

Maximising Potential – The Digital Option

Gifted and talented students possess the attributes to enrich their own lives and to make a valuable contribution to the knowledge society yet, all too often, this potential is not fulfilled. The perception that gifted students will achieve regardless of educational provision still lingers, despite the raft of research which points to the tragic loss of potential which results from the failure to engage gifted students during the early years. From preschool onwards our gifted students are vulnerable emotionally, socially and cognitively because of the mismatch between current educational provision and their demonstrated needs.

The gifted are as diverse a group as any other yet society tends to use the term ‘gifted’ as a brand rather than a descriptor; an almost grudging acknowledgment of difference but a failure to recognise the varied needs of gifted students. Of particular concern is the fate of gifted underachievers who require a highly differentiated learning programme and gifted students who experience significant learning difficulties. Such students require exceptional differentiation.

My concern is that the response to the legislation will be uniform differentiation without insight into the diverse needs of gifted and talented individuals. Further, I am concerned that the focus will be exclusively on the cognitive development of students and will fail to address the social and emotional literacy of students. Each gifted student has a right to educational provision which is responsive to the complex balance of the spiritual, emotional, social and cognitive attributes which characterise that individual. When such a programme is provided, potential will be maximised.

Differentiation of the Learning Environment

Given the complex needs of the gifted community, it becomes clear that an enhanced learning environment is required, one which supports the pace and complexity of the gifted students’ thinking processes. A learning environment which celebrates diversity and which focuses on the needs of complex individuals must be sufficiently flexible to create the physical and psychological space which gifted students require. Such an environment must provide:

- Pace
- Variety
- Student choice of content
- Innovation
- Complexity
- Challenge
- Development of creativity
- Validity of audience and product
- Collaborative inquiry
- Independent investigation
- Exploration of ideas and paradigms
- Intellectual risk taking
- Sophisticated research skills
- Development of thinking skills

Currently, the optimum medium for such provision is the virtual environment which can provide the scope and depth which students require. ELearning programmes have become an established part of adult training programmes and of tertiary delivery. The efficacy of such learning programmes is well documented. The challenge for the creators of the Alpha programme was to marry the needs of pre tertiary students with the diverse educational opportunities provided by the virtual learning environment.

We have been fortunate. When we approached the digital community, we were met by those who were totally committed to our vision. The result of this collaborative activity was the creation of the Alpha. We now have an extensive virtual facility which has state of the art facilities to educate students. The key elements of the Alpha educational programme are described below.

The Alpha learning environment is innovative, extensive and flexible; it allows students to engage in a wide range of learning activities which are stimulating to the intellect and which enhance emotional and social function. Students enjoy a protected learning environment which enables them to reach their full potential via mentorship, inquiry, investigation and the creation of original product.

The virtual site is large and comprehensive. The site map which students meet beyond the protected portico is divided into areas which have been constructed to address the emotional, social and cognitive needs of students. The interactive elements of the digital facility ensure that teachers are highly responsive to student need. Assistance is only a click of the mouse or a beep away. Students may be involved in in-depth research, collaborative activity or on- line mentoring; the fast pace and variety provided by a virtual learning environment creates passionate engagement and the confidence and energy to embrace the intellectual risk taking which fuels creativity and originality of thought.

Differentiation of the Teacher Role

Gifted and talented students require less direct instruction, grasp concepts quickly and do not need extensive skills practice. However there are often gaps in their skills base which are a result of their characteristic impatience and intensity. These gaps usually occur in research skills and organisation of studies. These skills can be acquired rapidly via a series of integrated studies which focus on the acquisition of the skills.

A teacher's predominant role is that of facilitator and mentor. Partnership in the learning task emphasises the teacher's skill and professional judgment, allied to the students' drive for mastery. Students may need encouragement in leaving the relative safety of their identified giftedness and moving out of this comfort zone to undertake adventures in thinking. Encouraged by the teacher, students who venture into new territories are often surprised and delighted to find an area of giftedness which has not previously surfaced.

At times teacher will act as Devil's Advocate – teasing out student ideas and thought processes, and encouraging valid discussion, rigorous argument and debate. The Socratic method of teaching is a fruitful one to adopt when engaging students in reasoning and reflection.

Teachers of gifted and talented students must also be skilled in orchestrating the diverse element of the differentiated programme and in ensuring a comprehensive yet balanced educational provision.

A typical morning for an Alpha teacher may include:

- sitting in on an audio discussion between students who edit “Alpha Matters” our on-line student magazine;
- entering a classroom where an older student is mentoring a junior student in the application of animated PowerPoint with voice overs;
- back into a teaching forum to deliver a lesson on problem solving;
- off into a student’s personal conference suite to teach one to one;
- responding instantly to a beep or pop up message from a student who needs assistance;
- calling the group together for an interactive audio conferencing learning session;
- sitting in on a student / mentor session and learning along with the student.

An Alpha teacher's role is to teach students how to organise in depth and valid inquiry rather than regurgitation of facts. We also challenge students to go beyond their comfort zone, to engage in a variety of digital opportunities, to access mentors and to report back via a range of creative options, such as animated Power Points, Movie Making and Audio Conferencing seminars. The teacher’s role is also to facilitate learning and balance the programme so that the student’s focus does not become too narrow, to support students in organising their investigations and to suggest areas of further development.

Teaching in Alpha is a great pleasure. Engaging inquiring young minds in qualitative research, intellectual risk taking and originality of thought is highly rewarding. The Alpha digital environment is extensive and international; we have facilities for many students.

Alpha teachers must undertake additional professional development so that they can make full use of the digital facility. Prospective teachers complete two courses:

- The Responsive Teacher course which consists of weekend seminars and follow up activities supported by e-mail mentoring;
- The Teaching in a Digital Learning Environment course - Teachers work with members of the Alpha tech team and with practising teachers, learning how to make optimum use of the digital site facilities. The focus of the course is to train teachers in using the extensive facilities of the Alpha site in a manner which creates a stimulating learning and teaching environment.

Differentiation of the Learning Programme

Enhancing Emotional & Social Literacy

Gifted and talented students develop early metacognitive skills, many before they leave preschool. This early awareness, allied to heightened perceptions, an acute sensitivity and well developed social radar, results in a feeling of unease and a vulnerability to anxiety. Even the most well rounded gifted child will have experienced the effects of uneven development - a rapidly developing intellect does not guarantee emotional maturity and the variation between these two often creates tensions within the child.

This unease can be compounded by the child's need to make sense of the environment. Gifted and talented young children pick up on adult anxieties, they listen to news broadcasts and may develop fears about the large issues which they can understand but do not yet have the emotional maturity to deal with. High IQ does not guarantee high EQ.

The acquisition of sophisticated social skills requires regular interaction and practice. Since it is difficult for gifted students to interact with like minded peers on a regular basis, their opportunity to experience the flow of easy relationships is limited.

Whilst they may enjoy the company of their same age peers, their sense of humour and mindset marks them as different. Repeatedly students I have worked with have expressed the relief they experience when working with other students who have been assessed as gifted. Perhaps for the first time, they experience the friendship of someone who laughs at the same things, shares the same passionate intensity and perceives the world in a similar manner.

It is not that gifted students have poor social skills; indeed they are often highly skilled in this area, it is that, being relatively isolated from like minded peers, they lack the opportunity to practise those skills on a regular basis.

The emotional and social needs of Alpha students are met via the diverse provision outlined below.

Emotional & Social Literacy Programmes.

These programmes are integrated into the fabric of the Alpha learning programmes. In addition specific emotional and social literacy programmes are taught on line, initially via a forum and then followed by discussion and debate via the Alpha digital facility. Students access specific programmes according to their identified need and mindset.

Currently four emotional and social literacy programmes are provided:

- The Brain Licence which covers the social and emotional needs of primary students
- The Leading Edge which addresses the needs of older students
- The ESO Option for gifted underachievers

- The Moving Forward programme which meets the specific needs of GLD students who struggle with a specific learning difficulty despite innate giftedness.

Social Interaction - Alpha students belong to three communities:

- Local community involvement is encouraged via the Social Contract. Alpha teachers encourage students to seek opportunities for social interaction. Local Alpha communities organise social activities. The Social Contract also details the chosen service which students offer to their local community.
- The Alpha Digital Community offers an extensive range of collaborative activities such as on line mentorship, shared teaching and learning via the interactive classrooms and mentoring of younger students. Each student has a private suite of conference rooms - forums, wiki, chats, messenger etc which allow for individualised learning or simply for social interaction and fun. It has been my experience that, when our students meet online, just to fool around, they soon enter into creative exchanges and original ideas are generated and enacted.
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- The Global Community - Alpha students are involved in collaborative learning activities with international students via Alpha's established contacts with teachers in overseas communities. Mentorship with experts world wide is also a feature of the Alpha programme. The digital facility and interactive classrooms provide ample opportunity for gifted students to access expert opinion and support.

Additional opportunities for social interaction include:

- Regular Alpha Community gatherings such as Winter Week
- The After School room - This area of the extensive facility is devoted to enjoying a range of carefully selected learning games which enhance cognitive functioning; the games are regularly reviewed and replaced to ensure that students continue to enjoy stimulating activities.
- The Theatre offers scope for on line authorship such as the Writer's Workshop, Music in the Round, Digital Art work etc.
- The Interactive Whiteboards which students use to create original design concepts, to engage in collaborative activities or simply to have fun together.
- The Classroom 2 where students may talk with each other, use the whiteboard facilities and text.
- The Syndicates forums which allow for safe blogging as it is an internal blog and circulates only within the Alpha community.

All of these facilities are monitored by the smart technology which records all interactions to ensure safety. All of the above facilities are open 24/7. The main classroom for each group is open only when teacher opens the digital door.

We haven't forgotten parents. As partners in their children's learning, their support is invaluable which is why we have created a PTA chat room with a difference. Parents

meet on line to organise supportive activities for their children, to debate and discuss issues or simply for a chat.

Each Friday is Open Day when the main teacher supervised classrooms are open for parent, mentor and student interaction.

Cognitive Development - Differentiation of Content

The content of a differentiated programme for gifted and talented learners must be sufficiently complex and challenging and should contain elements of both extension and enrichment. Effective curriculum compacting can provide sufficient time and space to incorporate a variety of learning experiences into the gifted and talented students' programme.

Acquisition of facts and concrete ideas should be restricted to widening the knowledge base. The main focus should be on the acquisition of concepts and on an interdisciplinary study of the processes which underpin the formation of ideas and paradigm shifts.

Gifted and talented students are not tolerant of any activity which they perceive as time filling. They require a content which is constantly leading them into new areas of discovery. Content organisation should be concentrated on key knowledge and skills which will enhance the cognitive processes of students and which will meet their affective needs.

Elements of such a programme may provide a number of options which include:

- A Thinking skills programme
- Philosophy for Students
- Second Language Learning
- Consideration of Ethics
- Enterprise Education
- Future & Community Problem
- Subject Specialisation
- Specific Talent Development.

Individualised Learning Programme. - Alpha students' learning programmes are tailored to their personal profiles. The first step in joining Alpha is an interview to ensure student suitability for the programme.

If a student is accepted, the next step is an in depth assessment via the Synergistic Learning Profile.

Each student is professionally assessed for the individual learning preferences. The Synergistic Learning Profile is a comprehensive assessment of each student's natural learning style in the crucial areas of:

- Absorbing Information – Sensory Learning Processing
- Processing Information – Brain Dominance and Thinking Style
- Memory Function – How each student stores and retrieves information
- Expressive Style – The Intelligence Centres which a student accesses naturally
- Communication Style – This covers the areas of relationships.

Each student's individual learning programme will be based on the results of this in depth assessment.

From this point a Needs Analysis is undertaken .The NA is a comprehensive document which collates the social, emotional and cognitive needs of the student and which identifies key areas for development, advancement and support.

Gifted students may chose from the current programme which is set in the course levels 1 to 4 for elementary and intermediate students and beyond those levels for high school students. They may choose to enter the Alpha Plus programme which delivers on line differentiated programmes or, and this is the most usual choice, they may undertake a Negotiated Study on a topic of interest.

Gifted Underachievers initially access the Seven Point Programme while gifted students who experience learning difficulties follow the GLD Intervention Programme.

Differentiation of Process

The learning process for gifted and talented students must be qualitatively differentiated so that their demonstrated giftedness can be fostered and their latent talents can surface. The provision of a range of educational opportunities will encourage students to venture into new areas of learning. Examples of provision are outlined below.

- Higher Order Thinking Skills
- Tolerance for Ambiguity
- Affective Need
- Leadership Opportunities
- Provision of a Range of Programme Options

The Alpha programme allows for exceptionally differentiated programmes which are tailored to individual need and interest. Students proceed at their own pace. Although the Alpha digital facility is officially open for instruction during the prescribed hours, access is available 24 / 7. Students may continue working with other students in the evenings or at weekends. I often receive emails from students at unusual times. All Alpha interactions are recorded and logged to ensure safe use of the site.

Collaborate learning on an international scale is a strong feature of Alpha, as is mentor access to a range of experts who are eager to support the new Alpha initiative. The extensive student / teacher interactive facilities allow for sophisticated communication with mentors. Students may also choose to mentor each other in areas of specific talent or interest.

Navigationism - Students may have the collective knowledge of the world at their fingers tips but they need to learn how to navigate their way through this knowledge; we teach students how to locate and evaluate information, how to establish its validity, how to sift, discern and apply knowledge. More than anything, we teach students how to employ their thinking skills and develop their current knowledge base so that they can move into creativity and originality of thought.

Differentiation of Product

Gifted and talented students, when they have developed organisation skills, are highly productive. They often focus on more than one product simultaneously. They display a marked need to share their knowledge in a variety of ways. They generate products which match their particular learning style. With encouragement they will explore various ways of expressing their knowledge.

Gifted and talents students have a pressing need for products which focus on:

- real problem solving activities
- real outcomes to their endeavours
- a real audience

As they mature, gifted and talented students will devise their own products. To get them started, teachers can encourage students to choose from the wide range of options which the digital facility provides.

The virtual learning environment offers an extensive variety of reporting and product opportunities. Students may choose to engage in on- line discussions and debates, produce movies, create PowerPoint presentations or use a variety of other virtual learning opportunities as they share their newly acquired knowledge with their peers. A favourite choice for junior Alpha students is to report via videos recordings .They can report directly from the site of their investigation such as a local stream. Slide shows also prove popular with the younger students who script the text and add graphics to create visually stimulating products of their learning. The students call these their digital books. Our students become authors at an early age .The facility allows them to publish safely in an international arena

Advanced Digital Literacy

The learning possibilities of the virtual learning environment are extensive and engaging. Students quickly embrace the digital concept and readily become adept ICT practitioners. Student to student mentorship is especially creative and affirming. As a community, we learn from each other and from the mentors who visit the Alpha to encourage and extend students. Instant access to monitored websites ensures that students can engage in inquiry, practice skills, widen their knowledge base and develop their creativity.

We find that students relish the fast paced learning which the Alpha programme provides. The wide range of reporting options which interactive tools make available encourages the students' creativity.

The Way Forward

Such has been the response from educators and learning experts that the Alpha digital concept has been extended to include:

- The Alpha Early Start Preschool Programme
- Alpha Primary and Intermediate
- Tutors On Line –The High School Option
- Alpha Plus. – Fast paced differentiated programmes and interest groups

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- Synergy –one programme for corporate training and another for personal development for adults
- Teachers' Centre where the teacher programmes are delivered
- The Parents' Place where the Child's Play and Digital Naturals programmes assist parents and grandparents in enriching their children's education
- The ESOL Centre for second language learning.

Developments on the horizon include:

- Extending audio video-conferencing facilities (which are currently restricted to broad band users)
- Creating localised Alpha communities in New Zealand and overseas
- Extending the Mentorship programme to include talent from every walk of life.

Gifted and talented students, our future leaders, must be at the cutting edge of educational initiatives which celebrate diversity and value the intellectual synergy which occurs when creative individuals form a true community of learners.

The Alpha digital facility provides a fully rounded educational experience which enables students to meet the challenges of 21st century and to excel.

Former Principal, Frances Hill has extensive experience of teaching gifted students in New Zealand and in the UK. Frances is an educational researcher, advisor, international speaker and author. Her latest publication is a series of four books "Teaching Gifted Learners".

Frances currently teaches students in the Alpha Digital Facility which delivers full time educational programmes to students from preschool to high school age.

Frances also supports teachers via the Alpha Plus Internet Programme for Gifted Students, a series of fortnightly differentiated studies. She is also the facilitator of The Responsive Teacher Courses, a professional development opportunity for educators.