From the SelectedWorks of Rozz Albon

July 1, 2008

Gifted university students: last chance to ‘come out of the closet'

Rozz Albon, Curtin University of Technology
Tony Jewels

Available at: http://works.bepress.com/rozz_albon/1/
Gifted University Students: last chance to ‘come out of the closet’.

Dr Rozz Albon
School of Education
Curtin University of Technology
Perth, Western Australia

Dr Tony Jewels
College of Business Administration
United Arab Emirate University
Al-Ain, United Arab Emirates

Abstract

If, as some people believe, university teaching is all about allowing or enabling students to attain their full potential, rather than merely creating more ‘bricks in the wall’, gifted students provide a particularly thorny problem for teaching academics in the contemporary university environment.

Many gifted students, by the time they reach university, have long since established, in their attempts to ‘fit in’, how to hide their special talents. A university environment may well be the final formal opportunity for gifted students to be accepted as such, and most importantly, for them to take better advantage of these capabilities in their ongoing education.

Evolving from the findings of a case study approach, the authors propose a model that might be used to help gifted university students reach their full potential. The “I” model for teaching gifted students consists of four functions – having incentive to recognize gifted students,
identifying gifted students, suitably involving gifted students in mandated curriculum and the internalization of giftedness by the students themselves.

Gifted students may have had little opportunity in their pre-university education to take advantage of their giftedness. It is suggested that for tertiary sector educators to extend this languishing of gifted students in an apparently ubiquitous quest for educational ‘massification’, is contrary to the customary, time-honored nature of any university education.

Introduction

Using a case study approach, this research undertakes an examination of the teaching and learning experiences and practices of two Australian university academic educators, relating to giftedness in university students. Their professional experiences are supplemented with qualitative data collected from students who they have identified as being ‘gifted’ in some way.

Their findings are summarized into an original theoretical framework which could be used both by higher education institutions and educators to address the issue of maximizing the potential of gifted students in a university environment.

Reflections made on their respective teaching and learning practices over several years addressed certain common areas that included,

- The changing emphasis in higher education of requiring students to achieve no more than minimum expectations,
- Assessments and processes which discriminated against certain groups of students (among them gifted) to learn beyond requirements or to meet personal interests,
- An increasing absence of empowering students in their own learning, and
• Why gifted students learning outcomes were not valued as much as their achievement of high grades.

A recurring theme in their reflections related to the hiding of student’s special talents. The masking of abilities in primary or secondary school aged students and the reasons for this have already been clearly established (Baldwin & Vialle, 1999). It was not clear however whether this type of student behavior continued into the university sector given the supposedly narrower range of intellectual ability in the student population. If this attitude did persist into a university context, how did it manifest itself and what lessons might be there for higher education institutions and educators in addressing the issue of giftedness in university students?

“Among the miracles of the human psyche is its power to generate an almost endless variety of competencies, most of which rarely ever develop at all in a person's lifetime. Of the relatively few that are widely nurtured to any extent, most are either dulled or atrophied through neglect. And of the fewer still that are burnished to brilliance, some succeed in attracting public acclaim as signs of excellence, while other highly perfected aptitudes requiring no less braininess remain unheralded and sometimes unnoticed,” (Tannenbaum, 1983, p55).

An oft stated philosophy of management, believed originally credited to Taylor, (1967) is that good management is concerned predominantly with using whatever resources that are available to the manager, as efficiently and as effectively as possible. This philosophy while perfectly suited to an industrial era may no longer be totally appropriate in our knowledge era. The clear identification and recognition of potential resources should be explicitly recognized as preceding any optimization of the resource. As Leonard-Barton, (1995, p61) has suggested,
“The complexity of problems in our knowledge society requires that problem solving activities be shared across disciplinary, cognitive, geographic and cultural boundaries”.

As Gallagher, (2008) has pointed out so pragmatically,

“Each nation needs brilliant minds that can see alternative answers to pressing problems …. the student of average ability will not find the cure for cancer, or new uses for corn, or ways for peacefully solving conflicts of interest”, (p5).

To ignore individuals who might be capable of providing alternative insights and perspectives in advanced problem solving may be considered as one of the more serious human resource management inefficiency’s.

**Background**

In following Leonard-Barton’s suggestion regarding the best ways to solve complex problems, this research was initiated as a result of the collaboration between two academics; sharing neither disciplinary nor geographic nor cultural boundaries. One of the university educator’s was from the education sector and had completed her doctoral studies with young gifted students (Albon, 2002) as well as developing courses and lecturing in the identification of giftedness and models for teaching gifted students. The second academic whose experience was in the management and information systems sector had no direct gifted student experience, but the courses that he had developed contained content that demanded a significant amount of creativity and innovation from students.

The two academics shared a passion for teaching and each had been the recipient of many teaching awards. A commonality was forged in their mutual belief that a university education should be more than merely learning ‘stuff’, more than simply providing specific discipline
related facts and more than linking success with requiring no more than any type of minimum standard. The two academics had both been frustrated in their separate disciplines when they had been regularly confronted by students exhibiting ‘special’ ways of responding to questions that had been posed, because the curriculums that they were required to follow made little allowance for properly responding to the directions that such ‘special’ answers had opened up. Such students, they believed, may have been exhibiting signs of what might be described as giftedness, yet even with their considerable academic experience, they were unable to clearly determine an appropriate response strategy in such cases. This research examines this phenomenon and proposes an appropriate strategy to address what might be considered as a much underutilized resource; that of gifted university students.

“... true teachers are kind, compassionate, tireless in their desire to share whatever wisdom they have acquired from their masters, never abuse or manipulate their students under any circumstances, never under any circumstances abandon them, serve not their own ends but the greatness of their teachings, and always remain humble”, (Rinpoche, 1992, p30).

Another commonality which underpins this paper is a concern for the languishing of brilliant minds in oftentimes un-stimulating and unchallenging university courses. As Palmer, (1998) suggested, we should teach who we are rather than merely teach what we know, and here were two teachers who were not prepared to ignore the educational needs of the individual. Curiosity and concern for students to be all they could be, led to the following research question. What guidelines might be applied in order to allow the potentials of gifted students to be realized in higher education? Four sub-questions were developed.

- Why should we be concerned with gifted students in universities; were there any incentives for stakeholders addressing the issue?
• What identification method or strategies might we use to identify gifted students and was it possible or even necessary to specifically identify gifted university students?

• How might we best involve the gifted university student in mandated curriculums in order that these students can flourish?

• Can gifted students ever internalize their giftedness and be fully capable of applying their talents in situations that demand it? In other words, are there likely to be benefits from addressing the issue?

These four sub questions are the foundations for an original model proposed for addressing the issue of gifted university students. The “I” model for teaching gifted students consists of four components – having incentive to recognize gifted students, identifying gifted students, suitably involving gifted students in mandated curriculum and the internalization of giftedness by the students themselves.

**Literature Review**

In this paper we have not deferred to any definition of ‘gifted’ from the literature, preferring to accept the premise that gifted university students will merely have some superior ability to process information, problem identify and problem solve. They ‘see’ the gaps and quickly and creatively connect ideas (often not identified by class peers), by asking questions, to arrive at innovative solutions (Sternberg, 1985). Although Lovecky, (1986) has suggested that, for her research, adult giftedness was based on a variety of criteria, which included historical and intelligence measures as well as professional and academic achievements, she has not identified precisely what other forms of identification she has used. Overall, there appears to be a general emphasis in the literature of linking ‘giftedness’ with either quantitative measures of IQ or academic performance. There are some references in the literature to high levels of creativity and there are some links made with certain types of both
self-esteem and self-actualizing behavior. In terms of identification it appears as if the literature merely provides general characteristics of giftedness; why giftedness might exist and how to identify the characteristics that may be typical of gifted students.

Much of the research associated with giftedness has been undertaken with pre-university subjects and the findings merely extrapolated from that research into the relatively small amount of research that has been conducted specifically at the post secondary or tertiary level. Our literature review confirms the paucity of research into the methods of identification, best teaching practices and academic responsiveness to teaching gifted students to enable them to flourish in various university contexts. In addition, there is also no available research on the outcomes for academics who teach gifted university students or the students themselves. At best, the needs of the gifted student, their characteristics and teaching models are transposed in a university context (Robinson, 1997), while forty years earlier Waggoner, (1957) critiqued the gifted student in the state university concluding the problem was one of quality not of numbers. He reviewed several university devised programs as well as honors programs as the means of program development for gifted students, the latter a practice which continues today. Despite the unavailability of selection processes beyond being ‘specially ‘selected for these programs it appears scholarship and ability tests and outstanding high school records were considered as the basic entry requirements.

The idea of honors programs is theoretical and again no research is available to determine if the students who entered the programs Waggoner spoke of, or those of recent times were themselves truly gifted or that the program merely catered for their superior intellectual ability. Further, no research exists as to the quality of the pre-honors course, sometimes spanning several years, and if these courses met the needs of gifted students. Waggoner noted discussions of proposed models similar to those in schools such as acceleration, but still reports a lack of experimentation.
As both academics had experienced what was interpreted as creative outputs from our association with gifted students it was assumed that there was a priori evidence of some link between giftedness and creativity. The literature however, while having a proliferation of definitions, theories and models of creativity, made few explanations and links of creativity with giftedness (Mumford, 1998). Confirming our own initial beliefs Mumford citing Sternberg & Clinkenbeard, (1995) & Gardner, (1983) concluded that giftedness should be defined in a flexible fashion, focusing on performance capabilities or potential rather than on fixed traits. Creative thinking skills, Mumford suggests, are the types of skills needed to solve novel, complex problems, and hence is how he eventually makes a connection between creativity and giftedness.

**Research**

During the unfolding of the various courses taught by the two academics, and particularly during tutorials, some students had indicated their potential giftedness through their answers to challenging questions, or questions they had composed and asked. It was noted however that these same students did not always appear to be motivated to excel or to work towards high grades, nor did they generally receive high grades. An analysis of course grades and grade point averages (GPA’s) of these students indicated little relationship with academic performance.

A case study method allowed students to develop realistic solutions by ‘pulling apart complex situations’ and ‘keeping class discussion grounded upon stubborn facts faced in real life situations’, in order to understand the ‘crucial nature of accurate diagnosis both specifically and generally’, (Lawrence cited in Erskine, Leenders, & Mauffette-Leenders, (1981, p11)). The use of case incidents was a specific attempt to make complex problems manageable by students, by concentrating on only one issue at a time. An example of
requiring innovative thinking is contained within a design structure problem presented to information technology students in a project management course.

Fortuitously, within sight of the classroom there was a pedestrian bridge that provided substance to what would otherwise have been merely a conceptual problem. Construction of this bridge began from each side of the river that it was eventually to span, but when the two ends met in the middle it was discovered to the contractor’s horror, that the ends didn’t line up. The question posed of students was how, using software development methodology principles, might the construction of the bridge have avoided the situation where the two ends failed to ‘integrate’ properly. (Integration of separately developed software components can be a significant problem in IT development). Sometimes, almost instantaneously, a student would suggest that construction should commence from the middle and be developed towards each river bank. It was not the solution per se that was exciting to get from any student but more the speed by which the solution would be proffered; almost without thinking. In the more than 20 times that this problem was presented to students, very rarely was this solution ever provided by one of the recognized high achievers in the class. If this was an example of a gifted student at work, the correlation between this type of behavior and measures of intelligence or academic prowess was seriously brought into question.

In problem solving tutorials associated with the same course the questions asked were complex ones that required predominantly divergent rather than convergent answers (Schumacher, 1977). From the earliest offerings of the course a few individual students had provided creative and innovative responses but it wasn’t until the students were allowed to work in groups of up to four that the sheer volume of creative answers escalated significantly. We postulated that a gifted student may not be ‘bothered’ to provide a creative solution if the answer was their’s alone, yet if that creative solution had been perceived by the gifted student
as contributing to other student’s learning outcomes it may have been considered more justifiable.

When formally interviewed, one mature female undergraduate student (SD), who both authors believed was indicating signs of giftedness, had expressed initial surprise when the interviewers were obliged to tell her the nature of the research in which she was involved. Although she claimed that she had “always thought differently” to other people and had realized that she had not fitted in with her peers, this was the first time that the word ‘giftedness’ had been linked to her. Throughout her 50 years she claimed that she had received no academic encouragement by any member of her family yet, even within an environment that was pressuring her “to get a real job”, she had still commenced an undergraduate degree in her late 40’s. She claimed to have always enjoyed studying yet she had never seen a need to excel … “just to do what I have to, in order to succeed”. When asked why she felt that she now needed an undergraduate degree, her answer was simple. Her supervisor had told her that because she had no degree she would not be promoted, so she simply said “OK, I’ll get a degree”. Her academic results indicate that she has had no great difficulty in now almost completing her degree yet she claimed that, even still working part time, she has never exerted herself. Her claim that the more complex the problem the harder she is prepared to work in solving it is moderated by her disdain for and lack of aptitude for mathematics. As mathematics is a significant component of many forms of intelligence measures it is little wonder that this student’s true intelligence had never been recognized. In terms of realizing what resources an organization may have to work with, here we felt was a classic example of not recognizing the skills that someone has but concentrating rather on the skills that they may be lacking in.

High academic achievement or a measured high IQ does not of course preclude an individual from also exhibiting signs of giftedness. One postgraduate student who went on to achieve a
perfect score in his Master of IT by coursework degree described his learning experience in his first semester with this unsolicited feedback.

“I know that I don’t always get the point that you’re trying to make in my answers, but I think that even when I don’t, what I do think about is more valuable to me as a learning experience than anything I would have thought of if I was aiming to answer the question in a textbook manner. I think this is the first subject I’ve come across where any sort of assessment questions are used as a learning exercise and the point being made by the questions is something that requires the assumption that the question itself, or at least a direct answer to it, is irrelevant”, (student MD).

His responses in the tutorials that he attended had been both profound and creative and he had been showing obvious signs of giftedness. He was subsequently appointed as a tutor in the undergraduate version of the course in which he had in the previous semester been the highest achieving student. While it is believed that he may have personally benefited from his involvement as a tutor, feedback from students in his classes indicated that his teaching style was not appreciated by them.

This example clearly illustrated the fact that because an individual was highly intelligent and obviously gifted in some way, that this giftedness could not be automatically transferred into other areas or other types of work. It begged the question, just how transferable is giftedness? In a risk management portion of a project management course a group of three students who were working closely as a group, were indicating through their tutorial responses that they were having difficulty understanding the nature of the learning objectives. Quantifying risks is both a complex and somewhat subjective process and to illustrate this complexity a non-
contextual example was used. The problem is never meant to be actually solved by anyone, but merely to illustrate the complexity of risk probability in project management.

*If a torpedo has a 1 in 3 probability of missing a ship, a 1 in 3 probability of sinking a ship and a 1 in 3 probability of damaging a ship and 2 damaging shots will sink the ship, what is the probability of 4 torpedoes sinking the ship?*

The answer of course (if anyone cares) is 76 in 81. Yet this is just the sort of question that both Sak, (2005) & Heinze, (2005) indicate might appeal to a mathematically gifted student. Much to the tutor’s surprise, but not apparently to his fellow group members, one of them (student PT) just audibly whispers 76 in 81. His fellow group members, by now laughing raucously, admitted that whenever one of them had a mathematics problem they now didn’t even bother trying to work it out themselves; they simply passed it over to student PT.

Student PT was subsequently formally interviewed by both academics and clearly exhibited characteristics of a gifted individual, albeit the giftedness appeared to be confined to a narrow range. We postulated whether attributing giftedness to an individual could be valid in only one area.

**Summary**

Responses accorded to high intellectual ability by others through earlier education may have either a positive or a negative effect, but in the event that students hide their ability assumes that less than optimal responses have been made during this time. Therefore the model we propose defers to the environment and processes in which opportunities to address and contribute to self-concept and self-esteem positively is paramount. As an ecological model it draws on the concept of *Managers of Abstraction*.

Paul Glen suggests that modern environments have created the need for a type of manager which he refers to as ‘managers of abstraction’.
“Where most managers are focussed on ends, these managers are responsible for particular features of the means to those ends”, (Glen, 2006, p9).

We believe that this concept may have great significance for modern teaching practices, especially where it relates to the subject of trying to motivate gifted students.

The mediocre outcomes for gifted students in our courses seem to indicate discordance between satisfying learning and meeting assessment requirements. It appears that success for many of these gifted students is measured by their ability to meet course requirements by learning particular knowledge or skills which are later required for examination or assessment, akin to jumping hoops. We concur with Ruf, (1998) in that being gifted is more about interests and behaviors and not only about progressing through assigned work at a faster rate, or attaining a lucrative salary.

“A frequent argument of certain individuals is that because resources and staff time are limited, they should be devoted to those who really need it. Ironically, there is probably no better place to invest time and energy with a greater rate of return than with gifted and talented individuals”, (Fredrickson, 1986, p556).

Recall of school events by our interviewed participants concur with the findings and discussion by many researchers in gifted: school has not been a pleasant experience and frustration, anger, disdain, withdrawal, and failure feature as recurring themes (Ruf, 1998). Respect for the education system was not upheld. Although some participants were angry that the system did not meet their needs and contributed to their alienation from others, others quietly accepted this and developed interests outside school.

For some students, who have spent many years being trained to be less able through inappropriate education, encountering a teacher who understands their high intellect, pursuit of challenge, need for exactness and order, and enjoyment in how they wish to engage with
the subject matter is likely to bring renewed vigor to their learning. An incentive for student and teacher can be established through this reciprocity. In contrast to this outcome, some students may display behavior akin to laziness. Work which requires little effort from students may see them drift into an ‘effortless existence’ (Hollingworth, 1930, p 442 cited in Ruf, (1998)). It is not until later when they meet a teacher who recognizes their intellectual ability that they begin to show life and curiosity of the subject matter. Even then, this awakening might take some time to show itself. Initial efforts may not always generate outstanding results. In the current case studies it was found that students responded or self-identified through such approaches as feedback, commentary, hypotheticals, analogical reasoning, metaphors and probability established by the teacher. Interrogating information in intellectual game-like fashion provided another means for the most intellectual able to emerge. Further recognizing the intrinsic motivation of these students, such as going beyond assessment requirements, seemed a significant identifier of gifted university students. Although it may appear self evident it may still be worthwhile to explicitly state that the goal for academics should be to encourage rather than thwart intellectual achievement.

Involvement for university educators involves embracing the following types of strategy.

1. Provide challenging learning experiences which require higher order thinking together with complex material or ideas and novel contexts.

2. Provide opportunities for critical discussion in which student’s contributions receive positive responses through such approaches as exploration, questions, validations and valuing them

3. Develop team assessments which allows for maximum growth in diverse areas
4. Open assessment and open for negotiation. Students may wish to take assessment requirements as minimum and therefore want to add dimensions or complexity to the assessment task.

5. Create opportunities for high level tutoring, coaching or other instruction.

6. Peer teaching.

7. Reward creativity, new ideas, feasible propositions, identify and fill the ‘gaps’.

8. Withhold answers, so that motivated students return to class and volunteer answers.

9. Enable students to contribute and grow creatively. Provide opportunities essential to creative growth.

10. Experience emotional responses.

11. Making students aware of their creative and intellectual potential may contribute to their management of intensities, their strengths and their weaknesses.

12. Provide opportunities for students to work in teams which may overcome some of the outside criticism often leveled at their energy, passion and drive to excel in the workplace, thus preventing a distorted self-view, (Jacobsen, 2000).

Gifted and particularly highly gifted students in a university course require feedback and explanations that would be helpful in guiding them toward healthy self-concepts and self-worth. We concur with (Ruf, 1998) the significance of attaining a positive internalization of what it means to be gifted, which requires academics to provide students with honest and sensitive feedback about their ability to achieve, to meet challenges and to feel successful.

“Society needs gifted reinforcement officers not gifted criminals”.

Page 15
References


