



in Alliance

THE ALLIANCE OF GIRLS' SCHOOLS (AUSTRALASIA) LTD
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in Alliance

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special issue

● *Annual Conference
2002 High Tech Girls*



In Alliance Editorial Deadlines 2002

Volume 24
Both Ends of the Spectrum
(gifted/talented/special needs students)
Thursday 15 August, 2002

Volume 25
A New Environment
(boarding and exchange programs)
Thursday 10 October, 2002

Copy on the above topics for the relevant Volumes is welcome and must be submitted to Dr Nancy Hillier at Annesley College or through principal@annesley.sa.edu.au by the above dates.



IN THIS ISSUE...

- Annual Conference 2002 High Tech Girls
- Welcoming Our New Patron
- President's reports
- Robotics & Engineering at Sacré Coeur

FROM THE EDITOR...

...many new faces in established roles.



Welcome to our new President Barbara Stone. We look forward to the next stage in the development of the Alliance under Barbara and we read of her hopes and aspirations in this Edition. After passing the torch of leadership of the Alliance, Ros Otzen will remain on the Executive in an ex officio role and thus maintain the link with the origins of our association, now numbering 93 members. Given there are 102 members of our American Affiliate, the National Coalition of Girls Schools, our strength is a great credit to those early members and the ongoing quest for further development. Our Executive Director, Edwina Sear has seen membership rise from 78 to 93 in the past 18 months and she is continually engaging with potential new members.

Ms Quentin Bryce AO, Principal of the Women's College within the University of Sydney, has accepted AGSA's invitation to become a Patron of the Alliance and we look forward to Ms Bryce's "useful contribution to such a splendid organization" as she commented in her acceptance. A profile of Ms Bryce may be seen on page 3 of this volume.

This edition allows us to reflect on the Annual Conference held in May in Melbourne. High-Tech Girls was again most successful in bringing together member schools and welcoming

Principals and Staff from our most recent members including Margaret McLeod Principal of Wellington Girls' College and Jacqueline Scorgie Principal of Corran School New Zealand and the Australian new members from Siena in Victoria, Brisbane Girls Grammar and Brigidine, Brisbane.

We were grateful to have Carolyn Grantskalms and Ann Mildenhall provide the overview of the Conference at the Final Plenary session and their observations are included in this edition.

In addition the marvellous work on robotics and engineering occurring at Sacré Coeur and Year 1 ICT at Wilderness are shared.

As we move into the holiday season may I wish you all a pleasant and refreshing break ready to take on the challenges of second semester. Our most recent material supplied by the National Coalition of Girls Schools clearly demonstrates the success of girls' schools in the United States and we must continue to work with the special young people in our care to ensure their continued support and opportunity in our schools. We are indeed fortunate to work with such fine young people and continue to support their learning and the professional development of our staff in many and varied ways.

Nancy Hillier, Editor

FROM THE EXECUTIVE DIRECTOR...

...and now under new leadership.



Following the Executive Meeting and our Annual General Meeting on 24 May, 2002 at Melbourne Girls Grammar, we farewelled Ros Otzen from the Presidency and welcomed Barbara Stone to the position. Barbara has written to us in this edition and we look forward to further blossoming of our already vibrant organisation. We also welcomed the appointment of Susan Just, Principal of Ipswich Girls' Grammar, Queensland to the Executive.

The Alliance Conference High Tech Girls was a great success commencing with a presentation by Dr Cornelia Brunner following which we moved into a very noisy drinks session (much animated catching up) and then into dinner, via the scented floor candles. The Japanese theme for the evening was enjoyed by all and SSL

Education Services (Spotless) did us proud with a delicious dinner. The organising committee had made the decision that this dinner would be a social occasion only, with no official speakers, so by the end of the evening there were many exhausted voice boxes.

Saturday and Sunday were held at The MacRobertson Girls High School, where delegates were launched into the day by Gary Stager in MacRob's magnificent Theatre. Sessions continued throughout the day and are amply recorded by various delegates in pages to follow. Presentations have been posted on the website (www.agsa.org.au) for you to visit and download as necessary and so will not be reproduced in this Volume of *In Alliance*. Spotless continued to produce stunning food and our sponsor, Fed I.T.

presented us with the latest is various technologies – some of which looked too good to leave! There were those who were fortunate enough to go home with some samples subsequent to the lucky draw.

Our thanks go to Christine Briggs at Melbourne Girls Grammar and Lesley Boston at The MacRobertson Girls High School and all those who were of enormous assistance at each school, for their integral part in the success of the conference. We would also like to acknowledge and thank those schools which generously opened their doors to our delegates for their exploratory ICT trip: Melbourne Girls' College, Methodist Ladies College and Korowa Anglican Girls School. This was a most successful trip ably 'captained' by Alyson Groom, thank you all.

Also included in the Volume is an 'IT' article by Sacré Coeur with much colour in the accompanying photographs.

We look forward to the Executive meeting in Sydney in August and to the Student Leadership Conference and the Annual Conference next year, both to be held in Sydney...more details to follow.

Our website is running along smoothly and your input is always valued. Please make this a site you visit and respond to. We have decided to add a new section to the website which will be an 'Employment' section for our members where you may advertise positions as you need. There have been occasions when our members have felt they wish to advertise for people who have a particular girls' schools perspective and this facility will, we hope, assist members in their endeavours to fill vacancies. Please feel free to send information to me so I may organise for this to go onto the website. This will be a service provided as part of your membership and there will be no extra charge for the service.

Also to be found on the website are past editions of *In Alliance* which you may wish to browse through. Ros Otzen has asked that you refer to her Editorial in Volume 9 of March 1998 and this may well be a timely initiation for this activity.

There is much the Alliance has achieved to date and there is still much to be done... so we look to the future with excitement.

Edwina Sear, Executive Director



Jan Parkes with Edwina

OUR NEW PATRON...

Ms Quentin Bryce AO

Quentin Bryce was educated at Moreton Bay College (an AGSA member) and the University of Queensland where she graduated with the degree of Bachelor of Arts with Bachelor of Laws. She was called to the Queensland Bar in 1965, one of the first Queensland women to be admitted. In 1968, she embarked on an academic career when she joined the Faculty of Law at the University of Queensland. She was awarded an Honorary Doctorate of Laws by Macquarie University in 1997.



She has a long and distinguished record of advocacy for human rights and in particular the rights of women and children. In 1978 she was appointed to the newly created National Women's Advisory Council. On that Council she played an important role in highlighting the concerns of Aboriginal women and women who lived in remote areas and had a significant input into the work of the Council in redefining the relationship between government, bureaucracy, women's groups and the community.

Her interest in systemic discrimination against women led her to accept the position of Founding Director of the Queensland Women's Information Service. In 1987, she was appointed Queensland Director of the Human Rights and Equal Opportunity Commission.

In 1988, Ms Bryce took over the role of Federal Sex Discrimination Commissioner. In this position, she distinguished herself in the evolution of human rights law and the resolution and abolition of discriminatory practices. She was a member of Australia's delegation to the UN Human Rights Commission in Geneva and represented Australia at major International conferences on the status of women. She was tireless in her community based approach to this role while recognising and respecting the legal framework in which it operated.

When that role ended, she became Founding Chair and Chief Executive of the National Childcare Accreditation Council with the brief of establishing national standards in the childcare industry. This was a demanding and controversial task and, given the diverse nature of the industry, critical to the improvement of standards for the protection of children in child care situations.

Quentin Bryce embarked on the role as Principal of the Women's College within the University of Sydney in January 1997.

Her community involvement includes chairing the National Breast Cancer Centre Network and the Board of Women's Cricket Australia.

She is a member of the board of Plan International and several advisory boards in the University and non profit sectors.

Quentin Bryce is an outstanding role model for others to emulate. She is a courageous and articulate person, always in the forefront of social change and responsibility, often facing strong opposition, but prepared to challenge aspects of legal practice and opinion which inhibit social process.

In 1988 she was made an officer of the Order of Australia in recognition of her contribution to the community, in particular women and children.

On a personal note she is married to designer Michael Bryce and has five grown up children and two grandchildren.



PAST PRESIDENT'S REPORT...

...from EGGSG to AGSA.

(an excerpt from the President's Report given at the 2002 AGM.)



This is almost the end of a long road for me as I step down as President of the Alliance. I feel well pleased with the twelve years I have invested in the promotion of girls' schools. It was late in 1991, that I first called together Victorian Heads of AHISA Girls' Schools, to discuss how we might work together to strengthen our sector. Sylvia Walton encouraged me to do so, after we had shared our thoughts during a sunny morning tea at the AHISA conference in Perth. Girls' schools were the butt of all manner of scurrilous misrepresentations from certain co-ed schools: we were depicted as anachronistic, fuddy-duddy left-overs of a bygone era, as a wave of single-sex boys' and girls' schools sought to reinvent themselves as co-eds. I recall writing a piece in response to the charge that girls' schools were a "deliberate abnormality"!

We called ourselves "The Education of Girls in Girls' Schools Focus Group" – a real mouthful, but there was something apt about being EGGSG! I recall vividly that for our first year of meetings we did not know how to relate to each other. We were so defensive! Some of us were really frightened lest we do or say something which could be construed as offensive to our antagonists. We had no practice in working together, and so established dialogue tentatively and slowly. How much should we reveal of ourselves to other girls' schools who were, after all, competitors?

We held a most astonishingly successful first conference at MLC, organised by



The AGSA Executive I-R: Barbara Stone, Suzanne McChesney, Lesley Boston, Dr Ros Otzen, Nancy Hillier and Ann Mildenhall. Absent: Beth Blackwood, Carolyn Hauff, Edwina Sear (taking photo).

Judy McCowan in 1992. We suddenly saw that we had real power as a group, so much so that the presence of the Head of a well-known co-ed school at the Dinner and his attempts to stir and ruffle us, came to nought. We felt a wave of energy and determination, which led to the transformation of EGGSG into The Alliance of Independent Girls' Schools in 1995.

At the first AGM in May 1996, membership was extended to all girls' schools in Australia of whatever sector, and New Zealand schools were included. This was a bold step: we were affirming that our common purposes as girls' schools overrode other sectoral differences. Our new name was the Alliance of Girls' Schools Australasia. We were incorporated on 18 August 1997. I would ask you to refer to my Editorial for *In Alliance* in Volume 9, March 1998 – you will find this on the AGSA website. A measure of our success is that we are no longer spoken of as some sort of crack-pot breakaway group on the fringes of real education, but as a

significant and strong organisation, whose opinion is sought, and whose sector is extraordinarily successful in the educational task.

Thus, I wish our marvellous Alliance health and strength, and many triumphs to come. I feel privileged to have been so close to the heart of the enterprise thus far, and am pleased to hand it on to our new President, Barbara Stone, with very great pride.

Ros Otzen (Dr)

FROM OUR NEW PRESIDENT...

...let us be advocates for girls and their learning.



It is a great honour and rather daunting to become the fourth President of the Alliance of Girls' Schools (Australasia). Since our establishment in 1995, with the success of our Annual Conference, the help of high quality publications like *In Alliance* and *Why a Girls' School*, and with an increasingly useful and attractive website, we are helping to raise awareness of the value of girls' schools as effective learning environments.

Much more, of course, remains to be done. On August 4 and 5 this year, the Executive will meet to develop its action plan for the next two years. Your input in terms of future directions would be welcomed. Our next Annual Conference is already taking rudimentary shape. To be held from May 23 to 25 at Loreto, Kirribilli, in Sydney, it will focus on research impinging on girls'

learning and provide opportunity for networking within "job" groups – Heads of School, Public Relations, Admissions, Directors of Studies – such as occur at the National Coalition of Girls' Schools Annual Conference.

My goal is that my time as President will see the Alliance strengthen its sense of identity as well as its membership. Girls' schools have been at the forefront of many changes in education in Australia. Sharing our knowledge about best practice can only consolidate this position. In this year's Annual Report, the National Coalition of Girls' Schools quoted Disraeli – "The secret of success is constancy to purpose". Like the body that inspired our formation, let us be, first and foremost, advocates for girls and their learning.

Barbara Stone, President, AGSA

OVERVIEW: HIGH TECH GIRLS CONFERENCE...

...focus on skill building will lead to seamless integration of new technologies.

The conference began with a keynote address by Cornelia Brunner from the New York Centre for Children and Technology.

Her presentation explored some of the gender differences in attitudes to information technology and the ways in which these attitudes impact upon career choices. In short, few women choose to enter into professions in information technology because their vision of the industry accords very poorly with their vision of what the industry might be and do.

This presents a number of issues which need to be addressed. Information Technology is a huge industry and a growing one providing rich opportunities for employment in a diverse range of endeavours. If girls do not consider these opportunities they are denying themselves opportunity. Even more importantly their view is largely based on assumptions which are incorrect. Girls do not know what is actually available. Moreover if women are not involved in the industry, it will continue to be created in a male paradigm. New authoring needs to be more focused on the user of the information and the ways in which information might be well designed to meet needs. Women must have a voice in this meaning making.

Cornelia answered a number of questions at the end of her presentation including ones dealing with chat room safety. She pointed out that we cannot keep girls safe, we have to teach them how to keep themselves safe. She posed an interesting question in the course of this discussion, one to which I still don't have a good answer:

What is the question to ask when the instinct says beware?

The second speaker, Gary Stager, works at Pepperdine University and in a range of projects, one of which provided much of the material for his presentations.

It is his contention that "the problem is not with girls nor with technology. The Problem is with adults who are not able to imagine the possibilities."

In his view the new technologies present us with new things to know and new ways of knowing them.

He supports a project-based education allowing students to construct their own knowledge supported by a range of technologies and staff. Technology is the building material through which students will learn.

Students should establish their project, which would have personal relevance to them in the present moment. The project would enable them to enter a rich world of possibilities, to explore and to construct knowledge relevant to them. The project would take "the proper time for the job".

These ideas had much in common with the philosophies of the Reggio Emilia approach to early childhood education and indeed Stager himself recommended an extension of the integrated approach used at that level of schooling.

He is passionate about the rights of children to great education and is both despairing about and contemptuous of much that still happens in schools because it sells children short - "We teach them but they don't stay taught."

Following Gary's first presentation there were three workshops offered and I attended Rosa Storelli's presentation on the ways in which the laptop program at MLC enables more effective learning to occur for girls and impacts on school planning and staff professional development.

MLC has developed a technology plan which looks at all of the impacts of technology on the school and campus and charts the way forward.

She identified the key issues in successfully integrating technology so that student outcomes are improved:

- the development of a school-wide learning culture
- professional development
- support for staff – at MLC this includes personnel with time release so they can work as learning technology consultants
- specialist staff

At MLC laptops provide the multi-dimensional tool which enables girls to express their ideas and their learning to a local or global audience.

Jenny Little's presentation, entitled "What is high-tech learning today: what can it be in the future" focused on the centrality of professional development. "Learning needs to be as important for our teachers as it is for our children."

Technology needs to be seen as a thinking tool rather than a delivery tool, a way to make children's thinking transparent.

There were a number of resonances between Rosa's presentation, Jenny's presentation and the final speaker of the conference, Helen Hayes who is Vice Principal (Information) at the University of Melbourne.

All three speakers stressed the need for teachers to see themselves as learners, for the institution to have developed a culture which stresses the need for constant learning and constant change in practices and approaches and for support to be readily available to staff.

All children deserve the best teachers all the time and this can only be achieved through a deliberate and planned focus on skill building in our staff so that the new technologies can be seamlessly integrated in the learning process for all students.

The conference ran very smoothly and all of the speakers provided us with food for thought. I should like to thank the members of the organising committee, especially Christine Briggs, Lesley Boston and Edwina Sear, for all of the time and energy they put into ensuring a successful 2002 conference for The Alliance.

Carolyn Grantskalns, Principal, Wilderness School, SA



Carolyn Grantskalns and Christine Briggs



THE 2002 AGSA A HIGH TEC



The Presenters (L-R) Helen Hayes, Tony Cruttenden, Jenny Little, Gary Stager, Olivia Clarke & Cornelia Brunner (not shown: Rosa Storelli, Margaret Akins & Rebecca Vosper)





ANNUAL CONFERENCE HIGH GIRLS





HIGH TECH GIRLS CONFERENCE: PERSPECTIVES...

...the newcomer's perspective.

6am May 26 2002 – Holiday Inn, St Kilda Road, Melbourne... I've been awake since 4am!

Is it the memory of the wonderful Paella at Barcelona? - the Spanish restaurant in St Kilda's, Fitzroy Street.

Is it the stimulation of conversation over dinner with new friends from Melbourne Girls' College? (thanks Jan & Nia - all learning takes place in a social context)

Is it the immersion in all I've seen and heard in two power packed days focused on teaching and learning and ICT?

In truth it is a combination of all of these.

It is always a privilege to step inside other schools to glimpse different ways in which professionals are grappling with the issues we all face, and amazing what little items can have huge impact on implementing change in our own environments.

A very warm thank you to Melbourne Girls' College, Methodist Ladies' College and Korowa Anglican Girls School for opening your doors to 56 "professional" tourists, including this new face from across the Tasman.

In the last 2 hours since 4am, I have read and reread my notes from presentations over two days. Summaries of many of those presentations are in this edition of *In Alliance*. Suffice to say, I have been provoked, challenged and stimulated to consider my own beliefs about teaching and learning and the role of ICT in those critical processes. And how refreshing, as a Principal, to come to a conference focused entirely on teaching and learning (the heart of the matter) and not on the myriad of managerial duties encompassed in our daily working lives.

Another delight has been to be able to focus entirely on the needs of young women, the people who matter most in our schools. There is mutual understanding about the ways in which our schools are different. Dialogue can be focused on the ways girls learn, and the social and environmental factors required to promote better learning. I have thoroughly enjoyed the discussion, the networking in an environment bigger than New Zealand and the truly collegial atmosphere of a wonderful conference.

Finally I'd like to acknowledge two

people: Jan Parkes, of Melbourne Girls' College, whose energy and vitality was enough to persuade me that joining the Alliance would be beneficial for Wellington Girls' College. (Best wishes for the future Jan, as you step out of Principalship) and Edwina Sear, Executive Director of the Alliance; whose warmth and attention to personal detail (as well as organizational detail) make her a wonderful ambassador for this organization. Huge thanks Edwina.

I can tell, that being part of The Alliance (to coin a phrase from our girls) will be truly AWESOME.

Margaret McLeod, Wellington Girls' College, New Zealand

...the seasoned member's perspective.

Over the past five years I have found the Alliance of Girls' Schools annual conferences to be some of the most worthwhile professional development I have undertaken. This year the 'High Tech Girls' conference was no exception.

I have attended these events at first as a Deputy Principal and then as a Principal in a variety of locations with completely different themes. No matter what the theme or location I have had the opportunity to interact with people who share my belief that girls' schools are doing great things in the education of young women.

The collegiality afforded by these occasions is something I have valued greatly. I have learned a great deal over morning teas and lunches, not to mention the most enjoyable conference dinners. The generosity of member schools to open their doors and host tours have given a tremendous insight to us all and speaks volumes for the spirit of camaraderie we all share.

'High Tech Girls' continued a tradition of providing interesting and knowledgeable presenters for workshops and keynote addresses alike. I know that many of our schools have invited speakers into their schools to inspire our staff or our girls after having heard them at Alliance annual conferences.

The Alliance of Girls' Schools annual conference should be marked in the school calendar early to ensure that key personnel can attend. My experience is that it is one conference that should not be missed!

Margaret White, Principal, Kambala

"I can tell, that being part of The Alliance (to coin a phrase from our girls) will be truly AWESOME."



...a new view from across the Tasman.

As one of the newest members of the Alliance of Girls' Schools, I arrived in Melbourne with high hopes for a conference that had been sold as "one of the best". New Zealand girls' schools are comparatively few, and in many cases isolated. As boys' schools experiment with co-education we sometimes feel embattled. We have no association of our own that offers the collegiality of the Australian Alliance, so the opportunity to join a much bigger group that can gather quality research and share a wider experience is of immense value. Australia is for us sufficiently the same, but sufficiently different to make the relationship between us interesting and useful.

Looking back through a notebook of scribbings and quick reminders jotted down during the conference sessions, I find a series of impressions that seem to stand out particularly:

- Dr Cornelia Brunner's energetic keynote address that rang so true on the subject of girls' thinking about technology.
- The beautiful Drawing Rooms at Melbourne Girls' Grammar.
- Meeting Edwina Sear who finally had a face after months of emails.
- The welcoming and lively people at our table at dinner on Friday – the conversation ranging wide from September 11 to the emptiness of the Australian desert.
- Dr Ros Otzen's reminiscences about how the Alliance came into being (all new and interesting to me), and then the contrast of her before-dinner story about the sympathetic portrait-painter.
- Rosa Storelli's vibrant presentation, full of clear thinking and practicality.
- The luxury of sufficient time to meet and talk to people.
- Definitely "one of the best".

And who was Phelia Grimwade? – an educational paragon from the past? – only a heroine could leave a dining room and a drawing room so-named.

The Tasman is, after all, not so wide. We look forward to the opportunity of hosting a conference in Auckland very soon.

Jacqueline Scorgie, Principal, Corran School, Auckland, New Zealand



*Our hosts:
Christine Briggs and
Lesley Boston*

...an energising experience.

High Tech Girls, the 2002 Conference of the Alliance of Girls Schools (Australasia), was a most energising experience. As new members, we were very interested to learn of the experiences of the Melbourne schools in the integration of technology and were struck by the passion of the presenters, not for technology, but for their students and the desire to achieve the best learning experiences for girls.

The presentations of the two keynote speakers, Dr Cornelia Brunner and Gary Stager, were most thought provoking. Each had a fresh eye on current research and an ability to challenge the perceptions of the audience. A major advantage was the opportunity to speak to these eminent educators throughout the conference. I also enjoyed the fact that they did not necessarily agree on all issues, such as constructivism, and this gave rise to more challenging discussions.

My colleague and I benefited greatly from the Conference. We have both spent a lot of time reflecting on best practice and on how we integrate technology throughout the school. Rosa Storelli's challenge to devise a plan for technology that suits your school environment has resonated deeply and has set us in motion! It was certainly a very worthwhile experience.

*Katrina Wain,
History teacher & IT Mentor,
Brisbane Girls Grammar School*





OBSERVATIONS: HIGH TECH GIRLS CONFERENCE...

...ICT and the 3 Cs – curiosity, critical thinking and creativity.

The conference theme 'High Tech Girls' was not really the focus, 'High-tech' was!

We began with the incomparable Cornelia Brunner. Those of us who were privileged to have heard her in 1996 were not disappointed in 2002. Brunner reminded us of the earlier research and the very different ways males and females view computer technology: Females wanting it to be integrated into their lives and males wanting it to make a transcending instrument. Post internet, boys use the technology as it is – taking the knowledge, while their sisters use it for connecting with others!

One of the problems we face is making the IT profession attractive enough for girls to even view it as an option. Brunner says that as educators we must ensure that our pupils are really literate – digitally, communication literate, media literate, information literate, as well as technologically literate. Our girls must be encouraged to think about computers in a different way – they do not need to 'love machines', 'be clever' or 'dedicated' to become an IT person. Girl-friendly games may be a start, and 'Sims' may be an answer! (After hearing Brunner, my husband bought it. However, this mother was rather non-plussed when she later heard daughter say she wanted to get back to getting the girl next door engaged! Some things obviously do not change!)

Tony Cruttenden's account of establishing IT in a Private Enterprise School in Toulouse, France was most interesting. Teachers were recruited for their IT skills and for their 'adventurous' characteristics – these were people confident enough to take risks and to learn with their pupils.

(Many Principals and IT Managers would be green with envy at the variety and amount of 'equipment' the school had available to it). The integration of IT into the teaching disciplines gave us a glimpse of what might be. Again, I think, the issues surrounding the professional development of teachers, their enthusiasm and well-developed IT plans are all-important.

Olivia Clarke may have been a 'trailing spouse', following her husband to California's Silicon Valley, but she certainly put her time to good use to research for a PhD. Her topic -: Pedagogues for effective learning in multi-media rich environments. Following Brunner's opening and Tony Cruttenden's account of the exciting possibilities afforded by the classroom use of IT, Clarke brought us

back to earth with what is reality in many schools. While most teachers agree computers and their software improve teaching and learning, really not much more beyond the basics is being done in schools. Her study supports the view that teachers and pupils have basic skills and those with more complex repertoires often acquire

these out of school. Teachers are competent administration users and pupils are usually competent in word processing, internet use, spreadsheets and presentations. When research suggests that in Australian schools only 34% of pupils used computer technology more than one hour per week it is probably little wonder that more imaginative use is not made! Unfortunately, the research also supports those who do not support the use of IT and computers in the classroom, as often the real use is that of 'new wave cut and paste' – in fact, 'unknowledgeable and uncritical use of the internet and media'. Clarke says the barriers to teachers taking up IT are 'common, consistent, repeated' reasons and are ones we must address if we

wish, genuinely, our pupils to become totally 'literate'. The issues for teachers are not insurmountable but, unless they are addressed, I can see schools becoming increasingly irrelevant for furthering IT use. There are issues of access, connectivity; the fragility and unreliability of hardware and software. Teachers simply do not have time out of school because of the conflicting demands on their time. Teachers do not have readily available technological support or advice and they do not have time to source and evaluate software and internet resources.

This is an issue which we must address if our pupils are to be adequately prepared for life after school. Helen Hayes summed up the skills needed for a post-school life. Not only must our pupils be flexible learners and be technologically literate, they must also have developed the habits to support them as lifelong *learners*. Critical thinking, problem solving skills and sound communication skills.

'The 3 Rs have been replaced by the 3 Cs – curiosity, critical thinking and creativity'. This is where imaginative use of ICT is important as another tool in enabling our pupils to be involved in their learning and to be lifelong learners.

F Ann Mildenhall, Principal, Queen Margaret College, Wellington, New Zealand



Carolyn Grantskains and Ann Mildenhall



CONFERENCE PRESENTATIONS Please note that text from presentations given at the conference are available on our website under 'current events'.



YEAR 1 ICT

The theme in Term 1 was *Oceans* and Year 1 girls chose "lighthouses" as one aspect of that theme. Technology with Year 1 girls incorporates materials as well as information technology. Some comments from the Year 1s about various Technology activities:

"I designed a lighthouse and then I made it with cardboard boxes." *Ara*

"I made a lighthouse out of wood. I measured the length of the blocks and used glue and nails to put them together." *Lily*

"Nayfeh and I made the light globe turn on. We used a battery and some wire." *Rebecca*

"In Technology Siobhan and I made something for storing a half eaten toffee apple. We could only use 10 popsticks, 10 rubber bands, 4 paper clips and sticky tape." *Ellen and Siobhan*

"In technology I made a lighthouse out of wood. I did some gluing and some hammering." *Monica*

"I made a lighthouse out of plastic Inter-Stars. It was tall." *Lexie*

"I made a slideshow. I used Claris-Works. It was about animals." *Nayfeh*



...lighting up technology.

"We attached 4 popsticks onto a cylinder and did French Knitting." *Holly and Courtney*

"In Technology I made a campervan using Inter-Stars. It had 9 wheels." *Zofia*

"In Technology I made a fan to keep me cool. I had to use only 5 rubber bands, 5 popsticks, 2 drawing pins and cardboard. It was incredibly hard." *Lani*

"I designed a lighthouse. I made it out of tissue boxes and cellophane." *Melanie*

"I read 'The Photo Book' on the computer. I had to find the missing word and put it in the right place in the sentence." *Samantha*

"In Maths I went on the computer and I worked on the program Maths Made Easy. I had to measure litres of milk." *Annika*

"In Computing I designed a stamp with a platypus on it." *Lucy*

Year 1 girls at Wilderness school use their skills in technology every day. We use an integrated approach to learning with skills and knowledge being taught using a Thematic Approach.

We acknowledge and thank Wilderness School, Adelaide for this article.



were proud to again sponsor the
2002 High Tech Girls Conference
of The Alliance of Girls' School
(Australasia) Ltd

For further information please contact
George Michaelides on 03 9269 7600

NEW OFFER FOR AGSA MEMBERS

In Alliance offers you, the members of the Alliance of Girls Schools (Australasia) Ltd, the opportunity to use the Alliance website www.agsa.org.au to advertise positions you may have within your schools.

To post an advertisement on the website simply send the details, set out in the manner you wish them to appear, to Edwina Sear at esear.agsa@korowa.vic.edu.au

There will be no extra charge for this service... this is a benefit of your membership.

www.agsa.org.au



ROBOTICS & ENGINEERING AT SACRÉ COEUR...

Exciting opportunities in IT await the Middle School students at Sacré Coeur. Robotics and Engineering has been introduced to the curriculum in 2002, and next year will see the introduction of Software Engineering and Multimedia Development. Students in Years 9 and 10 have the opportunity to study these one semester courses as part of their elective program.

The current Robotics course focuses around the simulation of real-life robotics and robotic systems using the LEGO Dacta Robotics System, commonly known as Lego ROBOLAB. The heart of the system is the RCX, an autonomous LEGO microcomputer that can be programmed using a PC. The RCX serves as the 'brain' of LEGO inventions. It uses sensors to take input from its environment to process data and to signal output motors and lamps to turn on and off.

The students first build their robotic invention using the RCX and LEGO pieces. Then they can create a program for their invention using ROBOLAB, an easy to use, yet powerful programming language. Next, they download their program to the RCX using a special infrared transmitter. Their creation can now interact with the environment, fully autonomous without the computer.

The students arrived at their first lesson with great excitement and curiosity about this new subject. Working in groups, they began with some introductory lessons, learning about gearing, friction, how sensors work and some basic programming activities. During Term One, they moved on to create several working robots, which were programmed to interact with each other to form a class project – a working Amusement Park! The Park consisted of a Bumper Car, Merry-Go-Round, Ghost Train and a Tour Bus. The students were asked to comment on their participation in the Amusement Park project. Some of the comments were:

"Being involved in this project was rewarding and satisfying."

"Throughout the project I learnt about how sensors work, the concept, joys and frustrations of programming, and building with Lego. I really enjoyed it despite the problems we encountered."

"We were all really proud of our tour bus."



"Our robotics class has been great fun. Whenever I tell anyone about it they are always really interested and like to find out more."

"I think robotics is a great subject. It let me have fun building but really challenged me at the same time."

"The best moment was seeing the whole working Amusement Park. I saw that all our hard work and persistence had paid off."

Second Term was kick started with a look at real-life robotics at the Ford Discovery Centre in Geelong and at the Ford Plant in

Broadmeadows. The girls were then involved in a Team Challenge. This gives the students an introduction to the art of co-operation, team management and problem solving. Teams of 2-3 students worked together to solve a given challenge. The task was to work collaboratively to successfully put the group's ideas into action. Students designed, built and programmed robots to perform a specific task (clearing as many weighted cans as possible from a circular field within 2 minutes) and then competed with the rest of the class in a friendly event that tested each robot's behaviour. The challenge event was enjoyed by students, parents and staff.

A lunchtime Robotics Club has also been established to cater for students in other year levels who have not had the opportunity to study Robotics, and those students who have studied Robotics and wish to continue working with robotics. A team of four students from this club are eagerly working on their entry in the RoboCup Junior soccer competition to be held in September.

Some of the things the students have learnt about through the use of robotics include problem solving, making hypotheses, predicting outcomes, designing, analysing, planning, testing, programming, forces, loads, friction, structural stability and strength, gearing, collaboration, and team work. Visitors to the class are always astounded at the level of involvement from the students. They are confronted with the sight of students with pieces of Lego strewn across the carpet, some crawling on the floor, chasing their robots across the room, all totally engaged in their learning.

We acknowledge and thank Sacré Coeur, Melbourne for this article.