Collaborative Problem Solving via Challenge Based Learning

At Curtin University, the Square Kilometer Array project, which is building the world’s largest telescope, has given rise to the development of a supercomputer capable of analyzing a torrent of astronomical data. This in turn, has attracted computational scientists from all over the world to assemble, collaborate and develop capacities for other benefits of the high-performance computing platform. The UNESCO Chair of Data Science in Higher Education Learning and Teaching at Curtin University exists to leverage this context to improve access to and effectiveness of higher education worldwide. One of the chair’s activities is to improve university engagement with K12 schools.

In this context the Learning Futures team at Curtin University has developed a number of ICT-enabled learning opportunities, including a new ICT platform that facilitates collaborative problem solving via challenge-based learning. This talk will outline its features by describing challenge-based learning as a serious game, the design and analytics foundations of assessment in a new model of ‘Personal Learning + Collaboration + Problem Solving’ framework, and will invite K12 schools to join the university in exploring technology-enhanced challenge-based learning approaches.
In this session we will discuss a simple but effective strategic planning process to help you align ICT investment to Business and Learning objectives. An effective strategy will help you reduce wasteful spending, improve staff, student and community engagement and deliver a significantly better return on your ICT investment.

Kieran Bailey

Having worked in Education for the past 12 years, Kieran started out providing IT and technical support to teachers and support staff while transitioning to classroom teaching. Kieran now provides IT leadership and directs IT strategy at Great Southern Grammar, a K-12 Independent School in Albany, Western Australia.

As one of 50 Microsoft Minecraft Global Mentors, Kieran can see the benefit in using technology to support children as they grow and develop in a constantly changing world, and is passionate about exploring ideas of the changing workforce, what our children should expect, and ways we can help them prepare for the ‘unknown’.

SharePoint, Identity, and SSO. Creating a great user experience.

The Great Southern Grammar IT team will present on their experience and successes (as well as what they've learnt), from implementing a full Identity Management system, SharePoint portal and integrated ADFS/SAML platform to deliver online communication to the school community. If you're starting on the journey down the Identity path, or want to learn about ways you can maximise or enhance your current online offerings, come and see one example of a system that is making use of the Microsoft tools available to schools.

Professor David Gibson

See Page 1 for Professor Gibson's Full Bio.

Online Collaborative Learning and the Work of Learning Futures-AHEAD-UniReady-Analytics

Watch this space – information will be updated as it becomes available.
Kevin Karp

Kevin Karp has been involved with Studentnet since 1996. He has grown Studentnet into being the premier identity management for Australian schools, using totally locally developed technology and innovation to solve Australian issues.

Identity Management: Protecting the student’s identity in an online education environment

Online services are very valuable and powerful tools for schools to use but they have a habit of interfering in the relationship between the schools and its community.

This happens several ways:
1. The online service forces a new login event
2. The login page is branded with the service not the school
3. The service has control of the login credentials (name, password etc) instead of the school
4. The online service needs to be told the membership of classes, houses, teams etc.

In this presentation we explore these issues and present ways for schools to take back control of their communities.

Jenny Jongste

Compelling Leaders to Adopt Office 365

Creating a need for change is always a difficult task in a school. Come along and explore some processes for how to create a school wide adoption approach and some ideas about simple accountability processes that will work in primary or secondary contexts.

To Be Confirmed

Watch this space - Information will be updated as it becomes available.
Daniel Chapman  
Corpus Christi College

*Implementing LEADing Lights’ - A Schools Perspective*

Watch this space – information will be updated as it becomes available.

Janet Brimson  
Partner and Information Management Lead at Business Aspect/Data#3

*Governance and Analytics: Balancing compliance reporting with business and risk insights*

Analytics provides the power to report on the past and predict for future proofing and is transforming the landscape of risk, discovery and records management. Your School is data rich, how can you begin to benefit from analytics to improve outcomes and change the way you manage risk within your organisation.

Jemima Saunders  

*Digital Transformation Lead Educators (DTLEs) as Change Agents*

The Digital Transformation Lead Educator Program is an effort by the LEADing Lights team to support teachers to integrate technology in to their teaching and empower them as change agents for their schools.
Cybersecurity in Education – Discussion panel with Tom Brajdic, Director of ICT, Iona Presentation College

The digital revolution in the education sector has seen the increased application of one-to-one devices in schools. Iona Presentation College was determined to upgrade its IT services to safeguard their network across the school’s desktop, tablet and mobile devices to ensure the safety and integrity of the system. Hear from Tom Brajdic, Director of ICT at Iona Presentation College as he shares the college’s experience with the implementation of a cybersecurity solution for the school. Facilitated by MSS IT’s Harriet Mellor with panel guests David Skyes and Andrew Crawford-Flett (Sophos).
Adam Smith

Adam Smith, CyberHound’s Head of Products, has been in the IT industry for over 19 years with most of this time focusing towards education. Through his extensive experience in the education market he has a deep understanding of the increasing pressures faced by schools today both financially and technically to improve learning outcomes and deliver safe online environments.

**Internet and Cybersecurity Trends in Education**

The internet is mission critical for many schools. In a minefield of internet service offerings with differing speeds and capacities how do you accurately identify the best option for your school? What happens if the service is interrupted through an outage or cybersecurity incident? In this session Adam will explore how to accurately define what your school internet requirements are based around your specific situation (e.g. student numbers, in-class implementation, content accessed, boarding houses), how to plan for the future and most importantly how to secure the service from cybersecurity threats and major outages.

Adam will discuss the following points:
- Emerging cybersecurity threats for education and their impacts on students, staff and the broader school community
- Identify the responsibilities for a school’s executive team around cybersecurity
- Best practice strategies to mitigate the risk around cybersecurity threats
- What to consider when defining your requirements for internet services to deliver optimum performance
- The use of data analytics to support purchasing decisions
Kim Flintoff

Kim Flintoff is the Learning Futures Advisor within Curtin Learning and Teaching. He is a seasoned educator with diverse experience including performing arts, applied science, technical and creative management, educational leadership, arts and education research. His current work focuses on identifying new technology tools, approaches and solutions to transform and improve learning and teaching, and developing the Learning Futures Network to draw together all the stakeholders (K-12, Higher Ed, Industry, Cultural, Community and Public Sector organisations) in a future-focussed education ecosystem. He is also the Sustainable Development Chair for Global Collaboration in the International Society for Technology in Education (ISTE).

Education and Uncertain Futures.

As we look to the future it is clear that there are many unknowns. The rapid development of computation, robotics and artificial intelligence means that we don't know the specific tasks that will be part of jobs of the future. What does seem apparent though is the requirement for flexibility, innovation, creativity, adaptable communication, cultural competence, problem-solving, data handling, personal learning, and collaboration as key attributes of future citizens. Subject expertise seems to poised to be something that needs to change according to context.

If that is the case then what is the primary role of education systems in this future world where menial and repetitive tasks are consigned to domain of machines?

The emphasis on the development of new capabilities is more than a simple economic imperative. The development of a truly integrated approach to learning underpinned by richer engagement with the STEM disciplines is a necessary step in moving towards global sustainability and requires us to stretch our institutional boundaries to be more inclusive of all other stakeholders.

Shane Entriken

3 Sessions - Privacy Constraints; Legal Implications of Data in Schools; and Legal Q&A

Watch this space – information will be updated as it becomes available.
Brendan Evans

Brendan Evans is a Digital Transformation Teaching Fellow in the Leading Lights program at Catholic Education WA. He leads system wide implementation and adoption of Microsoft Teams. Brendan’s role at CEWA is to support system capacity building in Digital Transformation by developing digital pedagogy; providing teaching, co-teaching and team teaching; and creating digital content. He graduated in 2016 with a Bachelor of Primary Education specialising in Special Needs. He is teaching and co-teaching Coding and STEM classes and supporting digital technologies programs at Servite Catholic College.

Teams for Learning

Teams is a chat-based collaboration hub that allows you to connect to anyone across your school, your region, or the education community. With Teams, you can have private chats with your colleagues or you can create "teams" with a group of select people. You’ll see how to create your class team, and explore the collaborative potential Teams EDU unlocks, showcasing real-world examples and best practice usage. You’ll see how to use some of Teams’ deeper functionality to speed up, streamline and centralise your digital classroom.

Hariett Mellor

Transforming Digital Learning – Discussion panel with Andrea Holloway, Head of Digital Learning, St Mark’s Anglican Community School.

Hear from Andrea Holloway as she shares how technology is being used at St Mark’s to enhance and transform learning. From the discovery process, proof of concept, functionality testing, sustainable funding model, and the teacher/parent on-boarding process, the panel will share their challenges and outcomes for your learning.
Facilitated by MSS IT's Harriet Mellor with panel guests Dave Hollands (HP Inc.) and Bruce Logan (HP Financial Services).
Kieran Bailey

Having worked in Education for the past 12 years, Kieran started out providing IT and technical support to teachers and support staff while transitioning to classroom teaching. Kieran now provides IT leadership and directs IT strategy at Great Southern Grammar, a K-12 Independent School in Albany, Western Australia. As one of 50 Microsoft Minecraft Global Mentors, Kieran can see the benefit in using technology to support children as they grow and develop in a constantly changing world, and is passionate about exploring ideas of the changing workforce, what our children should expect, and ways we can help them prepare for the ‘unknown’.

Minecraft: Education Edition

In this session, you will be immersed into the world that is Minecraft. Learn about the latest developments in Minecraft: Education Edition, explore freely available resources for educators, and see some great examples that you can start using with your students right away. You’ll also see how Great Southern Grammar is using Minecraft with students across the school and across multiple learning areas to achieve some great results.

The second session: You’ve seen what’s possible, now try it for yourself! Come and familiarise yourself with Minecraft: Education Edition. Learn the controls, how to survive a night surrounded by monsters, build a shelter and gather resources. You’ll also be pitted against each other in a ‘battle build royale’. For best participation, bring your own laptop with Minecraft: Education Edition installed and ready to run – you may need to consult your school’s IT team for access using your Office 365 account. Some loan devices will be available.

Phoebe Bennett

Sway and Stream for Learning

Microsoft Sway and Microsoft Stream are two Office 365 applications that promote the integration of digital media in the classroom. Sway is a digital storytelling tool that allows teachers and students to create and share interactive reports, presentations and portfolios. Stream is a video service where people in your organisation can upload, store and share videos securely. This session will provide an overview on both apps and how they can be incorporated into the classroom.
Hari Chillapa

Hari Chillapa is a senior teacher at Comet Bay College. He holds a Masters’ degree in Information Systems (Griffith University, QLD) and a Microsoft Certified Professional (MCP-Microsoft) in Visual basic and other database management modules. His areas of expertise are Computer Science (ATAR), programming, robotics and the game making. He has been teaching for over a decade in Western Australia. Hari is involved in conducting after school programs/clubs like Robotics, Coder Dojo and coaching students for the Robotics Tournament First Lego League (FLL) for the past five years.

**Competing with the future - Robotics and AI**

This presentation focuses on delivering a range of digital technologies curriculum driven and real-world based projects, using various robots such as Edison, Arduino mBot and Lego EV3. It is a fun based activity that stimulates and enhances the students’ engagement, analytical thinking and problem-solving skills. During this session, participants will have an opportunity to explore the robots practically.

Nicole Adams & Michelle lloyd

**Forms and Assessment**

Providing timely feedback to our students is an essential component of the teaching and learning cycle. With Microsoft Forms, you can create surveys, quizzes and polls, and easily see the results as they come in. When you create a quiz or form, you can invite others to respond to it using any web browser, even on mobile devices. You will see how to easily create quizzes for your students and how you can quickly gather data about your their learning to further inform your teaching.

David Hollands

**Watch this space – information will be updated as it becomes available.**
Phil Casas

Phil Casas is a current Associate Principal at Comet Bay College. He has portfolios in ICT infrastructure, technology integration, Digital Technologies and STEM and works at school, regional and national level to effectively lead technology integration in schools. He brings 30 years of experience to technology in education and shares a whole school methodology for cross curricular integration of STEM.

Leading a whole school approach to STEM integration

Participants will be looking at the critical success factors around common understandings, vision and planning, professional learning and engaging champions ... with a direct focus on building a sustainable STEM focus within your school.

Daniel Chapman

Implementing LEADing Lights’ - A Schools Perspective

Watch this space – information will be updated as it becomes available.
Brad Howard

Brad Howard is a passionate educator who has witnessed other education systems internationally, managed state and national companies, owned and operated his own businesses, created flexible rapid growth businesses and was once an Assistant Principal in the WA education system. Brad strives to make his presentations interactive, thought provoking and an expression of his passion for great education.

**STEM Success – Turning Kids from Consumers to Creators**

There has never been a more important time to focus on STEM subjects due to the rapid technological progression of our world.

- 50% of jobs now being replaced by robots within 10 years,
- 40% of jobs will require coding skills,
- 98% of kids at 5 years old are creative geniuses and only 2% remain by age 44

STEM / STEAM subjects are the core of creativity which enable the kids of today to develop a future for themselves. Through the use of technologies that surround them – from cardboard and paper – through to coding and robotics the kids are designing and creating paths we have not yet explored. Around the world countries are changing their attitudes to WHY and HOW and with WHAT they educate their kids. Rapid change requires flexible, cost affordable, passionate and resilient education.

Steven Payne

An enthusiastic, TRBWA-registered teacher with many years’ experience of using ICT for learning and teaching, Steven founded Standout Education in 2013.

Steven has worked as an education consultant, both in Australia and in the UK, supporting schools and jurisdictions to make effective use of ICT and improve learning outcomes.

Steven is currently working with a number of schools on implementing Microsoft Office 365, helping to improve communication and collaboration.

Steven is also experienced in using ICT creatively across curriculum areas and runs engaging workshops for staff and students, incorporating a range of ICT and STEM activities including robotics, animation and coding.

He has a particular interest in the role of digital technology in personalised learning and enjoys helping teachers develop and adapt strategies to support the needs of their students.

*Steven will be delivering 3 sessions on Microsoft Office 365*
Shannon Armitage and Tina Russell

Shannon Armitage, Assistant Dean of Teaching and Learning
Shannon has taught Politics and Law for over 10 years in the government and independent sectors and her students regularly attain the state’s highest standards. She was the President of the Political and Legal Educators Association of Western Australia for three years and was also a member of the Course Advisory Committee in WA for five years. Shannon’s experience and expertise in Gifted and Talented education and pedagogy with an ICT focus has equipped her to motivate her students through innovative and engaging learning experiences. Shannon has a Masters of Educational Leadership and has lead the introduction of Professional Learning Communities at the College to support robust discussion and professional learning of staff. Shannon enjoys the challenge of leading and fostering innovative design and delivery of curriculum by teaching staff in the Secondary School to ensure students are prepared to enter a changing society with 21st Century Skills.

Tina Russell, Head of Learning Technologies
Tina Russell has worked in education for sixteen years in primary and secondary schools in the government and independent sectors as well as overseas. She has a Master of Information and Communication Technology in Education and has also lectured at a tertiary level in this area. Passionate about digital technologies, Tina works with teachers and students, to lead and implement programs to support meaningful integration of ICTs into future-focused classrooms. She inspires teachers to design ICT-rich learning tasks that challenge students to engage more deeply in their learning and to develop 21st century learning skills.

Igniting whole-school pedagogical shift towards future focused learning

Our school wide program to implement a data-driven school-wide program to develop our students’ 21st Century learning skills to prepare them for a disruptive, fast-paced and connected future. This presentation will explore our;

- Initial focus on analysis of data to explore the effectiveness of our usage of educational technology.
- Pedagogical re-focus; identified need to deepen learning through task design and use technology to create transformative learning opportunities
- Use of data from BrightBytes Teaching and Learning module which informs our progress
- Development of a school-wide program to use the Microsoft 21CLD model
- Use of PLCs to engage all staff
- Change in strategies when delivering program to early adopters through to late adopters and resistors
- The task re/design process
- Use of innovative technology to create transformative learning opportunities
Our Contributors

Day 3 Thursday, 5 October 2017

Daniela Mattheys and the Team from WITWA and TechTrails

Watch this space – information will be updated as it becomes available.

Dr Ginno Kelley / Dr Cathy Cavanaugh

LEADing Lights’ Overview

LEADing Lights is CEWA’s landmark digital transformation initiative. It is an enabling digital platform that supports the ‘LEAD’ transformation agenda. A cloud based, standardised, end to end digital platform for schools encompassing communication, collaboration, student administration, finance, marketing, data storage, security, advanced analytics and reporting, the LEADing Lights platform provides opportunities to share, collaborate and learn from each other, to celebrate the innovation happening within our schools.

Kevin Karp

Kevin Karp has been involved with Studentnet since 1996. He has grown Studentnet into being the premier identity management for Australian schools, using totally locally developed technology and innovation to solve Australian issues.

Identity Management: Protecting the school’s identity in an online education environment

Online services are very valuable and powerful tools for schools to use but they have a habit of interfering in the relationship between the schools and its community. This happens several ways:

1. The online service forces a new login event
2. The login page is branded with the service not the school
3. The service has control of the login credentials (name, password etc) instead of the school
4. The online service needs to be told the membership of classes, houses, teams etc

In this presentation we explore these issues and present ways for schools to take back control of their communities.
Rob Barugh

Rob joined Hale School in 2001 and as Director of Information & Learning Technologies, provides strategic oversight of information technology activities across the three sub-schools, on the Wembley Downs campus. He is responsible for information and service technology units which support enterprise applications & data, research support, teaching & learning, user support, infrastructure, analytics, communications, and information security.

One of Rob's passions lies in student 1:1 computer access and he was heavily involved in steering Hale School's progressive initiatives in this area, over a decade ago. The school is now recognised as one of Microsoft's leading Showcase schools and has accepted invitations to travel to Microsoft's head office to Redmond, Washington to help contribute to strategic planning sessions around the Surface device and Office 365 for Education.

Most recently, Rob and his education technology unit has been beta testing the use of Office 365 Teams for Education on student Surface Pro devices. This also involves getting in place Microsoft's School Data Sync solution to ensure a smooth, school-wide rollout in 2018.

Other conference presentations that Rob, a Microsoft Innovative Educator Expert, has undertaken include those on Tablet PC Technology & Digital Ink, SharePoint, Disruptive Technologies and OneNote in the Classroom.

Rob can be contacted at rdb@hale.wa.edu.au | @robbarugh

**School Analytics - adopting a flexible Business Intelligence solution**

Implementation of a school-wide analytics platform, from beiging to end. Adopting a flexible Business Intelligence solution that will grow with the school and not limit opportunities into the future.

Responding to the The New Media Consortium (NMC) Horizon Report of 2012, that referenced analytics and school's making use of their data to better understand how their students and school are performing, Hale School made strategic decisions about pursuing a school-wide analytics solution. This presentation documents the journey undertaken to see the use of analytic dashboards normalised within the school and how they have been customised to meet the current needs of the school and how they can be further developed to meet the school's changing needs well into the future.

Learn how a Business Intelligence solution can explore school performance data in real-time, provide intuitive data exploration for users without programmers, and ensure that data is secure and accessible for the entire school community.
Hugo van Niekerk 

Mazenod College

An IT Framework for Schools

Watch this space – information will be updated as it becomes available.

Pete Brown

Serpentine Jarrahdale Grammar School

Pete Brown is an enthusiastic and versatile classroom practitioner of Information Learning Technologies. His aim is to create democratic classrooms based on interpersonal relationships and the recognition of the inherent worth of each student. Through motivation and encouragement students become critical thinkers and life-long learners by fostering a classroom environment that promotes inquiry and discovery.

He promotes student academic development and achievement by utilising a range of assessment and learning techniques, incorporating group work, reflection, self-assessment and innovative use of learning technologies. His aim is to develop student-centered learning environments in order to produce self-directed learners capable of collaborative and individual work.

Challenges Schools face with BYOD

Managing mobile devices in schools can be a challenging one. Pete will challenge the status quo and show how schools can succeed in giving students the opportunity to become inquiry and creative learners using mobile technology in the classroom through age appropriate device management.
Will Horwood

Originally from the United Kingdom, where I started my career as a Science Teacher, I was lucky enough to work in a Computing Specialist College. This is where I started to explore the valuable impact technology makes to learning. In my current role, I am lucky enough to work with inspirational teachers, assisting them integrate technology into the classroom.

Design and Creative Thinking: A STEAM example

This presentation will go through the process and steps involved in implementing a STEAM task in Year 8 Science. The task was centred around students creating a game or a toy, that teaches 6 – 8-year-olds about a scientific concept, whilst also helping them develop key skills in either of the 4 Cs (Collaboration, Creativity, Communication or Critical thinking). As well as highlighting the pros of this type of activity, we will also look at the cons, as well as what we would do differently next time. This task has been driven by the need for more STEAM activities, as well as the focus on 21st Century Learning Design. In an ever-changing world, the importance of creating lifelong learners is becoming ever more important. Hopefully, through creating rich tasks, we are giving students the chance to grow the skills required beyond school and enriching their experience.