QMEA, through its high quality program of activities, provides all of that and more. As an industry-led initiative, we pride ourselves on the richness we can bring into school settings inside and outside the classroom and the opportunities for both students and teachers. In addition to the plethora of experiences on offer that encourage students to take up STEM subjects and careers in our sector and other industries, we have broken new ground with a number of initiatives such as the Centre of Excellence in Automation and Robotics established in partnership with Alexandra Hills State High School and Queensland University of Technology. It is a fine example of a successful industry/education/university partnership and brings innovation to the classroom while preparing students for the careers of the future. It also builds the capability of teachers through our dedicated teacher professional development program which has delivered 14 robotics workshops state wide.

In addition, we have been particularly active in vocational education and training by reaching beyond our traditional school boundaries to deliver our first ever apprentice on-boarding program for BHP Billiton.

Further to this work, and to prepare our prospective apprentices and trainees for future employment, we produced our inaugural Resources sector apprentice/trainee employability skills for school leavers report. It makes interesting reading and will undoubtedly assist in informing students and teacher practitioners about the skills that will help entry level students into industry placements.

In 2016 we issued a warm welcome to two new QMEA schools Good Shepherd Catholic College Mount Isa and our first all-girls school; Rockhampton Girls Grammar and we look forward to building on our successful partnerships with these and all our QMEA schools in 2017.

In recognising QMEA's successes this year I would like pay tribute to our small but extremely capable team; Senior Project Officer Tammy Grady, STEM Outreach Officer Dan Rea and VET Project Officer Kym Frost, who have brought their talents and their expertise into play to make QMEA what it is today. I also would like to recognise my colleagues at Queensland Resources Council who continue to provide us with all manner of support and acknowledge our industry sponsors, the Queensland Government through the Gateway to Industry Schools Program and the QMEA Board, which has been invaluable in their provision of support and strategic advice.

Finally thanks goes to our QMEA principals, teachers and students.

QMEA's ongoing evolution will continue to position our students for the incredible opportunities that are available to them - opportunities that continue in our sector, here and globally, as well as more broadly in STEM industries.

I trust you will enjoy reading our year in review.

Katrina-Lee Jones
Director, QMEA



'As a university partner in the collaboration, QUT has been delighted to facilitate multiple opportunities for both teachers and students to raise awareness of advancements in cross industry research and potential STEM career pathways.'

Deryn Vahlmeyer, Assistant Dean
Science Engineering Faculty QUT

CENTRE OF EXCELLENCE

QMEA/ALEXANDRA HILLS CENTRE OF EXCELLENCE IN AUTOMATION & ROBOTICS

This year marked the launch of the ground breaking QMEA/Alexandra Hills State High School Centre of Excellence in Automation and Robotics.

'The centre' represents a real world industry/school/university partnership offering an embedded curriculum approach to automation and robotics. It embraces multiple subject and year levels that integrate industry practice and application while familiarising students and teachers with leading technological research undertaken within a university environment. The initiative prepares young people and their teachers for the new future world of work and provides a potential STEM pipeline of study and employment into the resources, mining, equipment, technology and services (METS) and other technology savvy industries such as agriculture, medicine and aerospace.

The centre represents both an in school approach and broader outreach program to students and teachers across the breadth of QMEA schools state wide.

'Progress on the Centre of Excellence has exceeded expectations with considerable advancements made in the cross curricula approach that has seen the integration of automation and robotics in multiple subjects and year levels.'

Gail Armstrong, Principal, Alexandra Hills SHS

HIGHLIGHTS:

- industry working in collaboration with 'the centre' in the design, implementation and delivery of a cross curricula approach
- a comprehensive cross curricula approach adopted at with new compulsory subjects in coding and electronics
- industry contextualised robotics challenges included as part of the curriculum eg navigation of robots of an obstacle course to simulate a mine rescue
- student visit to Hastings Deering state-of-the art facility to see application of systems and sensors
- automation included in QMEA Expand Your Mind activity and new electronics systems activity trialled at 'The centre'
- 3D designs created and used by students to generate 3D prototypes and drones used by students with student driven apps
- set up of the 'Coding Club' with a real world industry task assigned to group from Glencore MIM
- student participation in METS United workshop at QUT with robotics researchers from Massachusetts Institute of Technology
- student visit organised to Queensland Centre of Advanced Technology (QCAT) to observe automation and robotics research in action
- teacher workshop held at 'the centre' for QMEA teachers and feeder primary schools to absorb learnings
- teacher tour held for QMEA teachers taking in QCAT, Australian Centre for Robotics Vision QUT and BHP Billiton Integrated Remote Operations Centre (IROC)
- 14 additional teacher professional development automation and robotics workshops have been delivered across the state to QMEA schools.



'Industry through QMEA has provided a raft of learning experiences that have raised awareness of not only skills required by industry in this space but also the application of automation and robotics in the resources sector and other STEM industries.'



WHAT WE DID IN 2016

QMEA hosts a range of professional and trade pathway and industry-contextualised experiences for students and teachers based on STEM. Such experiential learning increases awareness of the sector and provided pointers to career pathways into the industry and other STEM related careers.

The QMEA has delivered a sequenced program of 72 activities in 2016 based on stimulating student interest, making connections, informing decisions, influencing pathways and challenging and preparing our employees of the future.

STIMULATING INTEREST AND MAKING CONNECTIONS

Years 7 and 8 students engage in activities to increase their awareness of the resources sector and the range of careers that exist in the minerals and energy sector.



Jellinbah Mining with students from Moranbah SHS who travelled overnight to the Blackwater event



Hastings Deering with students from Alexandra Hills SHS at Energy for the Future at QUT

‘Fabulous experience that enabled students to engage in real world issues with mentoring from industry professionals - great day!’

Amanda Patzwald, Science Teacher, Toolooa SHS

ENERGY FOR THE FUTURE

Described by schools as the perfect extension activity for term-three curriculum ‘energy production and efficiencies’, more than 200 students showed off their higher order thinking skills in Energy for the Future events across Brisbane, Blackwater and Gladstone regions.

Our industry supporters were again generous as always with each event being actively attended by representatives who mentored and inspired each of the young minds.

‘Some of the high school students who attend the EFTF program in the past, have now been enrolled in our engineering degree. It is great to see how the program encourages the students to think strategically and work together in a team to achieve a common goal for the future. Keep up the good work, QMEA!’

- Ashfaque Chowdhury, Deputy Campus Leader, Engineering (Gladstone) and Lecturer (Mechanical) | School of Engineering and Technology

CLASSROOM TO CAREERS

This program demonstrates the pathways from classroom to A very popular and effective program run across the state, Classroom to Careers are utilised by schools to add value to their classroom teaching.

QMEA coordinated a number of industry professionals to attend various classes throughout 2016 to show students how the curriculum they are studying today is used in the industry representative’s role every day.

Students benefit from seeing the real-world outcomes of their studies and gain inspiration and motivation for further success.

With a wide range of classes and year levels taking advantage of the program, industry can see the need real-world contexts the national curriculum. The level of support from our sponsor and in kind supporters has made a positive impact on all schools who participated in Classroom to Careers.

‘Being an influencing voice in a young person’s mind can be very rewarding and I found my work with the Classroom to Careers gave me a chance to highlight the lesser known aspects of my role which I believe are vital to become a long term contributor in one’s field’

- Graduate Engineer, QGC



Year 9 students from Moranbah SHS with BMA Geologist, taking part in the ‘rocks and minerals’ Classroom to Career

INFORMING DECISIONS, INFLUENCING PATHWAYS

Extended periods of engagement within this phase leads to a greater depth of understanding of the resources sector.

EXPAND YOUR MIND

With the involvement of 15 schools and close to 150 students over five separate regions, Expand your Mind promotes career opportunities in the resources sector while focusing on STEM pathways.

Customised to highlight three different STEM pathways ranging from robotics and programming, design and engineering and chemical processing, the day is both challenging and fun which brings out the best in the year 9s who attend.

STEM 4 SCHOOL KIDS

The STEM 4 School Kids event aims to engage Year 10 students interested in pursuing an 'academic pathway' in years 11 and 12. The program teams industry mentors with students on a number of hands-on, problem-based challenges.

'I enjoyed meeting new people, especially the industry reps. They had a huge impact on my outlook for the future and how I will be able to get a career in the Science or Mathematical field'

Student at Emerald STEM 4 School Kids

During the 10 'STEM 4 School Kids' events held across Queensland this year, industry professionals told more than 200 students about their pathway from high school to their current career. The students worked on activities that followed the mining process from exploration and extraction through to processing and rehabilitation.

Students from a range of schools participated in events in Brisbane, Rockhampton, Moranbah, Emerald, Wandoan, Mackay, Gladstone, Townsville and Mount Isa. Participants had the opportunity to hear from a variety of resource industry professionals including geologists, mining engineers, geotechnical engineers, metallurgists, process engineers, environmental scientists, human resources and many more.

'The day was a great experience for our students, it was great for them to see the different fields that are in the industry that they weren't aware of before. I think it was great that the QMEA Student Ambassadors were involved as this was a real inspiration for our students.'

Teacher at Moranbah STEM 4 School Kids



Students from Taroom SHS at an Expand your Mind workshop



Michael Staatz, Mining Engineer, Wesfarmers Curragh working with students from Emerald SHS



Students undertake an experiment at the STEM 4 School Kids event in Mount Isa



Students undertake an activity at the STEM 4 School Kids event in Townsville



Toolkit for School Kids held in Rockhampton



An activity underway at a Gladstone Toolkit for School Kids workshop



Students participate in the Hastings Deering toolkit day in Brisbane



A student participates in the Wesfarmers Wadja Wadja Toolkit for School Kids

TOOLKIT FOR SCHOOL KIDS

QMEA through its partnerships with industry facilitates a series of events targeting students who wish to pursue vocational education and training (VET) careers. These events help to make the students aware of different trade and operator pathways and allow them to talk to industry representatives who share information on their career journey. QMEA's VET-specific events commence in year 10 with our Toolkit days which provide opportunities to understand the types of roles available in the resources sector and help the students choose the correct subjects they should study to get their desired role.

Toolkit for School Kids events provide a unique opportunity for year 10 students to gain an insight into what people do in a trade or operator role in the resources sector. These day-long events are designed so that expert industry representatives can talk to the students about their current role and the vocational pathway. The students also have an opportunity to try some hands-on activities in a safe environment and with guidance from the industry experts get some understanding of the different trades.

As students begin to consider life after school and pursuing roles as apprentices or trainees, it is a perfect platform for the students to hear about local industry opportunities and develop networks with local industry representatives.

'Our young people need a head start in their future career choice and I believe that the opportunity they had today can give them that'

Teacher, Mount Isa Toolkit day

In 2016, 187 students and 27 teachers and 47 industry representatives attended Toolkit events in Mackay, Moranbah, Emerald, Mount Isa, Townsville, Rockhampton, Gladstone, and Brisbane.

This year QMEA facilitated two Toolkit for Girls events, which allowed female year 10 students try some trade tasks and targeted diversity in employment in traditional trade roles. They were held in Moranbah and Mackay and attended by local apprentices, businesses and industry representatives.

In addition to these events QMEA ran combined STEM and Toolkit days at Wandoan State School and combined with Wesfarmers Curragh mine to enter into a new partnership with Wadja Wadja Community School.

These events would not be possible without the ongoing support for our industry partners, the ongoing support from our local schools and the combined vision of ensuring school leavers have an understanding of ongoing opportunities in the resources sector.

PROFESSIONAL PATHWAY

QMEA Professional Pathway students are completing an academic program of work across years 11 and 12 with the aim of receiving an Overall Position (OP) to gain entry into tertiary education. These students are considering a range of careers in areas such as engineering, geology and environmental science.

The students are invited to take part in a number of STEM related opportunities including taking part in one of the QMEA 'Make It Now in Engineering' (MINE) Challenges.

MINE Challenges provide an amazing opportunity for high achieving senior students to work alongside industry professionals to solve genuine problems while experiencing the life of a resources sector worker. In 2016, 28 students and six teachers from QMEA schools attended a MINE Challenge.

During the July school holidays, nine students participated in the Glencore Mount Isa MINE challenge, which was a career-shaping experience for all. For the challenge the students were split into three teams and charged with solving some of the real-life problems on the mine site, including one challenge that had the group travel more than a kilometre underground to understand their project.

The BMA MINE Challenge in September involved 19 students who travelled to Moranbah for a week to experience the life of an industry professional at a coal mine and living in Civeo's MAC village accommodation.

Split into two teams based at BMA's Peak Downs and Goonyella Riverside mines respectively, the teams met with key staff, toured facilities and undertook a challenge to design, cost and propose a new box-cut coal mine. The week concluded with the teams presenting their cases to a panel of BMA's mine planners and site managers who agreed everyone had done a brilliant job before awarding the 2016 BMA Mine Challenge Trophy to the Peak Downs Team.

VET PATHWAY

QMEA's signature events in year 12 are the Make it Now in Trade (MINT) camps which are week-long events that have the students working in a simulated work environment to solve a trade-based problem. These camps are run in trade training centres in Central Queensland and Mount Isa, and the students work in teams to solve the problem while demonstrating an industry level of safety, teamwork, problem solving and trade skills.

QMEA makes available additional programmes to support the VET pathway.

These include:

- QSMART maths which is a trade based maths which was designed with the help of Industry with the focus on students wishing to pursue a trade pathway and is available for year 11 and 12 students
- AAPT as an industry level aptitude test is made available to all QMEA school students as preparation for their job applications.
- Certificate II in Resources Infrastructure Workplace Preparation (RIWP). This qualification focuses on safety, environment, maintenance, communication and organisational skills.

During 2016, 53 students were enrolled in the Cert II RIWP while 36 students had an opportunity to participate in one of two MINT challenges across Queensland. The MINT challenges for 2016 were the BMA challenge held at the Dysart SHS and the Glencore Mount Isa mine challenge held at Spinifex College Mount Isa. Both camps were wonderfully supported by a mix of apprentices and tradespeople from the local mines and culminated with judging by industry representatives for the best completed project.

Comments from students indicate their enthusiasm for this event and quite a few of the apprentices who helped over the week had actually participated as students a few years before. Industry has advised that due to the quality of students presenting in these experiences they are now using the camps as part of their recruitment process.



Participants of the MINE camp

'The challenge was an absolute blast and has been one of the best experiences I've been fortunate enough to be a part of. I appreciate all the time and effort that was applied by the staff and experts and thank them for providing us with an exceptional experience in the mining and energy industry.'

Student participant, Glencore MINE camp



Student at the Mount Isa Glencore camp



Students test their bikes out at the Glencore Mount Isa MINT challenge

'It was challenging to really think outside the box, I think this program can influence many young people to get a job in the sector'

Student participant, Glencore MINT camp

CHALLENGING AND PREPARING

The challenging and preparing phase targets year 11 and 12 students who have demonstrated a genuine interest in a resources sector career. Students participating in this phase have generally completed earlier activities in QMEA.



The QMEA ambassadors at Hastings Deering Institute of Technology



Ambassador students complete a Chemical Engineering activity at UQ



QMEA student ambassadors at CSIRO's Queensland Centre of Advanced Technologies

AMBASSADOR PROGRAM

The QMEA Ambassador Program attracts Queensland's most talented students who are considering professional and VET pathways into the resources sector. The selected students participate in a number of activities across a 12-month period that increase their understanding of the resources sector, provide unparalleled opportunities for networking with other students and industry representatives and develop leadership skills.

The students participated in a three-day camp, which saw them engaged with the cutting edge of mining and resources innovation through their tour of BHP Billiton's Integrated Remote Operations Centre, the CSIRO's Queensland Centre for Advanced Technology (QCAT), the Hastings Deering Institute of Technology and SIMTARS; the Queensland Government's safety in mining research station, as well as experiencing a taste of life at the University of Queensland.

The camp provided a perfect opportunity for the students to increase their knowledge of the sector in order to inform their own pathways and to encourage other students to consider resources sector subjects and careers.

The students were presented with their certificates by representatives from industry, government and academia at a gala breakfast event attended by a wide range of education and industry supporters.

Congratulations to our 2017 QMEA Student Ambassadors:

Nethmini Alahakoon, Toolooa SHS
Adele Bierman, Gladstone SHS
Lana Campbell, Pioneer SHS
Sarah Coker, North Rockhampton SHS
Felicity Finlayson, North Rockhampton SHS
Paige Foden, Moura SHS
Nick Frost, Gladstone SHS
Breanna Heid, Biloela SHS
Josie Henry, Kirwan SHS
Mary-Anne Kang, Wavell SHS
Brock Matthews, Nanango SHS
Christina McLure, Biloela SHS
Abi Meehan, Chanel College
Tom O'Sullivan, Moranbah SHS
Hayden Riley, Moranbah SHS
Lewis Ryder, Good Shepherd CC
Jonty Sleep, Moura SHS
Jarrod Toshack, Dysart SHS
Dinah Tu'ihalangingie, Emerald SHS
Troy Wright, Chanel College

QMEA AND LNG SECONDARY SCHOOLS PARTNERSHIP

Providing valuable opportunities for thousands of students and hundreds of teachers, the QMEA and LNG Secondary Schools Partnership comprising of QMEA, Education Queensland, APLNG, GLNG and QGC celebrated its fifth year of operation.

Promoting STEM pathways, the partnership was made up of several uniquely designed programs, which highlight various opportunities within the Gladstone region.

Supporting both students and staff, the partnership has engaged with more than 10,000 students throughout the past five years and assisted Gladstone schools in increasing the number of students moving into STEM related fields of study and employment.

The QMEA and LNG Secondary Schools Partnership has concluded in 2016.

TEACHER PROFESSIONAL DEVELOPMENT

QMEA's annual teacher professional development (TPD) program includes a range of activities and support for teachers in QMEA schools. This year there was a big focus on upskilling our teachers in the Digital Technology curriculum, which matched themes around innovation and robotics.

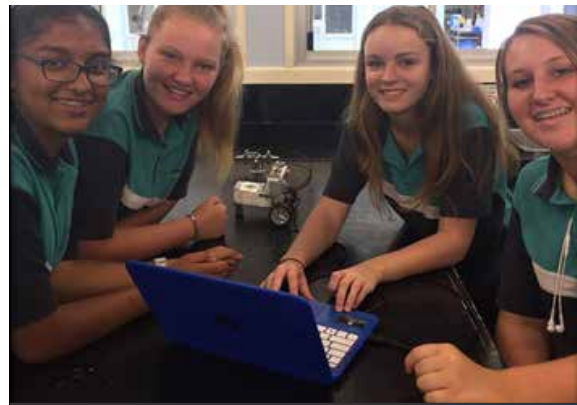
In 2016, more than 576 teachers engaged with QMEA events, or were supported to participate in a range of activities to improve their professional knowledge.

In addition to these workshops, QMEA delivered a number of specific teacher PD opportunities in 2016 including QSMART, Certificate II Resource Infrastructure Work Preparation training, Apprentice Aptitude Test Training Program and STEM teacher workshops in a number of locations.

QMEA wishes to acknowledge the Queensland Department of Education and Training for the assistance provided to support the delivery of robotics and automation TPD as part of the outreach work of the QMEA/Alexandra Hills SHS Centre of Excellence in Automation and Robotics.

'This session was a really engaging series of activities which opened my mind to the endless learning experiences my students could have with LEGO robotics.'

Teacher in Mackay on Robotics PD



Year 9 students from Tannum Sands SHS take on the Robotics Challenge in Expand your Mind



Melanie Webber, APLNG with Chanel College students and QMEA Ambassadors, Michael and Abi at QMEA's Intro to Safety, Industry and Academic Writing Program



Perfect Programming with Damien Kee



2016 INITIATIVES

RESOURCES SECTOR APPRENTICE/TRAINEE EMPLOYABILITY SKILLS FOR SCHOOL LEAVERS REPORT

In a first for QMEA, 17 resources sector companies provided feedback that has been used in a report on employability skills for apprentices and trainees. The QMEA Resources sector apprentice/trainee employability Skills for School Leavers Report was developed in response to calls from QMEA teachers and students wishing to understand the requirements of industry for students seeking a vocational pathway into the resources sector and its supporting industries as an apprentice or trainee.

This comprehensive report provides multiple insights into current and future opportunities for vocational students and preferred requirements for school leavers.

Industry representatives identified significant concerns in the current literacy and numeracy levels of vocational school leavers and stressed the importance of having a solid background in maths and English above all other skills and abilities. The full report can be found on the QMEA website; www.qmea.org.au.

'A good level of maths and English will ensure apprentices and trainees can read and understand procedures and follow a sound diagnostic process.'

Industry survey respondent

APPRENTICE ONBOARDING PROGRAM

QMEA again ventured into new territory taking a greater role in training up and coming resources sector workers, by starting with a new course for apprentices from BHP Billiton.

A total of 12 BHP Billiton apprentices graduated from a four-week Work Readiness Program, where they worked in an environment that replicated the sites where they will be starting their apprenticeships.

The program was delivered by QMEA at the 'big blue shed' training centre at Moranbah State High School. It was the first time QMEA had taken a key frontline role in ensuring that young apprentices are work-ready for their new roles in the resources sector.

The training program had a focus on skills, health and safety and the apprentices were placed at BHP Billiton Mitsubishi Alliance (BMA) operations at Goonyella Riverside, Peak Downs, Saraji, Broadmeadow and Blackwater mines and at the Hay Point Coal Export Terminal near Mackay.

The Moranbah training course enabled them to be work ready and involved learning hand skills, welding and basic electrical knowledge in an environment that ensured a smooth and safe transition to work.

OUR SPONSORS

QMEA looks forward to 2017 in building on its successes, achievements and outcomes for students, teachers and industry.



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