

in alliance



in this issue

Developing Innovation and Creativity

The Alliance of Girls' Schools (Australasia) Ltd

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**In Alliance 2012
Editorial Deadlines**

VOLUME 48

FRIDAY 2 MARCH 2012

Theme: *Girls and Physical Space*

VOLUME 49

FRIDAY 3 AUGUST 2012

Theme: *Early Learning*

Articles and photographs should
be emailed to the Editor at
jbutler@agsa.org.au.

From the President...

Robyn Kronenberg



In his book *Out of Our Minds – Learning to be Creative*, Sir Ken Robinson talks about being creative:

There are many misconceptions about creativity. Creativity is not a separate faculty that some people have and others do not. It is a function of intelligence: it takes many forms, it draws from many different capacities and we all have different creative capabilities. Creativity is possible in any activity in which human intelligence is actively engaged. The distinctive feature of human intelligence is imagination and the power of symbolic thought. Our lives are shaped by the ideas we have and beliefs we hold. New ways of thinking can transform us.

This edition of *In Alliance* features ways that we foster creativity in our schools and recent research in this area. I hope it stimulates further discussion in our schools and amongst colleagues.

I feel both delighted and privileged to be President of the Alliance for the next two years. Since its beginnings in the mid 90s, I have appreciated the collegiality afforded by the Alliance through branch meetings and Alliance conferences. As principal of St Michael's Collegiate in Hobart I am a member of the smallest Alliance branch, and although we have only four member schools we regularly conduct Alliance activities to engage girls, educators and the wider community. I encourage you to participate in your branch meetings and make the most of the services that the Alliance affords its members.

I congratulate Karen Spiller on her work as President of the Alliance over the past two years. Karen has led the Executive through a strategic planning process to set

our direction focused on the areas of communication, website, research, membership, advocacy, leadership and critical partners. Our new website was launched in August to give the Alliance a new look and to incorporate more services to our members. Our researcher, Kate Broadley, continues to research the benefits of educating girls in girls' schools and other key areas of interest to members, and Jan Butler, our Executive Officer, continues to promote the Alliance both to our members and to non-members to support and grow our membership, now 140 schools. Both Jan and Kate have worked tirelessly to ensure that our website contains the information we need as members and to promote the Alliance locally and internationally.

Thank you to Judith Crowe, Principal of Melbourne Girls' College, who hosted our AGM in June, with guest speaker, Bec Heinrich from Rising Generations, who coordinated and conducted our Student Leadership Conference last January. Thank you to members of our previous Executive, Judith Crowe (Victoria) and Kitty Guerin (NSW), who have served on the Executive for the past three and six years respectively. Joining the Executive are Janet Freeman (NSW), Deborah Lehner (Victoria) and Amanda Bell (Queensland). Finally, thank you to Karen Spiller for her leadership over the past two years; she remains on the Executive as Past President.

We look forward to continuing to work on ways to support our member schools and promote the education of girls in girls' schools.

Robyn Kronenberg

From the Editor...

Jan Butler



Kate Broadley's summary of the research on innovation and creativity that forms the centrepiece of this issue of *In Alliance* fails to confirm any true gender differences in creativity, although 'the available evidence suggests that women and girls tend to score higher on creativity tests than men and boys'. I suspect many of you will have already viewed Sir Ken Robinson's brief TED video on YouTube at <http://youtu.be/iG9CE55wbtY> entitled *Do Schools Kill Creativity?* He makes an 'entertaining and profoundly moving case for creating an education system that nurtures (rather than undermines) creativity' and it is worth a look.

It is clear from the articles that have been submitted, that there is much happening to develop innovation and creativity in our girls' schools and I thank the

contributors for sharing their work with us.

Our new web site has been a work in progress for some time and I thank Kate Broadley for the work that she has done on this. I hope that you will find time to contribute to the comments on articles and news items so we can engage in a lively discussion about issues relevant to girls' education in girls' schools. I also would like to thank Karen Spiller for her leadership and for her professional approach to the work of the Alliance. I have greatly appreciated her support. As the Alliance continues to grow, I look forward to working with Robyn Kronenberg and a new Executive team to continue to support all our members.

Jan Butler

Welcome to new Patron:

Gail Kelly CEO and Managing Director of The Westpac Group

Gail has more than 30 years career experience in banking. After a period as a high school teacher straight from university in her native South Africa, Gail started work as a teller with Nedcor Bank in 1980. By 2001, Gail had held various senior management roles in a broad range of areas including retail and commercial banking, strategy, marketing and human resources. Gail has spent the last nine years as CEO of two Australian banks – St George Bank from 2002 to 2007 and Westpac from 2008 to date.

Gail has presided over a period of enormous change and challenge for The Westpac Group. In 2008, Gail led Westpac through its merger with St George, the largest merger in Australian financial services history. Gail

also led Westpac as it successfully navigated through the turbulence and risk of the Global Financial Crisis and the consequent and continuing structural shifts in world banking and financial markets.

Westpac has grown to become one of the twenty largest banks in the world by market capitalisation. Under Gail's leadership, The Westpac Group today serves around 12 million customers, employs around 40,000 people and has over 1,500 branches.

Gail holds a BA and Higher Diploma of Education from Cape Town University, an MBA with Distinction from the University of Witwatersrand and an Honorary Doctorate of Business from Charles Sturt University. She



is a non-executive director of The Melbourne Business School, the Australian Banker's Association and the Financial Markets Foundation for Children.

Gail lives in Sydney and is a naturalised Australian. She is married to Allan and they have four children.

Congratulations to our Immediate Past President on being awarded a 2011 Churchill Fellowship

Karen Spiller, Principal of St Aidan's Anglican Girls' School in Corinda, Qld has been awarded a 2011 Churchill Fellowship.

The Fellowship will allow Karen to examine strategies for preparing female leaders for the position of Principalship in Australian schools. Karen will travel to the United States

of America and the United Kingdom to carry out her research.

"It is an honour to be conferred such a prestigious award," said Karen. "I look forward to speaking to, and working with thought-leaders in the US and UK to better prepare women for leadership of our schools," she said.



New Honorary Member of the Alliance, Barbara Stone AM

The Alliance is pleased to announce that Barbara Stone AM, recently retired from MLC School, Burwood, NSW, has been awarded Honorary Membership of the Alliance in recognition of her role in supporting and being an advocate for the Alliance of Girls' Schools Australasia.

Barbara's particular contribution to the vision of the Alliance from its early days as an Executive Member, and especially as President, is greatly valued and we are delighted that she will continue to remain part of this organisation.



28 October 2011	Due date for registration and payment for Student Leadership Conference
25 November 2011	Due date for completed Student Leadership Conference delegate information
18-22 January 2012	Student Leadership Conference, Women's College, University of Sydney
10-12 February 2012	National Conference on Girls' Education, Renaissance Hotel in Washington DC
25-27 May 2012	Alliance Biennial Conference for staff, Melbourne Girls Grammar School
25-27 July 2012	Annual NCGS Conference and Girls' Forum

Using Innovation to Reintroduce a Subject Often Ignored a

Susan Bowler, Robotics/Science/Maths Teacher, Maths Curriculum Area Leader, Ogilvie High School, Tasmania

There are many ways to stereotype girls, how they learn and the subjects they enjoy studying. Take a moment to think about classifications often given girls versus those given boys. We know they are general, but they still persist:

Girls enjoy drama, painting, drawing, photography, music, dance and theatre, English and Social Studies.

Boys enjoy Science, Engineering, sports, Mathematics, mechanics and working with wood, metal and plastics.

Ogilvie High School in New Town, Tasmania, is an all-girls, public high school. The stereotypes briefly listed above do not apply at this school. Except in one area - engineering. When I first started teaching at Ogilvie, I was asked to teach an engineering class, cleverly called 'How Things Work'. The focus for the class was sustainable, green design, including the science underlying the design, building and testing of wind turbines, solar power, green housing, etc. Ogilvie is a school where the number of girls studying science is very high, thanks to the development of a terrific science program, so I was surprised to see very few students interested in this particular topic. The classes were undersubscribed and the interest was less than optimal. The semester length course was not a winner. The goal was to teach science and engineering through hands-on, open ended practical activities. The projects were scaffolded with the science needed, but also drew upon their mathematical and scientific knowledge from prior years. Coming from a systems engineering background, I found working with the curriculum rewarding, but the delivery was falling flat. I was beginning to wonder about those stereotypes. I was also beginning to wonder about my teaching. What kept my hope alive was my experience working with women who did make their careers in systems engineering.

The question was: How could this course be redesigned into something that incorporated design and engineering, plus help develop systems knowledge? I discovered we had a number of MindStorms Robots. These were the first generation of the product and while fun to play with, were not easy to program. The programming was fiddly, and not always intuitive. We had used them for a very small part of one of the classes in 2006. We entered our State RoboCup Junior, had a little success, but most importantly, the girls had FUN. There was a spark that had been lacking in the other projects.

During the 2007 summer months, I researched using the next generation, MindStorms NXT, robots to teach engineering. I believed the enthusiasm I had witnessed, was due to robotics having a competitive and artistic aspect. At Ogilvie, competition is held in high esteem. The girls are offered many opportunities to participate in various competitions across core subjects, sports and arts.

It was obvious to me that the girls who participated in the 2006 Tasmania RoboCup Junior had enjoyed the experience. They had designed their own brief, created robots, programmed robots, costumed robots, created dances that complimented the robots dances....hold on.....rewind. Dancing Robots? Yes, that was the second part that motivated these girls – the artistic aspect of dancing robots. They built, programmed and costumed robots and themselves to dance to music of their choice. MindStorms NXT programming is easier for beginning programmers. The key was to garner interest in the idea of a Robotic Dance Competition and then build upon the basics, and branch into other areas.

RoboCup Junior has three divisions in their competitions: Soccer (where two robots play soccer against two other robots), Rescue, where a single robot competes in a rescue simulation, to rescue a victim from a chemical swamp, and Dance. Dance is the most free-form and some would argue the simplest of the competition divisions. It can be the simplest and therefore is a perfect entry point; however, because it is open ended, it can become very complex very quickly.

Ogilvie High embraced the open ended aspect of Dance and ran with it. In 2008, Google offered scholarships to teams who were at least 50% girls to travel to Graz, Austria and compete in the 2009 International RoboCup Junior. We applied, won two scholarships, and started preparing our entries, during in class and out of class time. Ogilvie had just offered its first Robotics course. The girls entered in the competition shared their knowledge with the girls who were new to robotics. This has been key to the success of Robotics at Ogilvie. Classes at Ogilvie are Grades 8, 9 and 10. The projects are open ended, so girls with different levels of experience can participate. The class sent two teams, one Rescue, one Dance. Rescue won Champion – Rescue SuperTeam. The

"They built, programmed and costumed robots and themselves to dance to music of their choice."



RoboSquad Birds with Devika their Mentor

and Held in Disdain by Girls

dance team, while innovative, realised they needed to incorporate more technology to be competitive. We watched, learned and returned to Australia with the goal to incorporate more technology. We did this, won the State and National Competitions. Our entry was still relatively simple, so the team (now consisting of three girls), recruited more interested girls (and two boys). The group became RoboSquad United – a name that incorporated members from multiple schools. We created a working system – a puppet show with seven robots that all worked autonomously. One wrote 'DIZ', another wrote 'ZY', a third used electronics for flashing eyes, another was a stationary robot that was a custom built circuitry sign that flashed 'DIZZY' or parts of that word to the music. Timing was critical here. Two other robots had more complex gearing and also utilised compass sensors. The last robot had to climb a 20 degree ramp, make 180 degree turns and pop balloons when it reached the top. Needless to say, the use of technology and complexity of design had increased many fold. The team, RoboSquad United, RSU, won Champion - Secondary Dance 2010, Champion – Secondary Dance SuperTeam. But, they were not ready to stop. There were other technologies they wanted to explore. They were interested in creating robots from scratch parts – custom robots.

Upon their return from Singapore, RSU decided they wanted to participate in the Tasmanian State RoboCup Junior, again. This was a huge challenge because it meant coming up with a whole new theme, design, and all the building and programming associated with this, in five weeks. The team tackled the challenge: they worked weekends and holidays, reused parts of their International routine that had not been present at the State or National competition in 2009. Best of all, they inspired a second team from the OHS Robotics class to participate! Both teams, RoboSquad United and RoboSquad Birds won first place in their respective divisions. RoboSquad United, the more experienced team, won the Engineering Innovation Prize - the first time this was awarded to a dance team. This was based upon making many robots work together using blue-tooth communication.

RoboSquad then joined forces with two girls from an all-girls First Lego League team from California. These girls joined us as exchange students. They wanted to experience RoboCup Junior and also First Lego League with our teams. Together, they brought in some new sensors, some custom electronics and C-programming. They successfully combined kit robot parts and controllers with custom parts and wiring. It was a very memorable experience. Both RoboSquad United and RoboSquad Birds won the right to represent Australia at the International RoboCup. However, the best part of this competition was the sharing of knowledge between the more experienced team, the novice team and the girls from the USA.

RoboSquad United and RoboSquad AST (RoboSquad Birds renamed) recently competed in the 2011 International RoboCup Junior.

RoboSquad United created a more complex entry based upon their National entry. They added more custom circuitry, custom circuit boards, Arduino controllers combined with more C-like programming and ultrasonic sensors. The robots interacted with humans and with each other. Their entry was well received, but the aspect that was consistently highlighted was the superb teamwork between the individual teams and between the combined teams. RoboSquad AST created a whole new routine with new robots and more technology.

The teams, with the knowledge gained from class and RoboCup, have also discovered they enjoyed participating in First Lego League. This competition has a robotics game aspect to it, but also has a project specific to an annual theme, plus a teamwork challenge. We



Continued overleaf...

Using Innovation to Reintroduce a Subject Often Ignored and Held in Disdain by Girls

Continued from previous page...

participated in this during 2009, and 2010 and did well during both years. The challenges are different. It is not as open, but can be technically more challenging. In that aspect, it is similar to RoboCup Junior Soccer and Rescue. The robot games are prescribed and the best solution wins. The project is open ended and is comprised of a model plus a presentation in any format.

What does the future hold? As of the writing of this article, the members of RoboSquad will enter the national competition, Australian Open RoboCup Junior, held at the University of Tasmania on 24 and 25 September, 2011. RoboSquad AST will enter their new dance entry. The other members of RoboSquad plan to branch into rescue and soccer. RoboSquad does not expect to win in either soccer or rescue, but are looking forward to learning what requirements are needed to build a winning robot, and then plan to create custom robots for both events. After all, they have at least three to four more years. These girls are aged 14 to 16. Engineering for girls???? Bring it on!

Links

RoboSquad United on Facebook <http://www.facebook.com/#!/pages/ROBOSQUAD-UNITED/105612796155562>

Videos for 2011:

RoboSquad United final run at the 2011 International RoboCup http://www.youtube.com/watch?v=TKX5PH_c-nQ

RoboSquad AST with SuperTeam combo performance - this is where they combine with 2 other countries and create a new entry in Dance: <http://www.youtube.com/user/sbowler57?feature=mhsn>

RoboSquad United Preparation for Istanbul. This was part of our introduction to our dance. It captures the multi school, mostly girl aspect of this team: <http://www.youtube.com/watch?v=ZbGisWzZYlc>



Student Success Program at Stella Maris College

Carolyn Collins, Stella Maris College, Manly, NSW



The current Student Success Program has been established over the past three years at Stella Maris College by Ms Alison Tedman and Dr Kay O'Leary to encourage our students to be innovative and creative. The program is designed to allow students to research and develop academically rigorous projects on areas of personal interest. The students research their chosen topic; write a literature review; survey and interview a range of participants and then create an artistic representation in response. These final productions have included novels, short films, garments, short stories and educational tools.

In 2010 we saw eighteen students involved in the program and this has increased in 2011 due to its growing popularity. The group meets each week, shares ideas and reports back on their individual progress. Staff members participate in these lunchtime meetings in the library, giving assistance and access to relevant resource materials and referencing techniques.

One of our Year 11 is awarded the position of Academic Mentor. This student works closely with a number of younger students, assisting in their research and development of focus areas. She also participates in Student Success meetings, giving advice and presentations based on her experiences as a past Student Success graduate.

Those who complete their Student Success projects are presented with 'The Silver Student Success Programme Award' at the end of the year.



Some of the projects in 2010 and 2011 have included:

- A collection of letters between family members based in World War II (*The Handkerchief Map* - now a published novel - <http://www.acepress.com.au/products/The-Handkerchief-Map.html>)
- A short story centred around family recipes
- A research paper on discoveries and initiatives that changed the world
- A short film on special effects and movie making
- A research paper on Collette Dinnigan and a sewn garment influenced by the designer
- An educational short film on animal testing

For more information, please contact carolyn_collins@stellamaris.nsw.edu.au

World Mentor: A world of opportunity

Liz McKay, Publications/Marketing, Diocesan School for Girls, Auckland, New Zealand

At the invitation of past Diocesan School for Girls Board Chair and Old Girl of the school, Angela Coe, the American founder and Chairman of World Mentor, Leigh Teece, visited the Auckland school in 2008 and presented to staff her vision for the mentoring network that includes a program based on Sean Covey's book *The 7 Habits of Highly Effective Teens*. Teece is quoted on the World Mentor website as being 'committed to creating global opportunities for youth throughout the world'. With generous support from the Teece Family Foundation, she 'endeavours to inspire youth and support education initiatives'.

Diocesan's Director of the Centre for Enhanced Learning, Suzanne Buswell, was impressed with the philosophy of the program and could see it that it would be another important aspect of Diocesan's provisions for gifted students.

Diocesan adopted the pilot program and Suzanne has since visited schools throughout the country, talking to the teachers responsible for extending gifted and talented students and encouraging their participation in World Mentor and The 7 Habits course. Across New Zealand, 100 students are currently involved in the program. Suzanne Buswell and Deputy Principal, Jayne-Ann Young, are both on the Executive Board of World Mentor NZ, and speak enthusiastically about the opportunities that the program opens up for our students.

This program is fast paced and requires students to be able to reflect and express their thoughts and ideas clearly with others – their mentor and the group. I like the way this course provides opportunities to develop the social and emotional quotients of able students, as well as provide them with academic challenges. The student feedback is always overwhelmingly positive and the insights the students gain from discussing the habits with a mentor are invaluable. These are busy students who want to be involved in lots of activities and still achieve highly. This course gives them life tools and skills. (Suzanne Buswell)

At Diocesan, Year 10 students are identified through the da Vinci Gifted and Talented Program and invited to participate in The 7 Habits course and, through this, be part of the World Mentor NZ program. The course runs for eight weeks during Terms 2 and 3. This unique opportunity links the students with compatible online mentors with whom they communicate about the habit under discussion for the week, as well as general discussion about such things as life skills and relationships, hobbies and interests and career paths.

World Mentor has a partnership with members of KEA, the Kiwi Expat Association, and other groups of accomplished New Zealanders. The mentors for students are drawn from this talented pool of individuals around the world.

In addition, World Mentor has established partnerships with universities (The University of Auckland is one strategic partnership), industry and the government, including such influential overseas organisations as the American Chamber of Commerce.

Discussions

As editor of *Dio Today*, I sat in on one of the World Mentor NZ sessions and observed the girls quickly settling down to the business of sharing how their online relationship with their mentors had progressed during the past week. The 'conversations' had ranged from a discussion on the value of a GAP year to goal setting and how goals are not always measurable.

The habit under discussion for the session was Habit 5: Seek first to understand, then to be understood - "Before I can walk in another's shoes, I must first remove my own."

The enthusiastic exchange of ideas around this topic took off in different directions – body image, whether a friend really requires a fake tan before going to America, Mum and Dad not listening, the positive impact of various teachers – and some of the observations made showed an insightful maturity:

"Remove yourself from your preconceived perceptions – have an open mind."

"See the other point of view before imposing your own."

"When I am doing group work now I listen to what the others have to say."

"People should accept you for who you are not what they think you should be."

"I am a talker – I realise that I talk and don't really listen."

"The Habits have given me an insight into my subconscious behaviour and made me more self-aware."

"Writing down behaviours has made me rethink and realise that maybe I was wrong in certain situations. I saw what I could change to improve things."

The girls went away with two main discussion topics for their mentor link – the balance between 'fitting in' and 'being yourself' and listening styles in the context of communication with their parents.

The hour session went by incredibly quickly and the thoughts aired were 'quick fire' and diverse, but it was clear that The 7 Habits of Highly Effective Teens is having a positive and rewarding impact on these students, and that they are looking at themselves and their relationships in a new light and developing skills that will stand them in good stead through their young lives.

Three of the students made the following comments about the program:

So far it's been great taking part in the World Mentoring Program at Diocesan. The term-long program has been based on the book *The 7 Habits of Highly Effective Teens* by Sean Covey. At the beginning of term all 10 of us were matched up with a mentor through the World Mentoring website. Each week we focus on a different habit, discussing and thinking about how we can use each habit, and then throughout the week we contact our mentors and continue our discussion with them. The mentors are wonderful! It's so good to hear about the experiences they have had in their life and it's especially interesting to hear about how they got to where they are now. Some of the Habits focus on personal actions, such as being proactive, setting personal goals and using your time wisely. The other habits talk about maintaining healthy relationships with others, ideas involving how to be a good listener, and how to work with others well. All of these habits are really useful and relevant to us as teenagers now, but will also be beneficial in the future. At the end of the program, we each have to prepare a short presentation that highlights everything that we have learnt from the book and from the mentors. I think the program is very enriching and such an interesting experience, both for the mentee and the mentor.

Eloise Chin



*World Mentor Group - Back row: Ellie McBurney, Kelly Kim, Mrs Buswell, Hannah Pitman-Bell, Libby Porter
Front row: Tegan Johnson, Ashleigh Parton, Lucy Griffiths, Eloise Chin, Rachel Small, Shantel Smith*

I'm really enjoying the World Mentoring Program, and I strongly believe I'll have a different view on all the situations I'm in once it is completed. *The 7 Habits* were intriguing and slightly confusing to me at first, but since having our mentoring meetings and discussions with my mentor, I have seen they are perfectly logical really! My mentor is fantastic and I really appreciate the effort she puts into my education for being successful. At first I – and my peers in the program – were confused by what the program was about, and so it took a while to 'get into it'. Now, though, I think everyone is really enjoying it and also believes it will be beneficial to them.

I try to use *The 7 Habits* in all areas of my life – academic, sport, family, social, etc – and my mentor really helps me by giving me a different view of things. She is constantly giving advice and asking me to think about things, and equally shares information about herself which I think is important that mentors do – it's a two way relationship after all. I made goals on the webpage, and my mentor helped me improve them to be SMART, which was a big eye opener for me as I realised how 'un-SMART' they really were beforehand. Also, I feel it is important for mentors and students to know that their communication can be about things that are not Habit centered. I have talked with my mentor about school marks and sports results, and I think we share a special relationship that is somewhere in between a parent and friend figure, which is very valuable to me.

Hannah Pitman-Bull

So far, World Mentoring New Zealand has been an amazing experience. I have learnt a lot about myself and also how I can relate to others better. I feel I have also learnt a lot about 'success', and have put to rest many worries I had recently been having about the future and whether or not I will 'succeed' in life. *The 7 Habits of Highly Successful Teens* by Sean

Covey shows habits that can help teenagers when they are at a stage in their lives when they start to think about the future and what they may want to do with their lives. I think it is also the stage when they start to worry that they will not achieve what they (or someone else) think they can or should. Many of these first few habits, such as 'begin with the end in mind' and 'first things first' helped me to confront these feelings I was having and to know that if I keep to these habits then I shouldn't be too far away from what I would like to be (with the help of my mission statement). I think that having a mentor who has actually thought about similar things and has gone through a similar stage with whom you can have discussions is the major beneficial part of this program so far for me. I really look forward to our conversations and am sad when things get very busy and I cannot get back to my mentor as quickly as I would like. I think the third habit can help with that also, and I have been getting better at doing this throughout the program.

Ellie McBurney

World Mentor - <http://www.worldmentor.net/ourprogram>

'Our goal is to expand our global presence to improve learning among people worldwide and, in the process, to create a global channel of communication for people to share ideas and recognise commonality of values.

'Our values are based on the belief that if people are given the right tools, they will develop the judgment required to make good life and career choices. By linking younger people one-on-one with mentors, we give every mentee in our program access to an expert to share life experiences and prepare for a successful future.'

Curriculum Collaboration at Ravenswood School for Girls

Chris Papadopoulo, Senior School Science Co-ordinator, Kate Nolan, Year 6 Teacher, Romy Tobiansky, Year 6 Teacher and Terrie Jones, Head of Teaching and Learning

Students love interactive Science but it is not without challenges for classroom teachers coping with the competing demands of the curriculum and working with limited specialist equipment. Science in the primary school context can produce tremendous excitement among students when they are presented with opportunities to use equipment, observe chemical reactions or perform experiments. At Ravenswood School for Girls, an innovative collaboration between teachers in the Junior and Senior Schools has resulted in a surge in excitement and curiosity in relation to the learning of Science. The rationale for the collaborative curriculum planning that took initially place early in 2010 can be summarised in two key points:

- Ravenswood is a K-12 school located on the one campus and this affords collaborative opportunities not easily obtained in other school contexts. The teaching of Science to students in Years 5 and 6 in Senior School Science laboratories provides tangible links between the Junior and Senior Schools and provides students with a level of familiarity with the Senior School that has eased the transition from the Junior School to the Senior School.
- The use of the facilities in the Senior School provides the opportunity to have learning experiences in a setting custom-designed for the purpose of scientific enquiry. Students can be engaged in the practical application of knowledge, the testing of hypotheses and the building of confidence and skill in the use of equipment.

After an initial evaluation of Stage 3 Science programs, the combination of the specific subject knowledge of the Coordinator and the understanding of the students' cognition and developmental needs from the class teachers produced program amendments that have enabled the significant development of scientific knowledge, understanding and application. In 2010, the program was limited to Year 6 classes but the benefits of the program became so evident from student work samples that it was decided to extend the program to include Year 5 as well in 2011.

The laboratory experience is embedded in the whole school timetable structure and students in Years 5 and 6 use the laboratory one period a fortnight to perform experiments that enrich and support the science lessons in the classroom setting.

At the end of 2010, the program was evaluated and students reported that they looked forward to Science classes. For both students and teachers, Science became a memorable experience because it was fun and it was real. Many students who had never before lit a match were now doing so with care and competence and were engaged in guided, supervised activities such as burning eucalyptus leaves over Bunsen burner flames to investigate the reasons why bush fires in Australia can be so devastating. Students showed a willingness to extend themselves and challenge their thinking.

In the classroom, students initiated discussions and willingly asked probing questions. Many parents also commented that their daughters discussed, in animated ways, the experiments they performed, and could articulate their relevance to their studies and to real life situations.

In 2011 it has been observed by teachers involved in the program that student dexterity has improved. Students are using the logic and language associated with the scientific method. They are formulating hypotheses, tabulating results, recording observations and deriving conclusions that are nuanced and reveal a deeper understanding.

Students who have made the transition from Year 6 into Year 7 in 2011 were more confident in the laboratories than students who entered into

Year 7 from other schools. Students new to Ravenswood were mentored by Junior School students who took on leadership roles in helping them adjust to the new learning environment.

Interestingly, the benefits have not been confined to the students. In consultation with the Science Coordinator, the teachers have been able to develop a deeper understanding of the content being taught and they report that team teaching in the laboratories with the Science Coordinator has been both enjoyable and informative. Their active involvement also ensures a proactive approach to student safety in the laboratory environment.

In the program students perform experiments to explore forces, magnetism, bushfires, earthquakes, rocks, microorganisms, volcanoes and flight through innovative laboratory experiments which stimulate interest and motivate students to participate in their learning experience.

The school is currently busy preparing for the biennial 'Science Day' event and it is highly anticipated in the Junior School. On this day, students from Kindergarten to Year 6 are challenged with a diverse range of experiments and problems to solve. Students from the Senior School act as mentors and assist Junior School students in making observations and drawing conclusions.

This example of a successful collaboration between the Junior School and the Senior School has resulted in significantly improved Science learning experiences. The students' love of Science lessons is palpable both in the classrooms and within their home environments. The collaborative curriculum planning process should assist Ravenswood teachers to implement the Science demands of the new K-6 Science syllabus.



Creativity in Middle School

Summer Charlesworth, Middle School Year Co-ordinator, and Terrie Jones, Head of Teaching and Learning, Ravenswood School for Girls, NSW

Emerging research continues to tell us that creativity is key to engaging students and preparing them for the world beyond school. As Kleiman (2008) asserts, though there may be no single, 'hold-all' definition of creativity, there seems to be a general coalescing of agreement amongst creativity researchers that creativity involves notions of novelty and originality combined with notions of utility and value. Sir Ken Robinson (2006) argues that creativity is as important in education as literacy and we should treat it with the same status, further suggesting that school, educators and the community need to radically rethink our views of intelligence. Theorists suggest that creativity consists of three components – domain relevant skills, creative processes, and intrinsic task motivation – all of which can be fostered through formal and informal learning (McWilliam, 2007).

Children intrinsically seek fun, connection and creativity. They are the group in our community with the biggest scope for innovation. Sir Ken Robinson has challenged traditional schooling's focus and asked provocatively 'Are schools killing creativity?' (2006) The answer of course may be 'not intentionally' and the more important question might be how can we ensure that education strengthens what is already present in young people - their innovative, creative, and progressive instincts? If our task is to educate the whole student, then schools and educators need to view subjects not just as silos of information, but as lenses through which to view the world and its issues. Schools can be places where information, learning and creativity flow.

Students will often recall lessons or experiences in school that are 'fun'. We can re-frame this term and think of these experiences as 'flows', a state of being at one with what you are doing where according to Mihaly Csikszentmihaly (1990) the level of challenge is commensurate with the ability of the individual. In both fun and flow experiences there is a momentary loss of self, an absorption in what is happening. With the flux of the adolescent brain, and the research backing what we know about Middle School pedagogies, it makes sense to design learning experiences that take into account the point at which ability and challenge meet to engage and inspire students and bring enjoyment to academic learning.

Indicative of this shift in the Middle School has been the revival and renewal of an idea that had been trialled some years ago at Ravenswood: Creative Curriculum. In 2010 Year 8 students and staff were involved in a revitalised Creative Curriculum Pilot, in which students courageously responded to the provocative question 'What's the point?' with an array of outstanding, innovative, meaningful learning products. The process and products explicitly encapsulated a holistic view of creativity and called on students to use a range of conceptual and concrete skills to make meaning.

The focus of the task shifted to the learner. Students negotiated the task specifics, and talked through the implications of the question they so often ask about their own schooling experience. Students were called upon to audit the skills and knowledge they had gained in their schooling and creatively combine threads of knowledge and various skills to produce a display that communicated to a real world audience the relevance of the learning to life. On the afternoon of the learning exhibition the space was buzzing with creative energy as students made their learning process visible to their audience. When one group was asked what had motivated them, they answered that they were inspired by the opportunity to really understand the relevance of their learning. The projects make links between seemingly disparate pieces of information and skills. The Year 8 Year Co-ordinator framing the scope of the task invited students to be designers of their own learning experience stating, 'I don't know what this will look like; show me.' And show her they did, putting together an



This group of Year 8 girls at Ravenswood connected with a range of schools, including the School of the Air to respond to their question: 'What's the point of what we learn at school?'

impressive array of products which were shaped during a focused four week program that ran in the core curriculum classes and some of the elective classes during Term 4.

Mentors will need to work closely with groups to identify key points where scaffolding is useful because, while some groups required more assistance to make sense of the open nature of the task, others found the scaffolds and organisers constraining and felt they 'had' to use them despite being assured that there was no compulsion to use a particular set of organisers.

At Ravenswood School for Girls, not only is this mind shift occurring within the classroom, it is also made manifest in a series of 'Beyond the Classroom' experiences. These blocks of time are set aside to enhance student-teacher relationships throughout the school, and explicitly draw out the creativity of students in their learning context. McWilliam (2007) recognises what we also value: the characteristics of these learning environments is the expansion of the involvement of colleagues and students in decision-making about the overall pedagogic culture and practices that support exploratory learning and creative curriculum design.

Erica McWilliam (2007) offers a wonderful explanation, in the context of the work of Mihaly Csikszentmihaly, 'Creativity is not garnish to the productivity roast, but fundamental to an increasingly complex, challenge-ridden and rapidly changing economic and social order.' She points towards an exciting era in curriculum planning; creativity is not an option, but a necessity for all learners and needs to be explicitly fostered in rigorous and authentic learning experiences.

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Enrichment Encompasses Innovation and Creativity

Doris Haddock, History Teacher, Clayfield College

Imagine a subject in which students can investigate such disparate topics as 'The Ethics of Stem-Cell Research', 'The Legacy of Oliver Cromwell' and 'The Potential of Using Music to Teach Science in Early Childhood'. "Impossible!" you say. Clayfield College students say it is not. These topics are just three of the many selected by students participating in the Year 10 subject, Enrichment. It is a one year elective in which the students undertake a variety of areas of investigation that reflect their personal interests.

Students who have demonstrated aptitude and motivation for self-directed learning apply to participate in an area of study related to one or more of the Key Learning Areas in which they have previously demonstrated significant interest and skills. Students are selected following an interview process that determines their suitability. Those selected are generally high achievers with a love of learning and a passionate desire to expand their knowledge.

The year of study begins with the students determining their learning style, trying some lateral thinking problems, and then examining research techniques before negotiating their topics and assessment with the teacher. The topics are limited only by time constraints and the imagination of the students. Consequently, topics have included historical enquiries, creative writing (e.g. historical fiction, sci-fi novels, fantasy stories), scientific investigations, music, drama and photography. Invariably, as new areas of knowledge are discovered, the research direction changes from that anticipated by the student, resulting in the task having to be modified to incorporate the new focus.

Assessment ranges from written pieces such as assignments, reports, and novels, to practical activities and oral and visual presentations. Students are assessed on three criteria – research effectiveness, synthesis of information,

and communication skills. The length of time of each research topic is also negotiated. Most students do three topics in the year.

The course is in its third year and has proved to be a great success, not just in increasing students' knowledge in their particular field, but also in improving creativity and research skills. The greatest difficulty has been trying to keep the topics manageable in size as the students invariably 'think big' and try to take on more than is realistic. The College anticipates that as the subject continues to be fine-tuned, its contribution to the life-long learning of its participants will be enhanced.



MLC Music Wins Global Gold

Jane Hammond, Communications Specialist, MLC, Claremont WA

Singers from Methodist Ladies' College, Claremont WA, brought home gold and silver medals from two prestigious competitions during their International Music Tour.

On 30 June 2011, a logistical miracle was achieved by MLC staff with the support of Gulliver's Sports Travel, when 94 girls from MLC, aged 12 to 18, around 70 instruments and 11 staff travelled to the UK to kick off the school's fifth International Music Tour.

The MLC Music Tour occurs every three years, and is no ordinary school trip. Led by dedicated Music Director, Bobby Gallo, the students' extraordinary talent and performance maturity have caused a stir each time, leading to prestigious invitations and adding some unique experiences to the schedule for 2011.

Four ensembles made up the tour group: the Chorale, Barbershop, Symphony Orchestra and Jazz Band.

The 70-strong Chorale and the Orchestra of 50 perform diverse repertoires. The world-ranked Chorale is adept at singing *a cappella*, while the instrumentalists have mastered pieces from Baroque through to the Modern era.

Barbershop expert Carole Macintyre has taken on the rewarding task of directing the MLC Barbershop – 19 singers drawn from the Chorale, who perform a mixture of contemporary tunes, jazz, classics and old favourites.

The 2011 Music Tour began with the world-renowned Llangollen Music Eisteddfod in Wales. The girls took part in the Senior Children's Choir section, and nine girls were accepted to participate in the solo competitions. The Chorale finished eighth out of 19 choirs from around the world.

Next stop Montreux, in Switzerland, for the famous two-week Jazz Festival – an invitation-only event and the largest in Europe. This was the third time the MLC Jazz Band had been invited to perform, rubbing shoulders with pro jazz musicians from around the world. The only all-female group to participate, they played twice on the main stage at Parc Vernex to a delighted audience.

Another prestigious invitation was extended by the artistic director of the World Choir Championships, held in Graz, Austria, who chose the Chorale, Orchestra and Barbershop to perform in the closing concert in the magnificent Stephaniensaal concert hall.

The Chorale received a Gold Medal in the Youth Choirs section and Barbershop won Silver in the Vocal Pop section.

The Chorale was also selected to compete in the Grand Prix of Choral

Music, resulting in an Honorary Diploma in the Youth Choirs section.

The 18-day tour presented some very special performance opportunities in between the major festivals and competitions. These included an invitation to the Chorale to sing during Holy Mass at the Basilica Mariatrost in Austria and, in London, performances by the Chorale and Barbershop at Hays Galleria, and by all four ensembles on the famous Clapham Common Bandstand.

In a message delivered before departure, MLC Principal Rebecca Cody celebrated the performers' determination to pursue excellence.



"Skill development and global connectedness can be achieved in a myriad of ways, but perhaps none as stimulating as journeying to other countries with the promise of world-class events and competitions!" she wrote.

"The 2011 International Music Tour provides an opportunity for our girls to refine competencies, gain amazing performance exposure and strengthen each ensemble's cohesion. Similarly, the chance to breathe in new perspectives and develop insights is a real gift."

Ms Cody surprised the performers by joining the tour in Llangollen – bringing an extra boost of encouragement and support.

On her return, she applauded the girls' success, resilience, flexibility and sense of fun:

"It was such a delight for me to surprise the girls and be a part of this extraordinary competition tour," she said. "I shall never forget witnessing first-hand the girls' tremendous successes... In addition, the Chorale's performances exceeded all previous

international results for MLC: 2011 saw us awarded our highest ever scores."

Mr Gallo commented that the girls not only represented MLC during the tour, but Australia, a fact reinforced by Prime Minister Julia Gillard's pre-tour message to the performers:

"This year's European tour is a wonderful opportunity to showcase your considerable musical talents across many genres and to build new friendships and cultural links with other countries. I am sure you will bring credit not only to yourselves and your school but also to Australia, as you represent us internationally, including at the prestigious Montreux Jazz Festival and the World Choir Championships."

WA Premier Colin Barnett commented: "The opportunity to visit and perform at such iconic events and locations across different European cities is every musician's dream, and I am sure you will each seize this remarkable opportunity and make the very most from it."

Developing Innovation and Creativity

Director of Students: Middle Years, Mrs Kellie Lyneham and Director of Curriculum, Mr Christopher McNamara, Melbourne Girls Grammar, Victoria

2009, two years after the arrival of our 11th Principal, Mrs Catherine Misson, saw Melbourne Girls Grammar launch our *Strategic Educational Intent: 2010-1012*. This document, written in response to an exhaustive community consultation process, outlines our future priorities and directions and ensures that our vision and values guide our dialogue and our actions. A key aim of this strategic document is to 'prepare our girls for a future in which they can be confident and influential' and it is with this guiding principle in mind that the decision was made to move from traditional P-6 Primary and 7-12 Secondary structures, to a contemporary P-12 structure with three discrete, yet linked programs of learning: P-4 Junior Years Program; 5-8 Middle Years Program; and a 9-12 Senior Years Program, each of which possesses its own philosophical underpinning and developmentally appropriate wellbeing structure.

The decision to move to a 5-8 Middle Years Program presented many questions, perhaps the most challenging of which was where we would house our Years 5-8 girls? Our research unequivocally supported our beliefs that not only was the early onset of adolescence a phenomenon that was affecting our girls, but also, that there was a need in our learning community to raise our expectations of what our Middle Years girls could achieve in their own mind's eye, and also that of their teachers and parents. Our research supported the notion that in many ways Year 5 was a much more productive time in which to transition our girls to a secondary setting and to prepare them for our rising tide of expectation and our belief that they should act as self-managers and exercise their right to independence and choice.

Yet, how were we to do this when our Years 5 and 6 students resided on our Junior P-6 campus? Fortunately, we were in the unique position where our Master Building Plan allowed us to consider the establishment of a Years 5 and 6 building on our Senior Merton Hall campus, a project which was endorsed by our community and provided us with the opportunity to build from the ground up not only a program which supported our philosophical approach to the Middle Years, but also a building in which to implement the first phase of our four year program.

Working from the MGGC C21 themes of Valuing Diversity; Ethical Behaviour; Expressing Creativity; State of the Planet Awareness; Understanding National and Local Issues; and Building the Capacity to Experience and Lead Change, a set of Middle Years Objectives was developed. These Middle Years Objectives, alongside our desire to create a Years 5 and 6 Program that prepared our girls well for the second phase of our Middle Years Program, naturally impacted on the design of the space for our new Years 5 and 6 building. We intended to engage our Years 5 and 6 girls in an academically rigorous program that provided stretch, choice, continuous exposure to eLearning and the latest technologies, opportunities to work in multiple grouping structures and inquiry opportunities. In addition, we also wished to support this academic base with appropriate transitioning structures, including a contemporary Years 5-12 Wellbeing

Program, access to Senior facilities and specialist teachers, a Years 5 and 6 play area and an After School Care Program which incorporated time for guided study and homework support. It became clear that in order to achieve all of our desires, our Years 5 and 6 building needed to be a flexible learning space in which we could provide a nesting area for our girls to study literacy, numeracy and cross-curricular units and be a centre of belonging which ensured the establishment of strong and meaningful relationships with their peers and Homeroom Teachers.

July sees us begin our second semester of our restructured Middle Years Program and much has been learnt since we first opened the doors of our Years 5 and 6 building, christened 'Wildfell', to our students and staff in January. Not only have we learnt about the life of our girls in the beautiful Wildfell space, but also, the way in which the Years 5 and 6 experience sits within the broader MGGC Middle Years framework.

Our Years 5 and 6 students have demonstrated an extremely positive response to the notion that they are not all required or expected to be working on the same things at the same time. Additionally, they rejoice in the fact that both the Wildfell space and the Middle Years structures have allowed them to make choices about how, where and with whom they work. Our girls have quickly become self-managers – their relatively individual timetables allow them to nominate which focus groups they need to be part of, and, with support, they identify how best to manage their workload and their learning needs. Our Years 5 and 6 Teaching Team has responded to the spaces

and the independence of the girls by thinking more creatively and openly about their use of time, space and grouping of students. They operate as a team of teachers with joint responsibility for the full cohort of girls. This approach has led to both a personal reflection and individual improvement agenda, and greater group accountability and communication between teachers, including a centralised data storage facility which documents the individual learning achievements and needs of each of our girls.

Whilst in the last semester we have moved significantly in our teaching and learning, we acknowledge that as lifelong learners, all members of the first phase of our Middle Years Program are still learning about the spaces and the program structures. Perhaps the most important lesson for us has been that to be both innovative and creative, one has to remain flexible and reflective at all times and to achieve this as a team we recognise the need to communicate, plan and work together at a much higher level. Our constant reflection on how our new Years 5 and 6 space operates, and how our girls operate within it has ensured that we are now ready to consider the ways in which we need to adapt the second phase of our Middle Years Program to accommodate our group of students who have pioneered the first stage in 2011-12.



*“To be both innovative and creative,
one has to remain flexible and
reflective at all times.”*



An Online Project: Maths, Fun and Food

Kim Allan, Mathematics Teacher, Abbotsleigh

'I hate Maths' greeted me when we started work in Year 9 this year. Several girls lacked confidence as they struggled to develop vital literacy and numeracy skills, so I sought ways to turn around their negative perceptions. I was inspired by a professional development day, which investigated the benefits of social networking media. The IT Integrators have also been a great source of inspiration and support in setting up the 9M8 blog.

Our blog includes photos they have taken of the girls, class rules designed by the girls and information about class activities. When students go to the virtual classroom before accessing the blog, there are class notices as well as links to useful websites, past papers and solutions, revision work and assessment notices. The student of the week (a highly sought after award) is also listed. The girls are quick to learn and eager to share and make good use of their laptops. They inspire me with their enthusiasm and 'never give up' approach, even when the work is challenging.

Where and how to begin? I decided to start simple. The students and I were going to learn together. I wanted it to be about the girls by including photos of them at work. It was also important to have the activities well scaffolded to build confidence and develop the necessary skills.

Data analysis and online publishing

We started by discussing class rules and how they relate to the school values. I then developed a survey and asked the girls to rate the rules according to importance (high, medium, low). They learnt how to access the blog site and enter data. We discussed the results and the girls were re-directed to the blog to answer questions relating to data analysis and presentation. Each student was assigned a rule to present as a single Powerpoint slide (with a link to a sample on the blog).

Skills developed included data collection and analysis, applying fractions and percentages to real life situations, design and copyright issues related to online publishing, uploading files, team work, developing good work and study habits, and writing blog posts and comments.

Rich tasks

During the first term, we studied fractions and percentages. I asked the girls whether anyone had a favourite recipe, with the intention of using it as the basis of a class assignment on adapting quantities. When Tory offered her choc chip cookie recipe, it was suggested that we actually cook them. At first I was reluctant but everyone was so enthusiastic that I decided it would be a good idea, designed a rich task and placed it on the blog.

The girls developed many skills, such as converting measures, using spreadsheets, showing data using pie charts, comparing quantities, shopping online to compare prices and reflecting on alternative methods of displaying information. The girls decided who was bringing the ingredients by posting their contributions on the blog.

On the day, the girls were very excited. There were many practical, literacy and numeracy skills developed in this session including team work, reading information accurately, correctly measuring ingredients (a quarter of a container of butter is much easier to remove when cut into segments rather than parallel layers), estimation and even cleaning up. It was great fun, especially with our very own Delia Smith (aka Madison) and Nigella Lawson (aka Piper) leading the class through the activity.

Digital future

These are early days and I am looking forward to involving the girls more in developing the blog, building confidence and increasing their engagement in Mathematics. Our next adventure will involve the girls in digital storytelling.

I was greatly encouraged at the start of the holidays when I accessed the virtual classroom to update the blog. One of the girls in the class had posted this notice on the virtual classroom: 'Mrs Allan, I just want to say on behalf of the whole class, thank you so much... We have all improved this term and now all love Maths.' It doesn't get any better than that!

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Sounds of Nature and Musical Creativity

Helen Watkins, Head of Environmental Education, Abbotsleigh

Our earth resonates with its own soundtrack. As a country girl growing up beside the Clarence River, the soundtrack that accompanied my childhood was coloured by the glorious carolling of magpies and butcherbirds, wind through the sheoaks and the huge spotted gums and stringy barks, crackling of summer parched grass, the banjo frogs in the back swamp and the sad caw of crows in the shimmer of hazy, lazy midsummer.

I was well into adulthood before I discovered the music of Peter Sculthorpe, Stephen Leek, Dan Walker, Ann Carr-Boyd and Colin Brumby, to name a few. For the first time, I heard music that had a distinctive Australian voice – music that thrummed with the Australian landscape and its rich history.

As a music teacher searching for ways to encourage students to discover the music within them and to listen to the natural sounds of their own world, I turned to experimenting with natural materials and found objects – stones, pieces of metal, seed pods and wood. At its most fundamental, music is simply the arrangement of sounds on a canvas of silence that the creator finds appealing. I found that students, presented with opportunities to explore the sounds that could be made with something as simple as two stones, soon turned them into meaningful soundscapes that had a musicality and subtle beauty that surprised them and quite often, me. The voice was our first instrument and the girls used vocals to powerful effect in their compositions as well.

When the 28-voice Junior School choir, Cantare, was invited to sing at Abbotsleigh's 125th Birthday concert, Jubilation, to be held at the Sydney Opera House, I wanted to showcase not only their lovely voices but also the high level of creativity of which these girls were capable. I had Stephen Leek's piece *Seascapes* unused in the music library for some time. Stephen is a choral writer who understands children's voices and has a passion for



embedding the Australian landscape in his works. He also likes giving singers the chance to have their own input into a performance.

Seascapes is divided into three sections, each opening with a beautiful two part unaccompanied wordless score that rises and ebbs and merges into an instrumental seascape that he left open to the performers to create. The Cantare girls discussed the feel of the piece and the mood we were trying to create and experimented with various sea-like sounds. They settled on five main elements:

1. Drums including a rumbling bass drum and a sea drum, which has seeds that roll round between two skins giving a lovely surf sound
2. A metal element of softly rolled cymbals of varying sizes and types that gave a gentle shimmer and frisson to the overall sound
3. Rattling sounds to resemble the surf washing over a pebbled beach for which they used carefully chosen stones that were rubbed and struck together, various South American rattles made from raffia, jujube beans and other natural materials, and small egg maracas
4. Wind sounds created by blowing over the tops of bottles and through sea shells
5. Seagull sounds made by the human voice

We also decided to have the gentle tone of a Tibetan singing bowl sounding throughout most of the performance. Whilst I, as conductor, could bring each sound group in and out, the performers were still individually responsible for their own contribution and could add or subtract their particular sound as they felt necessary during the performance, making each rendition unique and unrepeatable.

The wonderful degree of subtlety and empathy the nine to 12 year olds achieved in their concert performance, showed the level of sophistication young performers, given creative responsibility and a high level of engagement, can reach.

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Face to Faith

Ms Kathleen Upfold, Deputy Principal - Professional Learning, Star of the Sea College, Victoria

Face to Faith is a global schools program, initiated by the Tony Blair Foundation. Designed to bring 11-16 year olds together, using digital technology, its purpose is to encourage our young people to learn about each other and about the attitudes of people of different religions, or no religion at all, to global issues such as the environment, health, family, poverty and wealth.

Already active in 15 countries around the world, *Face to Faith* is designed to encourage young people to recognise the similarities between faiths, and more importantly, to respect and deal with the differences between diverse and sometimes conflicting worldviews. By learning about those with differing social, cultural and religious perspectives, young people build their awareness of the role of faith in their lives and in the lives of others.

Through the *Face to Faith* online community and video-conferencing network, Star finds partner schools from around the world with whom they can discuss global issues through different faith and cultural lenses. Students are strongly encouraged to develop possible collaborative social

action projects within their own community, and where possible, across the wider global community.

Face to Faith is part of the Year 10 RE program. Students are put at the centre of the learning program which crosses traditional subject boundaries in the interest of deeper investigation. Storytelling, action based learning and video conferencing ensures that students are engaged by the program, bringing benefits that stretch well beyond the classroom.

VCE students participated in video conferences with speakers at the United Nations to mark International Women's Day in March and World Malaria Awareness Day in May. Year 10s have been engaged in a video conference with students in India where they shared information about schooling as well as their understanding of family, community, global issues, social justice, sport, music and dancing.

We, at Star, are proud of our involvement in an innovative program that is designed to break down barriers of faith and wealth and culture.



Encouraging Musical Innovation

Andrew Pennay, Head of Classroom Music, Brisbane Girls Grammar School, QLD

(Andrew was a recent recipient of a National Award for Excellence in School Music Education)



Brisbane Girls Grammar School possesses a rich musical tradition. Our busy co-curricular program sees 30 plus concerts and two festivals each year and this work complements the stimulating, academically challenging work undertaken by students in curriculum areas. Our Creative Learning Centre has become the life-blood of the School with students mingling around creative spaces in their spare time.

The Classroom Music program, as a subsidiary of the Creative Arts Faculty, focuses particularly on the development of musicianship skills. As a specialist teaching area, Classroom Music students at Brisbane Girls Grammar School are required to hone sophisticated skills that are best developed by specialist teachers. To this end, our teachers of Music employ a Kodaly-inspired philosophy in their teaching, aiming to instil a love of music primarily through the experience of singing (Houlahan & Tacka, 2009).

Our accredited Kodaly teachers have honed their craft in this specialist style of teaching. Hallmarks of the style include an emphasis on vocal instruction, development of music literacy through active music-making, the development of a keen ear through employment of tonic solfa along with specific games and other repertoire with an emphasis on folk music from a range of cultures.

We aim to foster musical innovation from Year 8 to Year 12 through a range of initiatives, always from an aural-vocal perspective. Freed (1998) notes the importance of exploration, decision making, editing and drafting, well before the completion of a coherent product. At Brisbane Girls Grammar School, we develop these skills through the lens of musicianship training, in order to provide our students with concrete, observable, mappable skills that enable them to engage in this creative process recursively and sequentially as literate musicians.

Within an 'older beginner' framework that recognises the breadth of skill levels students have upon entry to BGGGS, our early composing efforts are truly based in sound and supported by development of music literacy. Junior Music students use simple movement, rhyming, rhythm and eventually melodic devices in a sequential program that instils confidence in their own abilities. As a consequence, students are able to notate, sing and play their own work with accuracy. They are empowered through a focus on the secure development of music literacy and compositional skills.

Cognisant of the fact that our students are deeply immersed in popular music, and mindful of Ruthmann's (2007) observation that students best develop a sense of personal musicianship through engagement in composing experiences that draw on 'their music' as curriculum, all Year

10 Music students undergo an intense Song Writing project that requires them to sing and play their own songs which are then presented on CD for members of the School community.

In the Senior School, our Year 11 Film Music task requires students to compose and subsequently record and perform their own film scores live on stage with their peers. Each year, our Year 12 students work with the renowned Topology, arguably Australia's most innovative new music ensemble. This opportunity provides the girls with composing and arranging skills with an emphasis on modern composing techniques. Each year, the students enjoy the thrill of playing alongside a professional ensemble and having their own work workshoped and eventually 'realised' live on stage. The girls project stunning visuals (usually donated by Art students) and the resulting project is compiled as a high quality DVD.

Outside the classroom, our active Composers Club has been formed to help individuals who are preparing for composing competitions, collaborating with peers, writing music for Drama productions or seeking extension or remedial musicianship work. Our Song Writers Studio, held concurrently, particularly values song-writing partnerships and provides access to music-making and recording for a broader range of students. Our annual Covers Competition invites students to record an innovative take on an existing song. These authentic co-curricular opportunities help our girls bridge what Jonathan Savage (2003) calls the 'listening gap' between their previous aural experiences and new or unfamiliar styles.

Across all year levels, we aim to embrace a School culture that values musical innovation and the infusion of creativity into all tasks through carefully designed assessment instruments and methodical instruction.

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Are Board Games Playful Learning?

Bruce Oppenheim, Science Teacher, Abbotsleigh

Board games have been a popular past time for thousands of years but are they educational? There is increasing interest in schools and libraries across the world in the role of games as a playful way to strengthen and develop learning. Some focus on computer games, while others focus on board and card games. In both areas there is a lot of excitement as to their potential benefits, with some even suggesting they may help develop the creative tools needed to help solve the world's greatest problems. The TED lectures by John Hunter on the World Peace Game and Jane McGonigal, with her book *Reality is Broken – Why Games Make Us Better and How They Can Change the World*, are both enlightening.

There has been a startling burgeoning in intelligent board game design over the past decade or two, which goes beyond the re-theming of an earlier game to a recent movie release. This initially came out of Germany and subsequently these games are often referred to as 'Euros' (or 'designer games' as their designer's names are prominently displayed on the box fronts). These games normally focus on multiple strategic options and different routes to success.

An important feature of board games is that while winning is the goal, the process of playing is what makes it fun. Alternative strategies can be explored, different tactics can be tested. In other words, games encourage cognitive risk taking in a safe, non-threatening manner and thus creative problem solving can be developed. Studies in the educational value of board games are in their infancy and as yet have mainly focused on their mathematical benefit. These studies have shown improvements in the numeracy in disadvantaged preschoolers and improved geometric reasoning and problem solving amongst Middle School students. While games can benefit maths skills, they can also work with a variety of other skill sets.

Recently, a variety of cooperative games have been developed where players have to work together to solve a problem, such as saving the world from a global pandemic or rescuing treasures from a sinking island. Success is by no means certain and only active teamwork and the pooling of ideas will lead to a positive outcome. The enjoyment of such games is not limited to school children. At a recent school seminar on board games in the classroom, there were loud whoops of joy from several senior members of the school when they managed to get back to their helicopter with the last treasure as the final part of their 'Forbidden Island' finished sinking below the waves. The game had engendered intense, collaborative problem solving and a palpable satisfaction at the successful conclusion. Such activities can only be of benefit to our students.

Some of the skills being developed by playing games:

- Social skills around a common task. This can be across age groups and with both teachers and students.
- Problem solving
- Logical deduction
- Developing chains of causality
- Language skills through the variety of word games
- Creativity in story telling games.

'Lucky' thirteen thinking tools

1. Observing: Highly creative people pay attention to their senses. They are open to all experiences.
2. Imagining: The ability to recall or imagine allows scientists and

musicians to recall past sensory experiences and to imagine new sights, sounds and feelings.

3. Abstracting: Creative people use abstracting to extract core principles from complicated data, ideas or images.
4. Recognising patterns: Recognising patterns as they occur in nature, language, dance or mathematics is the first step to being able to create them.
5. Pattern forming: Creators combine elements in new and often unexpected ways.
6. Analogising: The creation of analogies is a logical extension of recognising patterns. We recognise that two seemingly different things share important characteristics.
7. Body thinking: Many highly creative people describe awareness that comes through the body before it enters the conscious mind.
8. Empathising: Individuals lose themselves in the things they are studying.
9. Dimensional Thinking: Individuals are able to envision objects in three or more dimensions.
10. Modelling: Modelling can range from modelling work on the accomplishments of others to using working models to understand and analyse situations.
11. Playing: Playing requires a 'childlike joy in the endeavour at hand'. It can entail approaching tasks with a level of irreverence that allows typical rules or procedures to be ignored momentarily.
12. Transforming: Transforming can move ideas from one form to another and/or move from one thinking tool to the next to further explore and understand ideas.
13. Synthesising: Used to bring together ideas, feelings, memories, images, etc in a holistic way.

Source: Starko, A (2010) *Creativity in the Classroom*, New York: Routledge.

Room to grow

Games for Educators: <http://www.g4ed.com/>

TED videos: www.ted.com/talks/john_hunter_on_the_world_peace_game.html or http://www.ted.com/talks/jane_mcgonigal_gaming_can_make_a_better_world.html.

MIT's Lifelong Kindergarten Group: <http://llk.media.mit.edu/>.

Board Game Australia: <http://www.boardgamesaustralia.org.au/>.

Harris, C (2009) Meet the new school board: Board games are back - and they're exactly what your curriculum needs, *School Library Journal*. Accessible online at <http://www.libraryjournal.com/>.

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Social Media: How do schools traverse the landslide?

Ms Barbara Watkins, Principal, and Mr Martin Pluss Learning Technologies Coordinator, Loreto Normanhurst, NSW

Facebook, Twitter, Skype, you name it; we are in uncharted waters every time we engage with the juggernaut that is Social Media. Embracing Social Media is yet another new and exciting learning development for educationalists, and embrace with the medium we must or we will find ourselves increasingly outside the world in which our students live.

Whether you are an early or late adopter we know that we need to educate our young students to traverse any risks and embrace its effective use to become ethical digital citizens of the third millennium.

So, what is appropriate with this new medium and how does a school go about introducing this new wave of technology to its community in an appropriate way that will enhance their relationships and learning? At Loreto Normanhurst, we have taken the following approach knowing that each school's own value base must underpin any approach to embrace social media.

Like many schools across Australia, by 2012 at Loreto Normanhurst all students will be involved in a 1:1 laptop learning program. This has increased student access to social media tools and it proved prudent to investigate the impact and use of social media on the school. At Loreto we have embraced the use of webtools for communication and learning, and more recently we have embraced Social Media in four waves: awareness, education, engagement and integration.

1st Wave: Awareness

It was quite clear through our pastoral care program that students were using social media and the school became aware of the need for the students to learn how to use social media appropriately and ethically. Smartphones changed the playing field and education was needed rather than prohibition. In addition, the school's 1:1 program placed a laptop firmly in the home; accordingly we felt a responsibility to help families through the process of managing yet another mobile device. For teachers, there was no clear generational pattern of the use of social media. For the school community, factors such as comfort with technology, concerns with privacy and willingness to change, all contributed to a hybrid usage pattern of social media. It was clear that the world beyond the school gate was changing, a critical mass of social media use was developing, and it was time to begin a process of education.

2nd Wave: Education

In the first wave it became clear that students, parents and staff had different interpretations and usage of social media so the school embarked on an educational strategy aiming to develop a common understanding of the value of social media. In vertical pastoral care groups and year groups, students were taken through a program developing an understanding of their digital footprint, growing in their awareness of their role as digital citizens. Special meetings were held for parents to explain and

demonstrate the basics of social media. For staff, Breakfast Clubs were developed. These were regular meetings where early adopters and those comfortable with emerging technologies were chosen to lead staff groups through different aspects of social media.

Both these initiatives were well received by parents and staff and so now Loreto was in a position to join other businesses, government bodies and schools using social media.

3rd Wave - Engagement

It was in the above awareness raising and education context that a Social Media Strategy of engagement was developed for Loreto Normanhurst, and Loreto's Twitter, Facebook Pages and YouTube Channel were launched.

The school developed a linkage between Twitter and Facebook so that we could update Twitter with mobile devices on the road and at school events and these tweets would feed automatically to the school Facebook Page.

The use of YouTube was carefully managed and linked to Twitter and Facebook. As a school we believed it was better to have the school's official version of concerts, sporting and other events online rather than pieces taken by students alone. The school made appropriate use of public, unlisted and private options in the YouTube setting and assured the community that we were complying with school privacy procedures.

Wave 4: Integration

The use of social media in the school is continually evolving and it is only one cog in the wheel of the school's integrated communication and collaboration strategies. The use of 140 characters for Twitter and status updates for Facebook left a gap in our communication strategy so it was necessary to integrate the social media into some of the school's current methods of communication. Twitter and Facebook were linked to the school Newsletter, Parent Portal, sport notices and our school extra-curricular tours around the country or overseas.

Launching the Social Media Strategy at Loreto Normanhurst was in the context of other ICT projects of collaboration in the school. A Social Media group, including the Principal and Learning Technologies Coordinator, met regularly to respond to any unintended outcomes and consequences from its use so that we could ensure the sustainability of the school's social media.

This staged and sequenced approach to social media is already having a positive effect in the school. The next exciting chapter of the journey will be to carefully integrate social media into teaching and learning. Follow us on Facebook, Twitter and YouTube and you can see how we go.

<http://www.facebook.com/pages/Loreto-Normanhurst/108276435863336>

<http://www.youtube.com/watch?v=9KIaA4vEpXk>

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Surf Lifesaving in Health and Physical Education



Hospitality students prepare for the Friday Annexe Restaurant



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