

Quick No. 139, 2021 - Issue 1 ISSN 2652-2713 (Online)













Forty Years of proudly supporting Queensland teachers in effectively using Digital Technologies in Education.

CEGQ (the Computer Education Group of Queensland) 1981 - 1991

QSITE (the Queensland Society for Information Technology in Education) 1992 - present



- QSITE 2021 State Conference Let IT Bloom 20th and 2st September Toowoomba
- ♦ Australian educators embrace Swift to forge a new future for students in Queensland Apple
- 'A recent survey of Australian workers found that 87% required digital skills for their role.' Matthew Jorgensen
- ♦ Quick Journal history: 40 years ago Sandra Amoore
- ♦ How associations started QSITE Mark Holland
- **Output** Described Building bridges to the future of learning with Cisco Cisco
- **♦ Cyber security: It's time for a check-up Grok Academy**
- **⋄** CreativITy 2021 Gold Coast One Day Conference

### Contents

- 1 Editorial
- 2 QSITE 2021 State Conference Let IT Bloom 20th and 2st September Toowoomba
- Australian educators embrace Swift to forge a new future for students in Queensland Apple
- 10 'A recent survey of Australian workers found that 87% required digital skills for their role.' Matthew Jorgensen
- 16 Quick Journal history: 40 years ago Sandra Amoore
- 20 How associations started QSITE Mark Holland
- 22 Building bridges to the future of learning with Cisco Cisco
- 26 Cyber security: It's time for a check-up Grok Academy
- 28 CreativITy 2021 Gold Coast One Day Conference

Quick is published biannually by The Queensland Society for Information Technology in Education Inc., all rights reserved.

#### **Copyright and Restrictions of Use**

Quick is intended solely for the use of the individual patron of the licensing party which may include current staff and students of an institution.

Copyright of the full text is the property of the publisher of the original publication. Text may not be copied without express written permission except for the print or download capabilities of the retrieval software used to access it. This text is intended solely for the use of the individual user which may include current staff and students of an institution.



# **Editorial**

#### By Lyn Allsop, QSITE Executive Officer

The QSITE State Conference did not eventuate in 2020 and planning is going ahead for the 2021 State Conference, *Let IT Bloom*, to be held in Toowoomba the first week of the school holidays, Monday 20th and Tuesday 21st September.

Registrations are open to attend and enjoy networking with colleagues. It will be great to see everyone.

If the event is cancelled all delegates will receive a refund. Further information will be posted on the website, email lists and social media.

We are grateful to Matthew Jorgensen, Project Manager with ACS, *Gateway to Industry School program (GISP)*, for an article which updates us on the skills required by those in a Digital Professional Workforce and the opportunities for schools to consider in educating and encouraging career paths for students into the workforce.

Interesting articles reprinted with permission for your reading are *Australian educators embrace Swift to forge a new future for students in Queensland* with permission from Apple showing how some of our Queensland teachers are using this to teach coding. Also the article *Cyber security: It's time for a check-up* reproduced with permission from Grok Academy.

Cisco has prepared an article *Building bridges to the future of learning with Cisco* sharing what they can offer to support teachers and **education**.

This is a significant time for QSITE and QUICK as we celebrate 40 years of the progress of the Association from the inception of CEGQ in 1981 through to what it is today as QSITE. Across that time the aim has been to support teachers in the use of Educational Technologies and today

ANNIVERSARY

specifically Digital Technologies. There are many of us who were around in the beginning and will recall much of what Life Member, Mark Holland, and Sandra Amoore, QSITE Board Treasurer/Secretary, have gathered for us so we can reflect on those early times.

I can well recall my introduction to QSITE and Insite, the newsletter, during the mid 1980s so was not too long after it began. I was completing a Teaching Degree and developed a fascination for computers, which involved undertaking the class at TAFE to learn the wordprocessor Zardax, typing in the code on the Tandy TRS80, I wrote university assignments in LOGO language, as I tried to get a grip on what was the educational use of one Apple 11e computer sitting in my primary classroom. Those of you in the Secondary area will have quite different recollections of your experiences because that was where a major emphasis lay.

Have a chuckle on those early times and don't despair too much over where we are now. Life does go on and we need to always keep up with change.

I did love all the exploration of the early days as we discovered integration of educational use of computers in the Classroom.

I received a QSITE teacher of the Year award in 1993, pretty much the first primary teacher to be recognised, and I have been actively involved with QSITE ever since, spending over 15 years of it as QSITE Treasurer. I am also a Life Member and, even after 15 years in retirement, I still sit here on my computer looking after the administrative management of QSITE and tapping out content for Quick. *Where would I be without QSITE?* 

We are always looking for content to be shared with our readers so please remember to submit an article on what you find interesting to share with others.



The QSITE 2021 State Conference is scheduled for Toowoomba this year. If you are looking for some excellent educators of today, PD, take a look at the program.

# Let IT Bloom 2021

Toowoomba

20 - 21 Sept



Toowoomba is hosting the 2021 Queensland Society for IT in Education State Conference in the September school holidays. We invite you to peruse the website at <a href="https://qsite.edu.au/qsite-events/qsite-conference-2021">https://qsite.edu.au/qsite-events/qsite-conference-2021</a> which contains all the details of the two day conference, including keynote speakers, workshops, presentations, technology playground, exclusive tour of Pulse Data Centre, and the retro themed conference dinner to celebrate the 30<sup>th</sup> anniversary of QSITE and 40 years since the inception of the Computer Education Group of Queensland.











 $For ty\ Years\ of\ proudly\ supporting\ Queensland\ teachers\ in\ effectively\ using\ Digital\ Technologies\ in\ Education.$ 

CEGQ (the Computer Education Group of Queensland) 1981 - 1991

QSITE (the Queensland Society for Information Technology in Education) 1992 - present



At the time of this email, Toowoomba is not in a lockdown zone. In this time of uncertainty with lockdowns and COVID, please rest assured that if the conference is cancelled for any reason you will receive a full refund of your registration cost. Check with your accommodation provider before booking that they will also refund if you are unable to attend.

Start your school holidays off by visiting the garden city of Toowoomba and joining your colleagues in two days of highly engaging activities facilitated by experts from across Australia.

Visit the website for all the details or contact <a href="mailto:office@gsite.edu.au">office@gsite.edu.au</a> for further information.

**Major Sponsor** 



**Gold Sponsor** 











#### WHERE

### WHEN

#### PROGRAM

#### **PRICE**

\$250 Presenters & Students

\$350 QSITE Members

\$400 Full Registration

Toowoomba State High School Performing Arts Centre 76-98 Stuart St, Toowoomba OLD 4350 20-21 September, 2021

Keynote Speakers 23 Workshops

Student Presentation

STEM Playground

**QSITE** Awards

Drinks and Professional Networking

Conference Dinner

Trade Displays

Check out what's on the program

qsite.edu.au/let-it-bloom-qsite-state-conference-2021-program

Register now at

qsite.edu.au/event/qsite-2021-state-conference

#### **CONFERENCE KEYNOTES**





Sarah Atkins has worked for ACARA since 2017 as part of the Digital Technologies in Focus project supporting school clusters in Queensland and New South Wales. She brings many years of experience to the role of Curriculum Officer. Sarah is immediate past secretary for the board of the International Bebras Computational Thinking Challenge and edited the Australian Bebras Teacher solution guide 2014-2019. She was awarded QSITE's Outstanding Leader in 2015. Sarah has previously worked as Assistant Manager Technologies for the Queensland Department of Education and as a specialist eLearning Teacher at Good News Lutheran School. She specialises in providing practical ideas for teachers in the implementation of the Digital Technologies curriculum. Sarah can be found on Twitter @SaraheLearn and as part of the Scratch community: SaraheLearn

Jenine Beekhuyzen
Tech Girls Movement Foundation



As one of Australia's Women of Influence, Jenine often wears a cape to mobilise our next generation into action. Also known as Jewella, she uses her superhero persona to share her passion for education and entrepreneurship, while inviting girls, in particular, to find their superpower and use it to solve problems important to them in their local community and beyond. With a presence in every Australian school, Jenine's ultimate goal is to use technology to enable us to be our best selves, and for us to be in a position to actively contribute to solving the world's most important problems. Through digital intelligence, young people will find that they have the necessary superpowers to make a real difference in the world.

Brenden Hodgkins, Euclideon Holographics



Euclideon Holographics is the world leader in Holograms, Hologram Devices, virtual reality solutions and content creation. Based in Brisbane, we are producing world leading technology. "If only we had technology like this when we were in school".

To be able to provide the next generation of Australian students the technology that inspires them to create. We are providing the technology tools to help students navigate their way through learning. With our products being multi-viewer the whole class is immersed in what is projected. Euclideon Holographics CEO, Bruce Dell, will make a special guest appearance.



### Hologram Wall

Our Hologram Wall is a device that makes 3D objects appear out of thin air in any room. It converts a plain surface into a window where you can explore a virtual world. Use pre-built holographic experiences or build your own using our supplied software. Offering a cutting-edge and groundbreaking experience, give your students the opportunity to learn 3D modeling and visual programming in an interactive 3D environment.



### **Features**

- Convert any blank white wall into a 3D holographic experience, projecting holographic imagery up to 1.5m out of the wall and infinitely into the wall
- Explore a digital reality by viewing objects, environments, and people in real life-size, shrink down to the size of an ant, or become a giant and explore an entire city
- Up to 30 viewers with one presentor.
- Wall mounted (3m by 2.6m screen) or Portable units available for either permanent setups or temporary sessions
- Easy to use tool set to bring your creations and presensations to life.
  - Internet of Things (IOT) enabled for real-time feeds, open API for custom control and experience-building
  - Use Pre-built experiences and templates or build your own custom experience
  - Make your projects interactable using Scratch-like visual programming









# Why it is special

- Enables multi-viewer immersive learning; power up a wall to explain concepts to an entire classroom or let students build immersive, interactive one-on-one experiences
- Suitable for all ages to view by wearing a pair of 3D glasses, no bulky headset required unlike other "VR" solutions
- Create and share content with schools from across the world
- Provides a platform for you to teach students valuable skills in the emerging 3D and programming fields



### **Use Cases**

- Students can learn how to create their own holographic 3D scenes with easy-to-use software
- Learn programming in a fun and interactive way through our visual programming interface
- Bring physical items into the digital world with photogrammetry

To contact us for more information, please use: Phone: +61 7 3393 9579 or Email: info@euclideonholographics.com



# Australian educators embrace Swift to forge a new future for students in Queensland



Students at St Augustine's College, a high school in Queensland, Australia, are planning careers in app development. Teacher Oliver Baumeister shares their view that coding skills will be essential for success in the future.

Major organizations and educators in Queensland, Australia, are embracing Swift — the powerful and intuitive open source programming language pioneered by Apple that's behind some of the world's best apps — to equip the state's students with the skills they need to succeed in the booming app economy.

TAFE Queensland, the state's largest training provider, will soon offer iOS app development with Swift to educate students on fundamental app development skills. The program will be available to students beginning in October 2021 and will be Queensland's only iOS course cocreated with Apple engineers and educators.

"Developing in Swift blends creativity and coding to problem-solve in a way no other language can, giving our students the fundamental skills to create the world's next transformative apps, from ideation to design, development, and distribution through the App Store," says Jackie French, director of Creative Arts and Digital Design at TAFE Queensland. "Demand from students and industry continues to grow, proving the need for a larger pipeline of graduates qualified to maximize today's job opportunities

and keep Queensland and Australia at the forefront of creativity and innovation."

Jackie French, director of Creative Arts and Digital Design at TAFE Queensland, says the training provider will be the first in the state to offer an iOS coding course based on Apple's Develop in Swift curriculum.

Since the launch of the App Store in 2008, the iOS app ecosystem has been an engine of growth and among the fastest-growing sectors of the world's economy. There are now close to 160,000 app economy jobs across Australia, a figure that's been increasing by 10 percent every year since 2017. Today, there are nearly 2 million apps on the App Store, which has facilitated over \$600 billion (US) in commerce in 2020 alone, while the sale of digital goods and services through the App Store has earned developers over \$200 billion (US) to date.



Developing in Swift equips students in Queensland, Australia, with the skills they need to succeed in the booming app economy.

#### **Cultivating a Passion for Coding**

At Siena Catholic College and St Augustine's College, two high schools in Southeast Queensland, teaching students the principles of app development using Swift is unlocking their creativity and allowing them to reach new levels of innovation and problem solving.

"Our decision to choose Swift was clear and based on the simplicity, versatility, and limitless creativity the language provides," says Paul Dionysius, who teaches technology courses at Siena Catholic College. "Every day we're seeing our students develop enterprising ideas and designing real-world solutions to problems, building the essential skills for success in the 21st century. We have future blockbuster developers here today — I am certain of that and incredibly proud."



Paul Dionysius leads technology education at Siena Catholic College, helping students use creativity and coding to tackle challenges and solve problems.

Samantha Cray, a student at Siena Catholic College, says, "I love how coding gives me the freedom to be creative and analytical at the same time, helping me to think critically and build real-life apps to solve problems. I think there's a huge misunderstanding when it comes to the relevance coding has in a modern world, and how challenging it can be. Like every new skill, it takes practice, but the opportunity to provide modern solutions to real problems is really exciting to me, and using Swift makes it easy to turn my ideas into a working app."

Siena Catholic College and St Augustine's College share their passion for coding with Energy Queensland, the company overseeing the state's electricity distribution, retail, and energy services. This month, Energy Queensland initiated a week-long program that blends the classroom and corporate environments, offering students the opportunity to see and experience how Swift and iOS apps are transforming the way the company and its teams work.



A student at Siena Catholic College, plans the user experience and design for her iPhone app.



Students at St Augustine's College and Siena Catholic College liken Swift to a spoken language that's easy to learn and understand.

Energy Queensland's Dan Massey is committed to building the skills pipeline within Queensland.

"Innovation is central to the success of Energy Queensland, both in terms of how we use technology to provide better outcomes and service, but also how the organization is sharing these insights with schools and students, giving them a look into a real-world setting to aid their development and, in time, contributing to the prosperity of our community," says Massey, Energy Queensland's mobile apps platform manager. "A solid skills pipeline is essential for the success of our students and our state, and this program is something we're passionate to introduce and plan to grow."

Energy Queensland first deployed iPhone to its entire employee base of 7,500 in 2018, and iPad to the 4,000 field-based employees in 2019, giving the organization the opportunity to harness Swift to develop iOS apps and software solutions that would increase efficiency, safety, and employee satisfaction.

# Australian educators embrace Swift to forge a new future for students in Queensland



"Coding with Swift is much simpler and easier to use than other languages, and with it comes the ability to create something people can enjoy and find useful. I hope to make a career out of coding," says Daniel Parszuto, a student at St Augustine's College.

#### **Gaining New Skills for a Bright Future**

Year 10 students from St Augustine's College and Siena Catholic College are among the first to take part in the Energy Queensland program. They are already incorporating learnings into their existing coding work.

"Spending a week with Energy Queensland opened my eyes to how easily apps can help solve business challenges and even help save the lives of field workers," says James Nunn, a student at St Augustine's College. "The experience taught me that a career based on coding can inspire, educate, help, and protect people around us, and it's something I'm excited to pursue."



Coding offers "limitless possibilities," says Lincoln Hetherington from St Augustine's College.

Another St Augustine's College student, Lincoln Hetherington, says, "When developing with Swift, I really enjoy the ability to think of literally anything and being able to create it for everyone to see. It's easy to understand, and I love the limitless possibilities it offers. As the world is becoming more technologically advanced, knowing how to code will help me in the future with many different jobs and opportunities."

As the app economy continues to grow, Apple is investing in educational programs and opportunities that help prepare learners of all ages for the jobs of the future. With Swift Playgrounds, Everyone Can Code, and Develop in Swift, Apple gives anyone interested in learning to code the tools and guidance to create their own apps using the same tools as professional developers. Today, more than 9,000 K-12 and higher education institutions worldwide are using Apple's coding curricula, and Apple coding academies, accelerators, and Entrepreneur Camps give up-and-coming developers the opportunity to apply the latest technologies to their apps, build their businesses, and market their ideas to a global audience.



With Swift Playgrounds, Everyone Can Code, and Develop in Swift, Apple gives anyone interested in learning to code the tools and guidance to create their own apps.

### **FNQ CHAPTER**



It is with much sadness; that I have to announce that QSITE (FNQ) has been forced to cancel the Technology in the Tropics 2021: Together Again Face to Face Conference which was to be held in Cairns on Friday 3<sup>rd</sup> September.

When our Chapter group set out to conduct this event last November 2020, though Covid was very much about; I guess we all hoped that by September this year, we would be able to all meet again "Face to Face" to enjoy another Tropical Conference with colleagues.

As an organisation; we have soldiered on with this one purpose in mind; whilst all around us sporting events, cultural events, Regional Shows, fetes, musical events, Trade Shows, junior sports etc have been postponed or cancelled. Most of these lockdowns have been announced with extremely short notice.

We have held out hope that we could navigate through these Covid times, but unfortunately Covid has had the last word. With recent lockdowns well-advertised in Melbourne, ACT, NT, NSW, Brisbane and Cairns; we have had to very seriously consider if t he 3<sup>rd</sup> of September would be at all possible.

Cairns' people are still wearing masks until Sunday when a review will be taken. The Premier may lift the restrictions but can then reimpose them at any time. There is now too much uncertainty around what tomorrow (let alone 2 weeks' time) might be like.

This uncertainty and Covid fear have had a predictable flow on effect to the number of registrations that we have received, which frankly have been extremely low compared to previous events. In short, we cannot risk being responsible for conducting a substandard event with low registration numbers caused by something like Covid which is way beyond our control. We would be negligent also to be in any way responsible for possible health issues caused by staging this conference; with the Delta strain now apparently rife in many parts of Australia.

In short, I thank you for your understanding in this matter. Rest assured it has been an extremely difficult decision for the Chapter Executive to make, but one that is best done earlier than later. We have allowed all the time we could to see if things would improve. Alas this has not been the case.

In closing, I thank you for your support and I can only apologise again for this cancellation, but I am sure you understand that it was a decision to be made in the best interests of all attending on the day; both economically and most importantly health wise.

Some of us have invested large amounts of personal time in the creation of this event and it had all the hallmarks of being one of our better ones. We just couldn't risk it. Even the Colonial Club wasn't surprised at our decision as they are getting cancellations too.

Mark Holland FNQ Chapter Chair QSITE Life Member

# 'A recent survey of Australian workers found that 87% required digital skills for their role.' (The Digital Pulse, 2021)

By Matthew Jorgensen, GISP Project Manager

'A recent survey of Australian workers found that 87% required digital skills for their role.' (The Digital Pulse, 2021)

Two significant and related events took place in June 2021. The Australian Computer Society launched the ACS Australia's Digital Pulse, an annual snapshot of Australia's Technology workforce compiled by Deloitte Access Economics, at an event hosted by the Sofitel in Brisbane. This is an essential reference for teachers of Digital subjects as it presents contemporary data on skills priorities straight from the employers.

The information in the Digital Pulse makes for compelling reading, and there are some positive points for the tech sector. There is a forecast for 2026 of over 1.1 million technology workers in Australia. This shows an average annual growth rate of 5.4%, far outpacing the overall Australian workforce growth rate expectation of 1.2% per annum over the same period. Queensland's technology workforce in 2020 sits at 13.9 % of the overall Australian tech workforce at 112 000. In 2020, 1906 students were enrolled in Digital Solutions.



Of note is that the increase of funding around Australia to create Smart City strategies provides a focal point for emerging careers, specifically robotics specialists and industrial network engineers, data scientists and platform developers, cyber security professionals and cloud architects and digital anthropologists. Schools have an opportunity to connect with local councils and implement curriculum that caters for IoT-based projects, leveraging the use of technologies and skillsets used in this burgeoning career pathway.

The top ten skills demanded in ICT job postings in 2020 will interest school and curriculum leaders as well as Digital Faculty leaders. Many of these skills are reinforced across all subjects, and some are specific to Digital Technologies. Further investigation of the report shows the employers also desire strong Python, AWS and DevOps skills in new hires. Are our schools catering for these skillsets through our digital teaching and learning? Can we expect career teachers to effectively teach our students how to use programming languages with limited time and very limited expertise?

Rank	Skill	Job postings (no.)	ICT job postings requesting that skill (%)
1	Communication Skills	28,539	42%
2	Teamwork/Collaboration	15,232	23%
3	Problem Solving	12,259	18%
4	Planning	11,406	17%
5	SQL	9,789	14%
6	Customer Service	9,096	13%
7	Project Management	8,343	12%
8	Troubleshooting	7,372	11%
9	Writing	7,292	11%
10	Java	6,889	10%

Source: Burning Glass custom data (2021)

There were also some worrying signs to come out of the report. Female tech workers are still at 29% of the total workforce, unchanged over three years. With regards to Vocational Education and Training (VET), enrolments in entry-level ICT subjects continued to decline in 2019. Enrolments in Certificate I/II courses fell by 4.3% on the 2018

enrolments, and over 40% from 2015. Enrolments in Diploma or higher courses rose 15.1% from 2018 but are still over 30% under 2015 levels.

Diversity was mentioned 42 times in the report. A diverse workplace is one that has ideas and perspectives from many different angles.

Stereotypes of tech workers include young and nerdy or middle-aged men. Stereotypes are negatives that discourage diversity. 'It's estimated that increasing diversity in the technology workforce will grow Australia's economy by \$8 billion on average ever year.' (Digital Pulse, 2021). Events like the ACS Foundations BiG Day Ins showcase young tech workers with diverse backgrounds along with tech and business leaders.

- The Digital Pulse is free to download (registration required) at <a href="https://www.acs.org.au/insightsandpublications/reports-publications/digital-pulse-2021.html">https://www.acs.org.au/insightsandpublications/reports-publications/digital-pulse-2021.html</a> (<a href="https://bit.ly/3roTIMG">https://bit.ly/3roTIMG</a>)
- To access videos from BiG Day In presenters and tech experts, go to <a href="https://gldictgisp.acs.org.au/events.html">https://gldictgisp.acs.org.au/events.html</a>.



The Hon. Leanne Enoch launching The Digital Professional Workforce Action Plan 2020-2024

The other launch at the Sofitel was by the Hon Leeanne Enoch, Minister for Communities, Housing and Digital Economy. 'The Digital Professional Workforce Action Plan 2020-2024 is part of the \$200 million Future Skills Fund, consisting of an \$8 million investment to boost the number of Queenslanders skilling and re-skilling for an expected upsurge in digital jobs.' (Department of Communities, Housing and Digital Economy, 2021).

The vision of this action plan is for Queensland Government and digital industry to position Queensland as an innovative, digital economy through supply of an additional 10 000 digital professionals by 2024. This will be achieved through investment in skilling, reskilling and attracting a more diverse range of workers into existing and new digital professions.

The four priority areas of investment are:

- 1. Development of Queensland's digital professional workforce
- 2. Increase of the digital workforce pipeline
- Enhancement of regional Queensland's digital professional workforce
- 4. Provision of collaborative and strategic leadership to ensure a workforce of outstanding digital professionals

Key opportunities for schools are considered in the plan, to specifically:

- Improve image of ICT careers
- Improve career and pathway information
- Improve digital education in Queensland schools from P -12
- Create stronger industry engagement and partnerships
- Increase graduate/trainee placements
- Subsidise and incentivise education pathways
  - Revise terminology from ICT to Digital (contemporary and future jobs)
  - ♦ Regional workforce development
  - ♦ Promote ICT as an all-ability career

You can download the Digital Queensland: Digital Professional Workforce Action Plan 2020-2024 (PDF, 1201.08 KB) at <a href="https://www.chde.qld.gov.au/data/assets/file/0024/17529/digital-professional-workforce-plan.pdf">https://bit.ly/36WM96k</a>)

#### **About ACS**

ACS is the professional association for Australia's technology sector. More than 48,000 ACS members work in business, education, government and the community. ACS exists to create the environment and provide the opportunities for members and partners to succeed. ACS strives for technology professionals to be recognised as drivers of innovation in our society, relevant across all sectors, and to promote the formulation of effective policies on technology and related matters. Visit www.acs.org.au for more information.











1. online order on www.littlesun.com.au 2. email order to sales@littlesun.com.au **2** 03 9833 3889

Little Sun International Pty Ltd ABN: 48 147 832 282 NSW Government Schools Vendor No.: 100308009 QLD OneSchool System Supplier No.: \$20003472



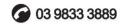








online order on www.littlesun.com.au
 email order to sales@littlesun.com.au



Little Sun International Pty Ltd ABN: 46 147 632 282 NSW Government Schools Vendor No.: 100308009 QLD OneSchool System Supplier No.: \$20003472

# Quick Journal history: 40 years ago

By Sandra Amoore (Qsite Treasurer/Secretary)

Did you know that QSITE was once called the Computer Education Group of Queensland? The first edition of the Quick journal was published on the 1<sup>st</sup> January 1980.

The State Library of Queensland has acquired editions from the establishment of Quick. If you have previous copies QSITE would indeed love to preserve them for future information technology teachers.

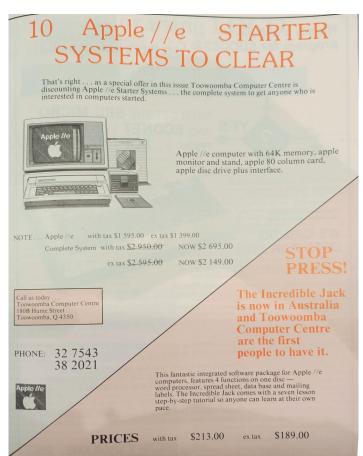
Physical and software technology has changed dramatically. These changes began with significant milestones.

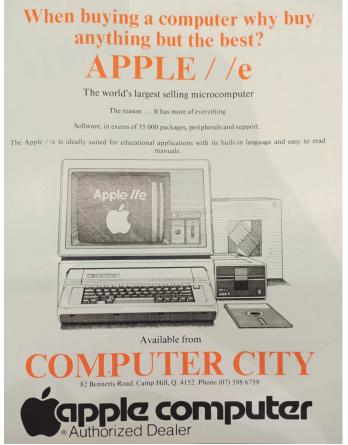
Internet: In the 1960 the United States
Department of Defense began working on
networks. By the end of 1990, Berners-Lee had
built all the tools necessary for a working Web:
HyperText Transfer Protocol (HTTP) and the

WorldWideWeb, the first web browser. By 1995 the Internet was able to carry commercial traffic. **Personal computer**: In 1977 the first mass marketed computers arrived: the Commodore PET, the Apple II and the TRS-80 from Tandy Corporation.

**Software**: An outline (algorithm), the first piece of software was written by Ada Lovelace in the 19th century. She is credited as being the first computer programmer. The first theory about software was proposed by Alan Turing in 1935.

As the Commodore, Apple II and TRS-80 began to be purchased by schools teachers were indeed lucky for the arrival of one in their classrooms in the 1980s. No networking or Internet so the future was a blank canvas. A brave new world arrived: no curriculum, no mentors and no knowledge.





The principal of Hatton Vale State School, John Selwood, perceived Computer Literacy as two areas. Computer awareness (Table 1) and Computer programming (Table 2) refer tables below. (Computer literacy: a suggested model for the primary school, vol 3 no 3 Apr 1983, pages 6 & 7).

Topics	Ye	Years						
	1	2	3	4	5	6	7	
What a computer is								
Following directions	_							
Vocabulary	-						_	
What a computer can do		-					_	
Learning to use a computer		_					-	
Using a keyboard		_						
Computer advantages			_				-	
Computer disadvantages			_				_	
Computers in our lives			-					
Everyday applications			-					
Future			_					
History				-				
Logic				-				
How a computer works				_				
Parts of a computer				_				
Hardware					_			
Software					-			
Flowcharting					_			
Storyboarding					_			
Formulae (variables, constants)						_		
Relations						_		
Binary numbers						_		
Computer generations								

In the computer awareness strand Selwood declared that the idea that the computer is a device for playing games is to be overcome. He acknowledges that many teachers would not agree to introducing programming in the primary years because children do not have a level of abstract thinking to develop programs in a sequential manner.

Table2: I	PROGRAMMING							
Topics			Years					
		3	4	5	6	7		
BASIC:	PRINT							
	Variables/Constant	_						
	Value assignment	-						
	INPUT; REM		_					
	GOTO							
	Formulae *Maths functions)			_				
	STRING; DATA				_			
	Relations				_			
	IF/THEN				_			
	ON/GOTO				-			
	LOOPING				_			
	FOR/NEXT				_			
	READ/DATA					_		
	RANDOM Nos					-		
	Problem Solving					-		
	Functions					-		

Darren Dorn of the Redcliffe High School shows school-mates, Deborah (left) and Mark Wharton, how to start action with a computer, with a little help from George Kocur of Tandy Electronics at the Tandy Educational Laboratory at the Computer Fair at Griffith University for Information Technology Week.



Is investing in the purchase of a computer worthwhile? Michael Gallagher of Hesket Primary School in Victoria (*Investigating the purchase of a computer*, no. 11 Sept/Oct 1983, pages 19 & 20) was excited by the educational opportunities for the use of this new tool. His advice for choosing the best computer for your needs:

- Choose programs which enable the children to learn by experimenting. Avoid programs that teach by telling. Books do that. Don't waste your computer by using it as an automatic page turner.
- Choose programs which allow children to learn skills in realistic contexts. Avoid programs that teach out of context. Many maths drill programs present number facts in isolation. Mathematics is an extension of our language. It enables us to mentally manipulate quantifiable aspects of our world. The mathematical tasks we set for children should always be set in contexts that relate to the world about us.
- Choose programs which develop problem solving ability requiring the use of reading, writing and computation skills. Avoid programs that promote reflex button pushing skills.
- THE EXPANDABLE APPLE

  TOOWOOMBA COMPUTER CENTRE

  1808 HUME ST, TOOWOOMBA 4350. Ph: (076) 32-7542

  The Personal Computer Specialists have a range of RPPLE Peripherals and educational software to expand the capabilities of your new computer.

  DIGITEK PRINTMASTER, RS-232, 16K RRM, PAL COLOUR CARD, VISION-80 Column Card, RPPLE FANS and much more.

  We also have VERBATIM single sided, double density disks for \$45.00 per box (ex tax).

  TOOWOOMBA COMPUTER CENTRE is an Authorised Dealer for:

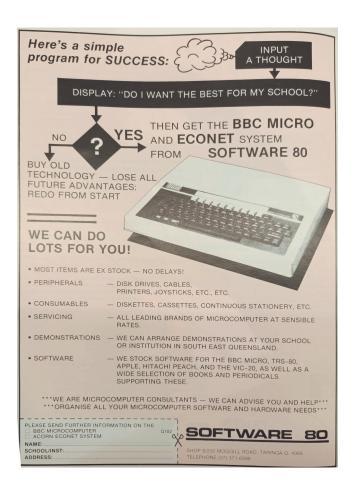
  RPPLE BBC-MICROCOMPUTER OSBORNE HITACHI SIRIUS

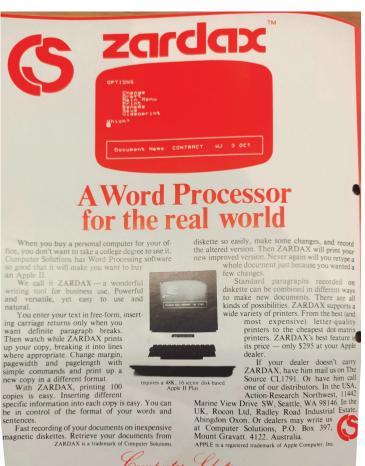
  ITOH EPSON NEC-SPINWRITER SEIHOSHA Printers

- Choose programs which permit a rich variety of user inputs. Avoid programs that accept only a single fixed word or numeral.
- Choose programs which allow children to learn from their errors. Avoid programs that cause children to fear making errors.
- Choose activities that allow the children to program the computer. Avoid activities where the computer controls the child.

I finish this article with the final words from Michael Gallagher's article from 1983, page 20.

In the future, present machines and programs are likely to be considered primitive initial attempts. Most of the development of these machines is yet to come. Nevertheless, we are at a gateway of an exciting new field of human endeavour. Computers are revolutionising our ability to access and manipulate information. I am excited by the fact that I live at this moment in human history. I feel privileged that I am able to introduce school children to computers as mind-expanding tools. I hope you too can share a similar experience.





ice, you don't want to take a college degree to use it.
Computer Solutions has Word Processing software o good that it will make you want to buy

an Apple II.

We call it ZARDAX — a wonderful writing tool for business use. Powerful and versatile, yet easy to use and natural.

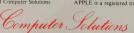
and versatile, yet easy to use and antural.

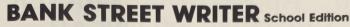
You enter your text in free-form, inserting carriage returns only when you want definite paragraph breaks. Then watch while ZARDAX prints up your copy, breaking it into lines where appropriate. Change margin, pagewidth and pagelength with simple commands and print up a new copy in a different format.

With ZARDAX, printing 100 copies is easy. Inserting different specific information into each copy is easy. You can be in control of the format of your words and sentences.

sentences

Fast recording of your documents on inexpensive magnetic diskettes. Retrieve your documents from ZARDAX is a trademark of Computer Solutions





The first word processing program for students is a powerful writing and language arts tool for grade 4-12. ASHTON SCHOLASTIC

Fully tested with young writers at Bank Street College of Education, the Bank Street Writer<sup>Th</sup> arrives ready to go to work turning repetitious chores into successful writing, spelling, grammar, and punctuation activities for students.

The software component is remarkably straight forward and easy to use. It includes an interactive tutorial, designed specially for school use, that shows both students and teachers exactly how the program works, step by step.

Directions, free of technical jargon, appear on the screen at each stage of the writing and editing process.

the writing and editing process.

The documentation includes totally non-technical directions written specifically for students (and teachers!) who may never before have used a computer, and both composition and language skills activities for teachers to use in the classroom.

Components
The Bank Street Writer School Package consists of three program disks (each with the interactive tutoral on the reverse side), and a looseleaf binder including a Student Guide, the Teacher's Reference Guide, and a section containing sample student activities.

#### Hardware requirements:

Apple version requires a 48K Apple II with Applesoft in ROM or language card, or an Apple II Plus, or an Apple //e.

Altan 400/800/ JOOAL cession requires only one disk drive. No 80 column board necessary for Apple version, Apple version can be run on any printer; Alar version on Atari printers and other printers using a parallel interface. Upper/lower case without hardware modification.

SCS94180 Apple® version SCS93886 Atari® version

Commodore 64 version will be available early '84.

User's Manual available only with Ashton Scholastic's School Edition

Ashton Scholastic, 5th Floor, Teachers Building, 495 Boundary Street, Spring Hill, Qld. 4000. Tel: (07) 221 8555



upply all peripherals, e.g. printers ("STAR", EPSON FX80, RX80, MX100 etc. interfaces & cables, paper, diskettes, and carry out all kinds of service to computer equipment. Monitors B/W from \$139.00. Green screens at \$199

#### **SOFTWARE 80 COMPUTERS**

2 8/200 MOGGILL ROAD, TARINGA Q. 4068HN OF LIZRARY PHONE (07) 371 6996

P.O. BOX 69, SPRING HILL Q. 4000 AUSTRALIA



# **How associations started - QSITE**

CEGQ is the acronym for the Computer Education Group of Queensland; a professional association "formed to foster interest in computer education among teachers and the general community, [and to provide] a forum for debate and discussion for those who have a commitment to computers and computing in schools" (Guttormsen, 1986b, p. i).

CEGQ was formed in 1981 with its inaugural meeting (with 107 attending) being held on May 12, 1981 at the Mt Gravatt CAE. The chairman of the steering committee was Gary Gibson (later to be the Foundation President) and it began formally in July 1981.

There had been an active informal group operating prior to this who had begun publication of QUICK (Queensland Users Interested in Computing for Kids) which became the CEGQ journal.

The first editor was Mick Shaw, then a lecturer at Mt Gravatt CAE and the technical editor was Geoff Gredden (Research Branch, Department of Education). The first state computer education professional association in Australia was the Computer Education Group of Victoria (CEGV) formed in 1979. CEGV held its inaugural conference at Latrobe University in 1979 attracting 300 delegates (four from Queensland). The first annual national Computer Education Conference was hosted by the CEGV in May 1983 at Latrobe University. Subsequent national conferences were held at Macquarie University (1984, hosted by NSW CEG) and University of Queensland (1985, hosted by CEGQ).

From state associations, the next "evolutionary step" was the formation of a national professional body (T. Adams, 1986). The Australian Council for Computers in Education

(ACCE) was officially formed at a meeting of CEG state presidents in November 1985 to provide a joint forum for the emergent state bodies. It was decided that the national body would

- a) prepare ac onstitution,
- b) establish a secretariat,
- c) adopt the name, Australian Council for Computers in Education (ACCE); and,
- d) publish a national journal under an editorial board.

The first journal of the ACCE, entitled Australian Educational Computing appeared in July 1986.

The ACCE is in turn affiliated with the International Society for Information Technology in Education (ISTE). The ACCE took over the convening of annual national conferences and continued the tradition of state groups acting as hosts of the event.

CEGQ established special interest groups (SIGs) which operated through the mid- to late-1980s. The groups (run semi-autonomously by voluntary convenors) were concerned with:

- (a)curriculum implementation, particularly of the then new senior secondary computer subjects (namely, the Practical Computer Methods (PCM) SIG and the Information Processing and Technology (IPT) SIG;
- (b)particular computer hardware (for example, the BBC SIG);
- (c)particular computer software applications (for example, the SQL SIG); and,
- (d)(d) support for teachers in particular locations (for example, Gold Coast SIG and Ipswich SIG).

Special Interest Groups met emergent demands and changed their focus as time went on. The

Simulations SIG, for instance, disbanded in early 1988 "as it was felt that the original intentions of the group had been met and this, combined with falling attendances, meant that it would have been fruitless to continue ("Special interest group," 1988, p. 2).

A distinguishing feature of CEGQ was its chapter structure which acknowledged (and attempted to redress) the geographic and demographic composition of Queensland. Chapters were initially established in Toowoomba, Mt. Isa and Townsville during 1988-89. Chapters emerged and waned in the same vein of challenge and response identified through the Special Interest Groups (SIGs).

One of the most important roles adopted by CEGQ is the advocacy of computer education. One example of this is seen in the letter sent by the association to the Minister for Education (dated September 4, 1987) which expressed concern at proposed cuts to education funding. The letter argued that:

Perhaps the issues are children and the future. ... children who are relying on an education which will carry them into the twenty-first century with confidence to cope with change, and an employment future which will require the ability

to cope with information technology. The state of Queensland will thank those in society who are visionary enough to realise the potential of computers in education and provide children of this state with the ability to compete on the international job market. The public sees educational computing as necessary, not just a frill, or a fringe benefit.

("Letter to the Minister," 1987, pp. 8-9)

CEGQ became QSITE (Queensland for the Society of Information Technology in Education) in 1992.

A number of informants to this study acknowledged the support of CEGQ/QSITE in giving them professional and technical support. They noted the effect of the conferences, professional development activities and public forums (online communities) provided by the organisation. Particular note was made of its annual award (since 1989) of a Computer Educator of the Year which acknowledges expertise and innovation in computer use in the classroom. Its advocacy of computing in schools and representation in syllabus decision-making was also acknowledged.













Forty Years of proudly supporting Queensland teachers in effectively using Digital Technologies in Education.

CEGQ (the Computer Education Group of Queensland) 1981 - 1991

QSITE (the Queensland Society for Information Technology in Education) 1992 - present



## **Building bridges to the future of learning with Cisco**

Renee Patton, Global Director of Education, Cisco Systems, Co-authored with Olivia Langborn, Education Industry Specialist, Cisco Systems - ANZ

It's hard to believe that 18 months ago, a major global pandemic turned our world upside down and resulted in unimaginable consequences.

Overnight, we had to re-think learning, work, and healthcare. In education, students were moved online; teachers were forced to find new ways to deliver learning, and people had to consider careers of the future. Now, a year-and-a-half later, education is at another critical turning point as we look toward the future of learning.

Student and teacher expectations, the fear of security breaches, and uncertainty about the future are creating the realisation that technology can be used in new and different ways to deliver learning. This realisation is accelerating the digital transformation of education, unlike anything we've seen in the past.



Technology is being used to support new learning models, and the possibilities seem endless. Cisco has been at the heart of education and supporting the digital transformation of education since the founding of our company on the Stanford University campus in 1984. Today, we continue to work closely with educators as they imagine the possible and build bridges to the future.

# With rapid transformation comes challenge

The digital divide continues to grow between those who have access to devices, connectivity, and digital literacy – and those who do not. Add to that, the pandemic has exacerbated a longstanding global mental health crisis among students, and teachers are struggling with burnout. This crisis is driving the need to develop new ways of experiential, engaging learning.

And, unfortunately, schools are some of the best targets for cyber attacks. According to the Australian Cyber Security Centre and for the period from July 2019 to June 2020, "Malicious cyber activity against Australia's national and economic interests is increasing in frequency, scale, and sophistication" with ransomware becoming one of the most significant threats<sup>1</sup>. Furthermore, the Office of the Australian Information Commissioner (OAIC), in its bi-annual report on privacy breaches, listed the education sector as third on the list of notifications of privacy breaches, after health and financial services<sup>2</sup>. Unfortunately, this was demonstrated in the recent attack on the NSW Department of Education in which contact information may have been compromised<sup>3</sup>.

So, how can your educational organisation prioritise investments in and prepare for the future of learning?

# No matter what goals you are trying to achieve, Cisco can help build the bridge to get you there.

Now more than ever, we believe that technology can be used to provide an opportunity for all, make a meaningful impact, and bring about a future that is better and brighter than today.

Our commitment to education goes beyond our

leading products and services. To date, Cisco has positively impacted more than 527 million people through social impact grants and signature programs. In the last year, we donated 53 million dollars in cash and personal protective equipment to nonprofit organisations and first responders during COVID-19.

For 23 years, <u>Cisco Networking Academy</u> has provided a bridge to career opportunities to more than 12.6 million people in 180 countries. And, we recently announced our new <u>Skills for All</u> program, delivering free IT education to empower all people to pursue careers of the future. Across Australia we have over 23,000 students enrolled in the Cisco Networking Academy program and since its inception, 94% of students who have completed a CCNA or higher have obtained a job or education opportunity.

With technology changing the way we work, live, play and learn, there is no better time than now to connect with your peers, locally and around the region, to share, learn and collaborate in this digital era. Powered by Cisco Webex, The Digital Schools Network is a thriving, peer-to-peer digital network, where schools can connect, collaborate and share – anchored by University Partners to help support teachers. Register your school to access virtual excursions, communities of interest, professional development, sharing practice, expert tutorials and virtual classes



As we look towards the future, I am also pleased to reinforce Cisco's commitment to education with a few announcements.

# Simplifying learning with Webex Education Connector and Webex Classrooms

Now Cisco is pleased to <u>announce</u> the next wave of hybrid learning with an end-to-end secure collaboration platform for hybrid learning and services. This platform is based on our award-winning Webex product line and includes our latest web-based interactive solution, <u>Webex Classrooms</u>.

Webex Classrooms allows educators and students to manage learning with a dedicated place to attend classes, view previously recorded lectures, and access course material. This solution brings greater flexibility and mobility to enrich the learning experience for teachers and students.

With Webex Classrooms, teachers can safely and securely teach from home, manage classrooms, schedule courses, and host and monitor classes. Students can join classes with easy-to-find links, view recordings, and schedule video meetings with instructors and classmates. They can also access a personalised calendar of upcoming classes, meet one-on-one with the entire class or in small breakout rooms, and stay organised from within Webex Classrooms.

For schools or universities already using a Learning Management System (LMS), the Webex Education Connector allows for the integration between Webex and Schoology, Canvas, Moodle, Blackboard, Sakai, and D2L. This integration simplifies the classroom experience by making sure everything teachers and students need to schedule and record courses and to access course materials and recordings resides within the LMS.



Finally, our complete set of Webex Devices, including <u>Webex Board</u> and <u>Webex Room Kit Pros</u>, complements our integrated platform, merging the virtual and physical, and allowing teachers and students to connect and collaborate from wherever they might be.



#### Recognising our everyday education heroes

I would like to take this opportunity to recognise our frontline teachers and administrators for helping us to get through an incredibly challenging year-and-a-half. You are our <a href="heroes">heroes</a>, and we applaud your unwavering efforts in keeping students engaged and learning. Thank you for helping us to build a bridge to the future of learning.

If you'd like to learn more about Cisco education solutions or programs, please contact:

#### **Olivia Langborn**

email: <a href="mailto:oedholml@cisco.com">oedholml@cisco.com</a>
Phone: 0438 151 155

#### Reference:

https://www.cyber.gov.au/sites/default/ files/2020-09/ACSC-Annual-Cyber-Threat-Report-2019-20.pdf

https://www.oaic.gov.au/assets/privacy/ notifiable-data-breaches-scheme/ statistics/2020-2/Notifiable-Data-Breaches -Report-July-Dec-2020.pdf

https://www.itnews.com.au/news/nsweducation-says-cyber-attack-may-havecompromised-contact-data-568046

## Links to the future of learning with Cisco

Cisco has an online community of interest for educators called the Digital Schools Network (DSN) (see attached PDF file) which is a free membership and peer-to-peer network where schools can communicate, connect and share knowledge with other schools in Australia, the Asia Pacific region or even globally.

Here below are some links about Cisco's programs, events and initiatives for education that will also be shared within our community for K-12 schools, the <u>Digital Schools Network</u>:

Through the Digital Schools Network, Beechworth Secondary College teachers connect with other teachers and schools in Australia and Asia Pacific: <a href="https://www.youtube.com/watch?">https://www.youtube.com/watch?</a> v=wCXtFGkFYh0&t=1s

Cisco's Networking Academy (free courses in cybersecurity, IoT, programming etc, over 20,000 students enrolled): https://www.cisco.com/c/m/en\_sg/partners/cisco-networking-academy/index.html

Women Rock IT (Community to inspire more females to ICT/STEM as a future career): <a href="https://www.cisco.com/c/m/en-sg/partners/women-rock-it.html">https://www.cisco.com/c/m/en-sg/partners/women-rock-it.html</a>

Future Voices (hear from educators and students who are teaching and learning with technology): <a href="https://www.voutube.com/watch?v=GDqIS7fGFME">https://www.cisco.com/c/en</a> uk/solutions/online-distance-learning/future-voices.htmlhttps://www.youtube.com/watch?v=vHFO9nEa2A4

Cisco Connected Educator (for teachers, Cisco partner together with CILC): <a href="https://www.cilc.org/">https://www.cilc.org/</a>
<a href="https://www.cilc.org/">Professional-Learning-Network/Badges.aspx</a>

Cisco Connected Country (connecting regional and remote students and teachers): <a href="https://www.youtube.com/watch?v=H">https://www.youtube.com/watch?v=H</a> Im2ZCueeE and <a href="https://www.youtube.com/watch?v=4kdHTaiFPhQ">https://www.youtube.com/watch?v=4kdHTaiFPhQ</a>











# Cyber security: It's time for a check-up

written by Nicola O'Brien, for Grok Academy

Ensuring our online accounts and personal information are secure at all times is just as important as keeping the front doors of our homes locked.

Students and teachers around Australia are spending more time than ever online, particularly as remote learning returns in some States. In the rush to get set up on Zoom, Teams, Seesaw and all the other resources that have helped make remote learning possible, privacy and security may not have been front of mind.

Before heading back to school, we'd suggest students and teachers alike give their digital lives a hygiene check. We've come up with some simple things you can do to keep yourself secure.



# 1. Use long passwords that are easy to remember, but hard to guess.

Long passwords are one of the best ways to secure your accounts. Instead of using easy to guess text combinations like "abc123" or "qwerty123", opt

for a passphrase made up of unrelated letters/ words, numbers and characters: examples include 'AngryKoalaKitchen' or 'YellowGumbootTelevision'. Remember that it's also not advisable to integrate familiar details like a pet's name, birthdate or favourite TV shows and hobbies. In this era of social media sharing and networking, getting too personal in formulating your passwords may give them away too easily.

#### 2. One password to rule them all — not!

Never reuse a password, no matter how convenient it seems. The things you store online that matter to you, from memories to money, deserve maximum protection. A single password for several accounts means that a breach on one site exposes all of your accounts with the same password. Think about it — do you think your local pizza shop takes security as seriously as your bank? Having the same password on both sites means your security is only as good as the weakest link.

Breaking the habit of reuse applies to password updates too — each time an app or website asks you to set a new password, resist the temptation to just cycle through the same core password: changing **GoCats1** to **GoCats2** isn't good practice.

And while the practice of teachers setting the password for all of their students (especially in the primary years) to **123** is widespread to avoid the thirty-minute sign in session for the year 1 students, it opens up a can of worms in terms of student privacy and online security.

#### 3. Use two-factor authentication.

Though passwords are our first line of defence against online criminals, two-factor authentication (2FA) adds an extra layer of protection. Verifying your identity by providing a password and then a single-use code delivered by SMS to your phone or via an authenticator app covers two of the three ways you can verify who you are: by providing something you know (a password) and something you have (a phone.) This extra verification makes you a much harder target to crack for hackers! Increasingly, two-factor authentication is included in software we use in multiple locations — such as our apple ID and google credentials.

# 4. Check privacy settings regularly and keep software up to date.

Hacking tools and malicious software evolve just as quickly as the updates and patches that keep us protected, so our digital lives need regular housekeeping. Install the latest updates for operating systems, applications and antivirus or anti-malware software.

Protect your privacy and strengthen your device's or web browser's defense system by turning off location tracking, camera access, microphone access and even access to your phone and email contacts.

On social media, ensure that most, if not all content is not set to public and can only be viewed by the family, friends and colleagues you know personally.

#### 5. Use a password manager

Having a password manager is a good option as you only need to remember one master password to access your securely stored passwords. A password manager also has the option to generate long secure passwords for every different account that you use. There are a few password managers to choose from: for apple users, iCloud Keychain is part of the operating system. Apps like 1Password or LastPass are other widely used password managers.

# 6. Update your cyber know-how through online resources.

Grok Academy developed the <u>Schools Cyber</u>
<u>Security Challenges</u> with industry partners to help empower high school students across Australia with future-proof skills, career opportunities, and well-informed perspectives on cybersecurity. This series of courses integrates programming and cybersecurity concepts with a series of ethical hacking activities. Vibrant video features on the working life of cybersecurity professionals are included in the courses.

For more educational resources and the latest news on cybersecurity and cyber safety in Australia, take a look at the <u>Australian Cyber</u> <u>Security Centre</u>, <u>AustCyber</u> (Australian Cyber Security Growth Network) and the <u>eSafety</u> <u>Commissioner</u>.

For more information on teaching cybersecurity and digital technologies, visit Grok Academy aca.edu.au/cyber.

## **CreativITy 2021 Gold Coast One Day Conference**

We decided to name the conference after the highly successful CreativITy 2019 QSITE State Conference, continuing the atmosphere created back then of 'collegialITy' and sharing. It turned out to be a great idea as many participants commented to us that they had been there and shared their own 'remember when' moments throughout our 2021 conference. They came from far and wide, even one intrepid traveller from Townsville joining us for the day.

CreativITy 2021 aimed to provide stimulating ideas, resources and discussion for all participants from Early Years to Digital Solutions teachers. The descriptions of our presentations are ordered from Primary through Secondary years.





Participants could select to engage in a hands-on programming workshop with presenters Ronelle Allen from Coombabah State School and Michele Neuhaus from Burleigh Heads State School. During this workshop the presenters shared their knowledge of Spheros, Scratch Jr and Scratch as well as adding the extension Makey Makey to showcase how these programming tools can be used to create a range of projects linked to a variety of Australian Curriculum learning areas.







#### **Robotics**

Participants could also choose to attend a handson robotics workshop presented by Jacqui Kidney from Mudgeeraba Creek State School. Jacqui shared her knowledge and experience with robotics and how they may be used in all learning areas of the Australian Curriculum. Participants could explore and use BlueBots, LEGO WeDo Kits, Spike as well as Dash and Dot. Jacqui shared just how easy it can be to use different types of robots and robotic kits in the classroom.



#### Microcontrollers

Offering different workshops enabled participants to move between workshops and gain experience in a range of different digital technologies. Aimed at middle school teachers (Years 7 to 9), Liz Polentas from All Saints Anglican School offered an informative series of workshops regarding the Arduino. Liz began with an introductory session which was then followed on with two individual hands-on sessions. These sessions explored how Arduino can be used in Project Based Learning, ideas and activities that could be used to create a program and cross-subject integration with microcontrollers. Participants were able to choose to continue with this strand to deepen their skills and knowledge or choose from the other sessions being offered.







Artificial Intelligence and Machine Learning
Jason Vearing from DRNME brought ideas and
understanding about Artificial Intelligence to
teachers of students as young as Year 3 over two
sessions.

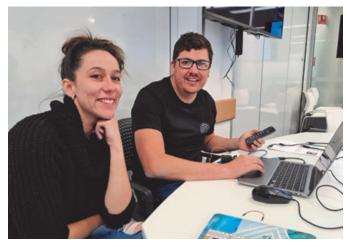
Al for Years 3 – 6 – Cow or Bird Artificial Intelligence (AI) and Machine Learning (ML) is everywhere! From spam blockers, to chatbots, facial recognition, autonomous vehicles and many other applications, AI and ML are set to disrupt and change the way we do things. Participants gained practical understanding of how these technologies work by making an image classifier in Scratch using the very friendly Machine Learning for Kids platform.

Al for Years 7 - 10

Diving a little bit deeper (but not too much!) this workshop looked under the hood of an image classifier to understand how Machine Learning works. Participants used Google's Teachable Machine to keep the concepts simple and understandable even for those with no prior Machine Learning experience.

Steve Tucker from Varsity College followed up with his API Workshop, focusing on IA3. Digital Solutions teachers explored approaches to addressing Unit 4 IA3 assessment through Application Programming Interface (API) development. Steve shared ideas and resources that he has developed to meet curriculum and assessment standards at Varsity College.









Capture the Flag Competition has been run by Steve between schools for the past few years. Teachers are able to use Capture the Flag as a context to teach students to control autonomous bots using the Python coding environment. Sponsors including IBM, Griffith University and QSITE Gold Coast offer their support to teachers in training students for real-life technologies roles of the future.

Steve's session walked teachers through setting up GF Capture the Flag, the rules, the software and how to teach State Machines in a structured way to make the coding easier for students. The Capture the Flag Competition will be held at Griffith University on Friday 5th November. It will simultaneously be a face to face and online event showcasing the finalists from all around Australia. The Digital Technologies Curriculum Changes session explored the proposed changes to the Digital Technologies curriculum and implications for teaching. Firstly participants, guided by Jason Zagami, shared their current teaching of Digital Technologies.



Kim Vernon from ACARA presented an overview of the proposed changes via videoconference. Then teachers discussed the potential impact of these changes in their small groups. They brainstormed possible changes and feedback to ACARA, followed by a lively whole group sharing and discussion.





The 2-hour **Digital Solutions External Assessment Unpacking Workshop** presented by Richard Kelly from Toowoomba State High school took participants through the 2020 Digital Solutions external exam, unpacking each question, answer and marking guide. The goal was to develop ideas for teaching the content and for giving students strategies to attack the questions and maximise their marks on the upcoming 2021 exam. Strand was a big draw card for CreativITy 2021, with DS teachers eager to connect and gain support for their teaching and assessment.



Our heartfelt thanks go out to our **sponsors** Micromelon Robotics and Kitsunei for their support of the CreativITy 2021 one day conference. Attendees had the opportunity to engage with both sponsors who each provided a brief demonstration of their company and their products whilst enjoying a well-deserved networking lunch break.







At our **QSITE Stand** we focused on promoting the benefits of QSITE and our upcoming State Conference, Let IT Bloom. Richard followed this up with participants before our prize draws and the conference close. After this year's success on the Gold Coast we are considering doing it all again next year, after a well-earned rest of course!



### **SUNSHINE COAST**

Another Dig Tech Skills Expo was held at Mountain Creek State High School recently on Saturday June 26. A total of 25 workshops (<a href="https://www.ivvy.com.au/event/K9LF9Z/sessions.html">https://www.ivvy.com.au/event/K9LF9Z/sessions.html</a>) were offered on the day with attendees coming from across the south-east corner of Queensland. The remote area subsidy provided also assisted teachers to attend from further afield, including Moranbah, with the feedback being very positive about access to Dig Tech PD that may not normally be available. Although challenging offering/attending face-to-face events during the Covid times, social distancing in workshops and keeping workshop sizes smaller than usual allowed the event to proceed.

With a mixture of primary-focused and secondary-focused workshops offered, and with a mixture of skills development combined with considerations when implementing in classrooms, the workshops continued to follow the trend of discussions developing organically and creation/reinforcement of networks of like-minded teachers being arguably the most important outcome.

A particular bonus was the involvement of Catherine Newington from the Australian Computer Society who was able to escape the Melbourne lockdown and make it up to run her workshops. So much better than doing virtual!

### **TOWNSVILLE CHAPTER**

The Digital Solutions Group met on Saturday 22nd March. David Beitey (Online Technologies Manager, eResearch Centre, James Cook University) presented material developed as part of an industry/educator partnership formed in the ICT Gateway to Industry Schools Program (GISP) initiative (the content and examples that he went thorough can be found at <a href="https://github.com/davidjb/gisp-data-api">https://github.com/davidjb/gisp-data-api</a>). Members of the group found his presentation both interesting and useful, generating plenty of questions and discussion.

People agreed that the next meeting should be between weeks 4 and 6 next term. The focus should be reviewing/moderating IA2 submissions and discussing the requirements and response format for IA3. It was suggested that perhaps a scaffold/template for students to use to assist with their response for IA3 could be developed.





The Queensland Society for Information Technology in Education Inc. (QSITE) connects and supports educators, institutions and their stakeholders so they may fully explore the opportunities *Digital Technologies, Digital Literacy and Digital Pedagogies*, bring to Queensland education and its classrooms every day.



### **QSITE** support for all educators

educators of today, creating tomorrow

QSITE is a state-wide organisation with: active regional chapters incorporating educators from State, Independent and Catholic schools, at early, middle and senior learning phases.

Many QSITE members work within educational governing bodies and service wider educational communities.

Access to online conversations amongst the QSITE network reveal education's true Digital Technologies integration needs, and support education through constant collaboration.

Join the network that explores every opportunity Digital Technologies bring to the education profession ...... to you, your students, your colleagues and your school

#### **QSITE Events**

QSITE members are offered substantial discounts to networking events and workshops, with "free for members" events scheduled throughout the year. The annual QSITE state conference is a key event on the educational calendar drawing international presenters and delegates from all over Queensland.

#### **Professional Advocacy**

With a commitment to lead ICT education and ICT integration in Queensland, QSITE uses its JCQTA (Joint Council Queensland Teachers' Associations) and QCAA (Queensland Curriculum and Assessment Authority) connections to prepare policy submissions and advocate on behalf of QSITE members to progress the meaningful use of ICTs for all sectors of Queensland education.

# National and International Professional Affiliations

QSITE membership affords you discounted International Society for Technology in Education (ISTE) membership and automatic affiliation with the Australian Council for Computers in Education (ACCE) Associate status.

#### **Member Recognition Programs**

- Peer recognition in the QSITE Annual Teacher and Leadership Awards,
- Invitations to publicly showcase your ICT integration innovations through 'QSITE Tinkering with Technology' sessions in your local area, or
- Become a mentor, profile your achievements online, or submit an article in a QSITE publication.

Become a QSITE member today and put the QSITE network and learning Communities to work ... for you, your students, your colleagues and your school.



Become a QSITE member today and put the QSITE network and learning communities to work ...for you, your students, your colleagues and your school.



### Join QSITE

The Queensland Society for Information Technology in Education (QSITE) connects and supports educators, institutions and their stakeholders so they may fully explore the opportunities Digital Technologies bring to Queensland education and its classrooms every day.

Through state-wide learning communities and professional networks, QSITE members:

Engage..... students and educators in life-long learning

Share..... IT challenges, achievements and experiences

Connect..... with colleagues for collaboration and learning

Lead...... IT education and IT integration in Queensland

The membership types are: <a href="https://qsite.edu.au/membership/membership-types/">https://qsite.edu.au/membership/membership-types/</a>

accurate as at 10th June 2021



Contact: office@qsite.edu.au Website: www.qsite.edu.au

Queensland Society for Information Technology in Education Inc. P O Box 8, Red Hill, Qld 4059 ABN: 79302323186

### **About QSITE**

Through state-wide learning communities and professional networks, QSITE members:

Engage ..... students and educators in life-long learning

Share......ICTchallenges, achievements and experiences

Connect..... with colleagues for collaboration and learning

Lead .....ICT education and ICT integration in Queensland

QSITE: educators of today, creating tomorrow!

#### **QSITE Management Committee**

President Norena Mendiolea Vice President Karsten Schulz Secretary Sandra Amoore Treasurer Sandra Amoore

Board Members Sue Isbell
Board Members Sharon Singh
Board Members Tracey Sleeman
Board Members Graeme Breen
Board Members Elke Schneider
Board Members Michele Relton

#### **QSITE Chapter Chairs**

Far North Mark Holland
Townsville Jay Burmeister
Rockhampton Heath Henwood

Sunshine Coast Contact – Graeme Breen

Gold Coast Jason Zagami Toowoomba Richard Kelly

QSITE Executive Officer Lyn Allsop

Queensland Society for Information Technology in Education

ABN 70 302 323 186

Post Office Box 8 Red Hill Qld 4059 Phone: 1800 4QSITE (1800 477 483)

E-mail: office@qsite.edu.au Web site: www.qsite.edu.au

# Let IT Bloom 2021

Toowoomba

20 - 21 Sept



