Smart kids and Rural – Giving the Bush Back it's Future

The development of our project

Gifted and talented programs are nothing new and in various forms they are dotted throughout the country. Whilst most states trumpet the value of their particular gifted and talented programs both at the primary and secondary level the stark reality is that the quality well funded programs are generally very "city centric" and target high school aged students. This in itself is a barrier to rural students .

The Bunbury Education District like every other education district in WA does have a Primary Extension and Challenge (PEAC) Program in place and in 2008 we conducted a review of a program that we believed was achieving high outcomes. What the survey revealed was to the contrary and in fact it was evident that the program had stagnated, there was little connection back into student's home schools, the courses on offer lacked academic rigour and that in the case of Year 7 students there were no direct linkages into high school. Armed with this information we canvassed widely to look at an alternative approach to PEAC that addressed these issues and as part of this approach we canvassed high schools to determine what their input should be into the program.

The response was both innovative and dynamic and sowed the seeds to develop a new initiative in Gifted and Talented education that not only has system wide implications but also has an inclusive approach that ideally suits regional locations.

The Project

Previously, the PEAC program had operated in a building away from a school site and this isolation meant that too a large degree the program was not under the constant view of other teachers, students and the community. After a recommendation was made to bring the program into a school, Newton Moore Senior High School offered to site the program on their campus and to involve high school staff in program delivery particularly at the Year 7 level. This had enormous implications because now, our PEAC program would be able to offer gifted programs on a high schools campus which gave us unfettered access to high school facilities such as science blocks, science teaching expertise, home economic facilities, design and technology facilities, high end computer laboratories and comprehensive resources available through their library/resource centre.

Another crucial dynamic and milestone was when we advertised amongst school teachers across the district calling for course designs that reflected innovation and academic rigour. We fully expected these programs to come from existing primary school teachers as the client group were to be Year 4's to 7's but to our surprise the majority of programs came from high school teachers. The quality of these programs was outstanding and it quickly became apparent that having high school teachers working with gifted primary school students would have an enormous impact on learning outcomes for students but would also benefit teacher development. On top of that these students all of a sudden were not only accessing high quality expertise but also facilities that were not available in primary schools.

We knew we were onto something special when over 200 people turned out to our parent information evenings, when over 14 staff enrolled to do their Masters in Gifted and Talented Education, when teachers from across the high school campus came to the PEAC Centre to "sticky beak" and offer their particular expertise, when high schools students wanted to become involved in a peer support role, when parents emailed us to thank us for "discovering" that their child was gifted and talented and when these young students themselves revelled in this new and exciting learning environment. We had in effect made a very important discovery and that was to truly challenge primary schools students, their parents and teachers we had to create a challenge environment.

Who was involved?

The short answer to this is anybody and everybody who wanted to be involved and that is essentially what happened. We started out like everybody else with a working party which like everybody else delivered a report. From that point on everything changed because we adopted the philosophy that not only was there a better way to

develop and operate this important program but we needed to look at extending the challenge of teaching and learning to the point where teachers and students were both courageous and excited about taking up this challenge.

The principal of NMSHS who courageously gave up new facilities in her schools to be used in this program and the Australian Science Teacher of The Year (2009) and her staff who came out of their own teaching environment to design and implement outstanding science programs for primary school kids showed enormous leadership and a willingness to extend the challenge boundaries. The Teaching and Learning Manager who put convention to the torch through coercing, encouraging and willing students, parents and staff to become an integral part of this innovation was a pivotal and charismatic component driving this change agenda.

What are our goals?

Simply put, our goals are to provide outstanding teaching and learning opportunities for our kids but these things are never that simple. We have set out to contextualise our goals as they relate to gifted and talented students.

Testing

The tests that are used to gain entry into the PEAC program at a state wide level are: Spatial Awareness Matrix and the Test of Learning Ability and we use these tests at a systemic level to identify those students who may like to participate in a PEAC program. In the past these tests were the sole means of determining whether or not a child was included in a gifted and talented program. What is obvious to us and every other teacher in the country though is that a test alone should not be the sole determinant of a particular student's giftedness and that we risked excluding some children. We knew that gifted talented students present in many forms and as such we asked students, teachers and parents to have some input into this part of the process with the result that we now understand the demographics of our target group much better, we now have a much more inclusive approach and even better, Indigenous kids are now in the program. Our long term goal in this area is to have students from every school in our district involved in the program because we see this as an essential role modelling component in all schools. We are also keen to be seen as culturally inclusive so that students and in particular Indigenous students have access to this program.

Programs

All of our programs need to stimulate and challenge young minds and they need to give this select group of students the skills to shine. As such our goal and our practise is to advertise widely to ensure outstanding teachers at all levels are encouraged to submit course outlines to us for evaluation and to ensure that we have a resourcing regime in place that will allow the selected teachers and their programs to be made available to our PEAC students. Our initial results in this area were quite outstanding in that we uncovered numerous teachers in education who submitted course outlines that were simply outstanding ranging from Physics programs looking at robotics, Chemistry programs, a Biology based wetlands project, studying Mathematics through the Arts, high level English/Language programs and studying the discipline of archaeology. The courses put into place in 2009 and 2010 not only deliver high level outcomes to students but also serve as a powerful marketing tool across the whole district to the point that the number of students wanting to participate in PEAC programs has doubled and the number of parents that have sought additional information on the program has grown over five fold. Our overarching goal in terms of program development is to continue to seek out those teachers who have the talent, the drive and the ambition to design and implement course of study that will truly challenge this emerging group of gifted and talented students and to implement their programs which in turn will lead us to yet undiscovered gifted teachers, students and programs to carry us into the future. In addition we have a goal to link up with universities through the provision of professional development opportunities for teachers in the area of Gifted and Talented education along with exploring the concept of developing gifted and talented programs for pre school children using an assets model based on what they know and should know rather than the current model based on what they do not know. In essence our ultimate goal is to continue to encourage exploration of the concept of providing a gifted approach to all levels of education.

Evaluation

What participating students get out of our programs is largely up to them but what is patently obvious from an observational point of view is that the extremely high levels of engagement and the feedback we receive from students and their parents indicates that they are totally immersed in their programs. Having said this though, we are acutely aware of the importance of these students putting something back into their home schools and to this end our goal is to have PEAC break out of its offsite role and become an integral part of the student enrichment process on

every school site. In addition we are very mindful of our initial research which clearly showed that previous PEAC programs did not link into the important transition all students need to make into high school and beyond. Already our achieved goal of having PEAC programs based onsite at high schools where students as young as nine years old are now accessing new facilities and new programs is delivering outstanding outcomes and whilst we are only 18 months into our new program, clearly we can see that students are engaged at much higher levels of educative thinking and operation. There is a growing realisation amongst our group and others that "look" through the window that we are really "onto something" although we do not quite understand what it actually is that we are "onto". Everyday we learn more about what we are doing and the beauty of this particular project it has the capacity to generate its own energy based on the cleverness of the essential ingredients of teachers, students, parents and support staff who all epitomise the creative spirit of the bush where the challenge of overcoming mediocrity and sameness in favour of innovation and greater outcomes off a base of limited resourcing are hallmarks of our culture.

The benefits of the project

Sometimes the gods just smile upon you and when we started out with this project I think these gods smiled widely because it would seem that a series of accidental consequences drew together a range of people that as a collective have developed this program into what it is today and who will continue working to ensure it has the capacity to deal with all the tomorrows it will encounter.

The vision was born from the work of a talented educator who had just returned from a 6 year stint in an international school in Irian Jiya. He was between jobs and we coerced him into analysing the results of a survey we had done in relation to our pre - existing PEAC program and crunching some test result data. This analysis clearly showed our existing program had faltered and did not have the capacity to deliver what parents, students and schools needed. His independence allowed him to move across schools and subsequently he came across a high school that offered new accommodation and new facilities to house a new program. This development alone resulted in a whole new wave of thinking and actions in relation to a new way forward for PEAC.

The staff at the high school seized the opportunity to work with primary school aged students and immediately we announced this initiative they began exploring how gifted and talented programs could be developed for the "little people" using high school teaching and learning knowledge and linking them up to the vast array of facilities only found in a high school setting. Science teachers, Maths teachers, Language teachers, Arts teachers even the Design and Technology boys put in their bids to run programs which gave us an enormously rich warehouse of programs from which to draw from in the now and in the future. To give a brief snapshot of the initiative shown in designing new suites of programs and the talent of the staff we have included a very brief synopsis of just some of the many programs designed for the new PEAC program.

- SCIENCE – "I am robot" (Physics) involving investigating the physics of how simple machines work, building robots and teaming up to fight a robot war.
  "Mendeleev's Magic" (Chemistry) involving the investigation of scientific process through chemistry, learning about the periodic table and developing laboratory skills.
  "Knights of the Moore" (Biology) involving the investigation of the bio chemistry of swamp lands through the analysis of soil and water samples to ascertain their impact on macro – invertebrates.
- MATHEMATICS – rediscovering the creative world of mathematics art through exploring the Mandelbrot Sets which highlight the basics artistic elements of complex number theory. Students will use computer analysis to delve into the theory and discover how Algebra, Number and Calculus can be artistically beautiful. Just when their appetite has been whetted they will be delivered to Escher who designed magnificent art works using transformational geometry and the students will get their own chance at become a transformational geometric arts master by using graphic tablets linked to HD television.
- ENGLISH – "I've got something to say to the world" – while it is said that the pen is mightier than the sword, the English staff at our host school are adding a camera and a computer to get students to explore the power of film making, the brilliance of creative writing, the artistic flow of poetry, the power of public speaking and the "grunt" of journalism.
- SOCIETY AND ENVIRONMENT – Students will investigate the discipline of archaeology through carbon dating, stratigraphy, researching the historical wonders of the Rosetta Stone, Pompeii, the Caves of Lascaux and through carrying out a modern day archaeology assignment through an investigation of a "rubbish bag"

These are just a sample of a few of the new programs on offer which incidentally also all support vertical streaming and can be used across Year 4, 5, 6 and 7. In addition, they integrate the technology of digital cameras, computers, 2D, 3D, digital microscopes, electronic balances, microprocessors etc which are the tools of the new century.

The Coordinator who takes responsibility for wrapping all of these program elements together also runs the four year old program and is an innovative thinker who is always exploring ways to expand the program and to guarantee program capabilities of the highest order.

Then, there are *the parents* who have embraced the concept of their children being given the opportunity to learn and to explore in a new environment. It is these parents from all socio –economic sectors of the community who have turned up in unprecedented numbers at information evenings not only to applaud participating students but to offer their services as well. It would seem that everybody wants to be a part of the action and wants to be a teacher and as a measure of success that is a good indicator and a signal that we are on the path to developing true learning communities that work in partnership and not in isolation.

The Kids – where would we be without the kids as they are the jewel in the crown of this program? It is difficult to portray the enthusiasm of 200 students who take part in this program. The energy that they exude has got to be seen to be believed and their enthusiasm to explore and to learn has a profound impact on each other and their teachers. This infectious learning energy is our most powerful marketing tool because the messages go into the wider school community and into homes. People, being natural sticky beaks then want to find out what is causing this ruckus and as a result our message and our work is strengthened further. We believe that in part this energy comes about because the students are confronted with a whole series of genuine learning challenges that are embedded in creatively designed activities that take these students from the comfort zone of a primary school into a whole new teaching and learning environment. In learning as part of this PEAC program the students are also providing opportunities for high school teaching staff to experience first hand where the foundations of learning begin. This has been a powerful tool for these teachers and has in some respects redefined the way in which they approach their craft.

The results into the second year of operating the new way are outstanding. For the first time, we have had to cap the number of students coming into the program at 200 due to finite resourcing although this indicator will now be used to promote the argument that the program needs to significantly expand to care for the number of students wanting to participate. Participation rates from both teachers and parents has exceeded expectations and is another indicator of the success of the PEAC program. The calibre and number of the programs being submitted to the independent assessment group for consideration to be included in PEAC exceeds demand and as such the programs selected are able to clearly demonstrate outstanding levels of creativity, innovation and academic rigour. –

This is a program embedded in excellence and the concept of basing it in a high school setting and being able to access both the human and physical resource gives us a flexibility for expansion in the first instance throughout the region and then through the rest of the state.

The impact of the project in the South West

The impact of this program concept is quite broad reaching and certainly has resulted in our education district re examining the whole concept of gifted and talented education programs. We are now far more aware that the barriers associated with the exclusivity of this process in the past need to be abandoned in favour of a much more inclusive approach. We now have a much better understanding of the makeup of the gifted and talented child and understand that there are many attributes associated with gifted and talentedness not all of which are apparent through the standard testing regimes. The take up and the interest in this new program means we have to constantly rethink our delivery options. We now need to look at expanding the project across the regions, how we can embed more enrichment type programs using the core elements of this program in home schools and how we can offer the program to more students whilst coming off a finite resource base? This is not going to be easy but it is an imperative because there is a very strong case to be mounted to treat every child as if they were gifted and talented. Using an assets model such as this as opposed to a deficit model should have implications across all education systems.

The concept of “little kids” working in a “big kids” schools is quite fascinating and has been the major selling point of our program which has caused enormous debate in our community. It has significantly impacted on the confidence of parents in the government schooling system who widely support the initiative of their child being taught in a “big peoples” school. This increase in confidence will have long term implications and has necessitated the need for us to look at tracking these kids as they continue their education journey through and beyond high school. The community has now become a very important messaging tool that has already and will continue to strengthen the image of public schooling.

At another level, our work can be directly linked to a surge in the number of teachers who are now registering to complete higher education courses of study in the area of Gifted and Talented education which in itself is going to have positive implications in schools across the district.

The rural features of the project

The distinct rural feature of this project is that it is owned by the community that it is in and this is reflected in the participation rates of the whole of the community in the project. It is unlikely that such community involvement could be attainable in a metropolitan setting where the sense of community is more difficult to develop. In many respects it is about the “culture” of the bush where there is a much greater preparedness to respond to challenges and in many respects it is this enthusiasm and energy from teachers, from parents and from students that has been pivotal to the success of this program.

The program has a relatively uncluttered design and implementation mantra which gives it the capacity to be implemented across regional Australia. The concept of basing it in a rural high school would and does have enormous appeal because it gives young children to opportunity to access resources and expertise that may well otherwise not be available to them. More importantly, it does not require huge amounts of resourcing but it does require considerable amounts of will and ingenuity something which is in abundance in rural settings.