

Talented Tertiary Students: A Largely “Forgotten” Group Within the Tertiary Sector?

Lynda Garrett and Christine Rubie-Davies
University of Auckland, New Zealand

The small-scale study reported here sought to ascertain the experiences of talented undergraduate students across four faculties within one university in New Zealand. Thirty-eight undergraduate participants from the four faculties were identified by 16 staff participants based on criteria used by the academic staff in their respective faculty, department, or school. Staff and students participated in separate focus groups so that their perceptions of talented students could be gained. Participant understandings of current identification methods and provision options for talented undergraduate students within the university environment were also sought. Talented undergraduate students identified existing practices that had enhanced, or in some instances had proved detrimental to, their learning. Students also shared ideas that they believed could be implemented to further enhance their experiences and learning. The implications of these findings are discussed with the intent of further enriching the future experiences of talented undergraduate students in the tertiary environment.

The limited research investigating education for “talented” students at the tertiary level suggests that they are a largely neglected group within the tertiary sector (Abeysekera, 2008; Moltzen, 2008; Rinn & Plucker, 2004). Universities seem keen to recruit more academically talented students, and yet little is known about the nature of tertiary-level programs for gifted and talented students (Rinn & Plucker, 2004). Recommendations within available research reports highlight the need for further investigations at the tertiary level to more effectively support and enhance talented learners’ experiences (Abeysekera, 2008; Moltzen, 2008; Rinn & Plucker, 2004).

Contemporary theory, research and literature in gifted education advocates a liberal, multi-categorical definition of giftedness and talent whereby giftedness is viewed as developing potential within one or more areas of aptitude (e.g., Gagné, 2005; Moltzen, 2008; Renzulli, 2005; Riley, Bevan-Brown, Bicknell, Carol-Lind, & Kearney, 2004). Developmental perspectives are indicative of a global shift away from a narrow IQ-based approach to conceptualizing giftedness and talent and toward one that values talent across a range of human endeavors (Moltzen, 2011b).

However, there is no universally agreed upon definition of “giftedness.” As Moltzen (2011b) argued, most writers in the area do not differentiate between the terms gifted and talented and the terms are often used interchangeably. The term *gifted* is still often associated with the historically narrow and elitist perception of aptitude as IQ-based and, therefore, applicable to only a few very able students. Consequently, in the current exploratory study, the more broadly based term *talented* was consciously used to recruit participants. While the term talented was used initially by the researchers, staff and student participants used the term gifted as well.

Moltzen (2008) asserted that while a number of talented tertiary students do achieve at a high level, it

seems clear that many do not. Underachievement or non-retention of talented students within the tertiary environment is a likely outcome of the frustration and boredom these students experience where little is done to nurture their talent and potential (Moltzen, 2008). Indeed, as Moltzen (2008) noted, “There seems to be a perception that at school it is important to differentiate the curriculum to meet diverse levels of ability . . . but at university a ‘one size fits all’ approach is appropriate” (p. 2). Moltzen (2008) advanced an apparent lack of differentiated learning opportunities within the tertiary sector as a major factor contributing to the underachievement and non-retention of talented students. Developing specific programs and/or differentiated learning opportunities within existing tertiary courses for talented undergraduate students is viewed as a potentially positive catalyst for student learning and the pursuit of postgraduate study (Moltzen, 2008).

There is a noted gap in current research relating to academically gifted students in the 17-22 age group (Rinn & Plucker, 2004). Therefore, the present study was designed to provide baseline data related to the current experiences of talented undergraduate students within one New Zealand University. It was hoped that the study would facilitate opportunities for the *personal voice* of a sample of talented undergraduate students and academic staff to be documented and considered. The following questions were designed to guide the research process:

- What are academic staff and undergraduate student perceptions of talented students and their characteristic behaviors?
- What do academic staff and undergraduate students believe to be the key considerations in identifying and effectively catering to the particular needs of talented students in the tertiary setting?

Method

Participants and Setting

The participants in the current study were 38 talented undergraduate students in one university in New Zealand. Four faculties within the university participated in the study. Two of these were science-based faculties, and two were humanities-based. The student participants from the four faculties were identified by 16 staff participants (four representatives from each faculty) based on criteria used by the academic staff in their respective faculty, department or school. Consent to conduct the study was gained from the University Human Participants Ethics committee, and all participants were required to sign consent forms agreeing to participate. The Dean of each faculty also completed a consent form to allow the research to take place within the respective faculties.

Data Collection Procedures

Two staff focus groups were conducted simultaneously at a central location. Representatives from one science-based faculty (FS1) and a humanities-based faculty (FH1) formed one focus group, while the second focus group was comprised of members of another science-based faculty (FS2) and humanities-based faculty (FH2). A successful initial approach was made to one staff member in each respective faculty who had previously won a teaching award. It was assumed that these staff members would be interested in a teaching-centered project. They then recruited other members of their faculties with an interest in teaching and student learning (though not necessarily in talented students). Staff participants in this study were four representatives from each of the four faculties with a total of 16 staff taking part in the focus groups.

Student focus groups were conducted in the respective faculties in a room where there would be no interruptions. The six to 12 talented student participants from each faculty were identified by academic staff participants according to criteria used within their own faculty, department, or school. Criteria for selection were deliberately left to the academic staff participants as student participants would necessarily be part of any undergraduate provision options for talented students offered in the respective faculties. A total of 38 students contributed to the student focus groups.

Each of the staff and student focus group discussions lasted for one hour. Three members of the project team conducted the staff focus groups with the first member acting as a facilitator, the second taking notes, and the third observing. Student focus groups

were carried out with two staff members. One staff member acted as a facilitator and the other as a note-taker. All focus groups were audio-recorded and later transcribed by a professional transcriber. Together, the discussion notes and the audio-recorded transcripts provided a complete record of each focus group.

The discussions in each focus group were guided by a common set of topics centered on gaining staff and student perceptions of talented students, as well as the characteristic behaviors, methods of identification, and program responses to such talented students within the one New Zealand University. Staff and student focus group discussions also utilized a similar set of prompts (see Appendix for focus group prompts).

Data Analysis

A grounded theory approach was taken to analyzing the data. All transcripts of focus group discussions were read several times to become familiar with participant responses and the associated discussion. Notes were made directly onto the transcripts related to common and core ideas emerging from the data. Relevant sections in the transcripts were highlighted. This process facilitated an understanding of the core ideas and enabled themes to be developed from the data as recommended by Strauss and Corbin (1998). Statements made by the participants were then systematically coded into sub-themes, within four emergent themes, by two of the original research team. Disagreements were highlighted and discussed. The researchers then re-coded the data such that the agreement rate was above 95%.

Results

The following four emergent themes are presented: (a) how talented undergraduate students are defined, (b) how talented undergraduate students are identified, (c) opportunities for talented undergraduates students that support their learning, (d) and issues for talented undergraduate students. Various sub-themes determined through the analyses are also integrated into the presentation of findings.

Defining the Talented Student

In every focus group staff and students mentioned achieving high grades and demonstrating high levels of academic motivation as indicative of student talent. One staff member (FS2) reflected commonly expressed staff and student perceptions by noting that talented undergraduate students would be those “who are just going to do well in their formal courses, get As, A+s, and be really involved and immersed in what they’re doing.” An associated conception was that talent was

innate. However, both staff and students mentioned this idea less frequently than was the idea that achievement of good grades represented talent.

While high levels of academic aptitude and excellent performance in coursework were the most common descriptors of talent, many staff and student participants recognized that talented undergraduate students possessed multiple abilities. Multi-talented tertiary students were variously described as being capable of studying conjoint degrees in different disciplines and being talented in multiple domains such as music, sport, or cultural endeavors. A student (FS2) emphasized the multi-factorial nature of talent by highlighting that someone might “be a wonderful dancer, but a ‘B-grade’ student.” However, others believed that being talented was domain specific. As one staff member (FS2) explained,

I think when you use “talent” it’s in a particular domain. You say he’s a talented pianist, talented research mathematician, or a talented rower. When I think of talent I think of very domain specific. With gifted I think of perhaps a multiplicity of things.

Defining Characteristics or Behaviors of the Talented Student

Staff and students generally shared common perceptions of the indicative characteristics or behaviors of talented undergraduate students. Staff and student participants identified a number of intrapersonal abilities and qualities as being indicative of talent in a tertiary setting.

Talented undergraduate students were commonly defined as possessing effective learning and study strategies and grasping concepts quickly and easily. One staff member (FS1) believed talented students to be “much better at thinking on their feet [and] coming up with a quick fire answer. They’re better at analyzing completely new and novel situations. They’re much better at understanding concepts.”

Characteristics that could be defined as relating to academic motivation were also mentioned in all focus groups as being indicative of talent: persistence, curiosity, enjoyment of challenge, love of learning, satisfaction from hard work, self-regulated learning, and an eagerness to learn. One student (FS1) explained such a personal “eagerness to learn” as being “eager to know, rather than you have to know.”

An aspect that was mentioned by staff in all focus groups, and by several students in one faculty, was that talented undergraduate students were creative thinkers, could problem-solve, or were innovative. One student (FS1) asserted the importance of innovation on the basis that “it is what pushes the field forward.”

The ability to ask searching questions was mentioned several times in all staff focus groups as an indicator of talent. One staff member (FH1) consciously looked for students who “seem to be deeply engaged in discussions and with going further than just the surface stuff. They challenge ideas, they ask questions, they sort of go beyond whatever it is that we are doing.”

Several staff and student participants viewed talented undergraduate students as also possessing distinctive personal qualities. Effective people skills was one such attribute mentioned by a student participant (FH1) who placed particular value on “the whole person. So it doesn’t matter if you’re academically smart . . . it’s interpersonal skills that matter and building relationships with [clients], staff, people.”

Leadership was a further quality identified by both staff and students as a marker of a talented undergraduate student. One humanities-based staff member (FH1) thought talented students were

often the ones who take on some leadership role and especially in tutorials when you’ve got them work-shopping certain ideas and doing activities, they step up and demonstrate whatever talent they have in those situations.

Staff, in particular, regarded initiative as another important quality. Several staff (FH2; FS2) believed that talented undergraduate students were more likely to put themselves forward, become known to lecturers, and thereby take advantage of opportunities such as summer scholarships or summer jobs (where students can work alongside a researcher on a research project).

Identifying the Talented Student

In a university environment where students can be anonymous to teachers and other students, the researchers were interested in the ways that talented undergraduate students were identified. Staff from one of the humanities-based faculties (FH1) admitted that there was no formal system in place for identifying talented students, particularly at the undergraduate level, where the situation was described as “a bit hit and miss.” It was felt that more tailored program options were available at the postgraduate level. Other staff from one of the science-based faculties (FS1) conceded that they tended to concentrate on struggling students more because retention was important in a “restricted entry faculty.” At times, recognition clearly related to students achieving high marks and grades. However, some differentiated program options and more informal methods of identifying talented students were also shared.

One obvious means of identifying students was through grades and marks achieved in examinations. In one faculty in particular (FS1), identification of talented

students began before they had entered the university. Secondary school students, in their final year of study, could apply for an accelerated pathway (AP) program on the basis of high school grades.

This program enables talented secondary school students to be accelerated into the second year of the Faculty program, thereby completing what is normally a 4-year program of study in three years. Students are expected to maintain a “first class honors” standard throughout their three years of study, and most students will complete a master’s degree in their fourth year. As one staff member noted,

Previously, before we had AP, I would find talented students would be a lot quieter and they wouldn’t speak out and I would say they were trying to hide their talent. But now there’s a crucial mass in each degree so there’s usually four to six in my degree of say 50 and they all know they’re talented students and so I think they feel safer. . . . They’re just unabashed, they don’t mind asking questions and showing they’re talented because everyone knows they’re the accelerated pathway students anyway so they’re out. It’s allowed them to take some freedom over the questions in class.

Another faculty (FS2) developed the MAX program, an acronym that stands for mathematical, acceleration and extension. The accelerated mathematical learning opportunity for talented students in their final year of secondary schooling enables students to complete a first year university paper in a dual or concurrent enrollment option. Students who pass the course are then eligible to enroll directly into any of three 2nd-year mathematics papers as first year students enrolled in full-time university studies.

Within the same faculty (FS2), another department identified “very talented” students in their second year of full-time university studies for their Honors program. The Honors program is a university-wide initiative designed to attract the best undergraduate students into postgraduate studies. The program consists of masters-level courses and a dissertation completed in one year of full-time study or 2 years part-time. In some disciplines, an Honors qualification is required as the first year of enrollment for a 2-year master’s degree program.

Staff participants from a science-related faculty (FS2) noted that talented students valued their selection into their faculty’s Honors program and became highly focused in working towards their goals. They were also “visible in the student body as people of academic standing” with the result that “the retention rate through into the postgraduate program was almost 100%.”

Students mostly believed they had been identified as talented because of marks or grades they had

achieved on assignments or examinations. However, students also realized that other factors could potentially be significant. As one student (FS2) acknowledged, it was “not just grades, they know that I might do sport . . . mentoring [of other students].”

Some staff identified their ability to differentiate talent and potential in tertiary students by observing and listening to student interactions, their questioning, and higher level thinking skills. A staff member from a science-based faculty (FS1), reported being

on the lookout for people with perceptive observations or asking lots of good questions. . . . There are those subtle linkages between the different fields in [my area] and early on in the degree these things looked like separate islands but as you go through the degree there’s a lot of powerful general concepts that link these things together and I look for the students who can identify those connections by themselves without having to be told.

Student participants were also aware that they could become noticed through in-class participation, particularly through their willingness to ask and answer questions more frequently than other students.

Catering for the talented student. Faculties varied in the ways in which they catered for talented undergraduate students. A common and cohesive system was clearly lacking. However, opportunities were provided to develop student talents in all four faculties within the current study. Apart from AP and MAX program options, talented students could also be employed as teaching assistants and tutors for other students in earlier years of their undergraduate degrees. They were also used to speak to secondary school students about pursuing tertiary studies. Some departments offered summer internships while others took advantage of the university summer scholarship program.

The summer scholarship program enables high achieving undergraduates to work with an academic on a research project over the summer, and they are given a stipend. It is specifically designed to encourage high achievers into postgraduate study. A student from a humanities-based faculty (FH1) valued the mentoring and consequent personal growth opportunities available within a summer scholarship option.

It appeared that enhanced program-level responses to the needs of talented undergraduate students had mostly been initiated by interested and enthusiastic lecturers. For example, in one of the humanities-based faculties (FH1), staff offered a choice in both of the designated assessment tasks for a semester course. Other students (FS1) valued having the option to choose to work on assessment tasks in a collegial

manner with like-minded peers. Staff in both humanities-based faculties and a science-based faculty spoke about providing extension questions for their talented students within assessment tasks. However, some staff members within a science-based faculty (FS1) cautioned about this practice. For example, one staff member explained,

The backlash from that was [that students protested] but we're good and we're not giving any trouble, why are you making us do extra things and the idea of it being not a substitute because of some perception of equity of assessment and all the rest, but actually a punishment for being good.

Some faculties or particular departments provided some kind of recognition of students' achievements. Overwhelmingly, students situated in one of these contexts (FS2) appreciated being acknowledged for their high achievement. Recognition of achievement included a congratulatory letter or certificate, a departmental invite to "an afternoon tea or sometimes lunch" or even "personal invitations to seminars." Students valued the personal invitations as opportunities to form friendships with like-minded peers and to form a "subject club" in one instance.

Issues for Talented Students

Some faculties and departments clearly appeared to be making considerable efforts to cater for their talented students. Conversely, there were aspects of some students' experiences at the university that were identified as being less positive. Student concerns spanned negative relationships with some course lecturers, a sense of missed opportunities when needs were not fully met, and a perceived lack of recognition of their abilities.

Several students identified lecturer behaviors that were viewed less favorably. Individual interactions between lecturers and talented students within a humanities-based faculty (FH1) were causes for multiple student concerns. For example, a student (FH1) expressed her frustration with lecturers who could not cope with being questioned and who consequently felt threatened. In another instance, expressing a personal opinion led an experienced lecturer to "shut me right down," causing the student (FH1) to feel "small in front of 60 people." One student (FH1) had been labeled as "an aggressive person" after sharing with a tutor that she had understood the introduced content within the first 5 minutes of the session. Publicly highlighting perceived lecturer errors caused a lecturer to tell yet another student (FH1) "that I shouldn't come to class if I know it all."

It appeared that several students believed their learning opportunities were limited at times within

undergraduate-level programs. Some students clearly felt that they were not being challenged sufficiently in their courses. It was particularly difficult for one student (FH1) to be in a class "having all these ideas," where the majority of students were still struggling to grasp a particular concept in "the fourth week" that this student had "got in week one." Another student (FH1) felt that course content was "dumbed down too much" and suggested "streamed tutorials" as an alternative form of provision.

Some students believed there were course assessments that did not appear to validly test their abilities. Others questioned the lack of challenge within particular assessments. Several students (FH1) felt that certain assessments required little more than an ability to "write exactly what the teacher wants to hear" using a mandated "writing frame." Such prescribed templates for writing were regarded by students in one humanities-based faculty (code) as being

irrelevant and it restricts your thinking in a way because you're following a prescribed way of thinking whereas your whole critical literacy is based on understanding the world and where you fit in the world . . . if your world is confined to a writing frame then you're not exploring what your talent is of thinking outside the square.

Some students appeared somewhat aggrieved where there was no recognition for outstanding levels of achievement. As one student (FH1) stated,

I like to think that if I get an A+ in most of my papers that it means something. Because it almost feels like I do my work and then, it's not that I want to be acknowledged for it, it's just that there has to be a next step as well . . . this guy has potential to do something more beyond this paper.

For another student (FH1), a lack of recognition had resulted in a loss of motivation:

I just can't be bothered doing a really good essay because it's like I know this is enough to give me a B so I'm not going to push myself any further if I'm not going to get acknowledged for it.

Discussion

A Multi-Dimensional Definition of the Talented Student

Staff and student conceptions of the talented student generally reflected a high level of shared perspectives.

The Talented Student as Academically Able and Motivated

Most staff and student participants defined talented students as those who demonstrated high levels of academic ability and motivation in achieving excellent grades in their undergraduate coursework. Specific intrapersonal characteristics, such as persistence, hard work, a demonstrated love of learning, and self-regulatory abilities were commonly mentioned. Such perceptions of talent and talented behaviors link to both the original and revised versions of François Gagné's Differentiated Model of Giftedness and Talent (DMGT; Gagné, 2000, 2003, 2007, 2008).

In the original version of Gagné's (2000, 2003) DMGT, talented individuals were regarded as those who successfully transform high levels of natural ability or gifts within one or more of four general domains (intellectual, creative, socioaffective, and sensorimotor), into outstanding performance in a particular field or fields. The model closely aligns with the notion of a talented student expressed within the present study as outstanding performance within one or more aptitude domains.

This is a theoretical model of giftedness that clearly distinguishes between giftedness and talent. The actualization of gifts as talents within the DMGT requires sustained commitment to learning, practice, and training in a particular skill or skills over time (Gagné, 2000, 2003). Various intrapersonal and environmental *catalysts* are also believed to enhance, restrict, or even curb the talent development process at different points in time (Gagné, 2003). The role of chance, in the form of unexpected encounters or opportunities, is regarded as a third potentially important catalyst (Gagné, 2000, 2003).

In the revised DMGT, natural abilities or gifts are regarded as the most influential factors overall. Intrapersonal attributes, inclusive of a high level of interest, will-power, and self-regulatory abilities within a talent domain were proposed as the most significant catalytic influences on the development of expertise over time (Gagné, 2008).

The Talented Student as Multi-Talented

Many staff and student participants in the current study also defined the talented student as multi-talented. Such students were described as being capable of demonstrating high-level abilities and personal qualities spanning multiple domains within and beyond academic performance areas. Participants also regarded outstanding people skills, personal initiative, and leadership abilities as definite indicators of talent in undergraduate students. The notion of talent as multiple abilities spanning several performance areas, and

encompassing both intrapersonal and interpersonal aptitudes, is reflected within Gardner's theory of multiple intelligences (Gardner, 1983, 1985, 1987, 1993, 1999).

Gardner (1983, 1985, 1987) initially proposed that all humans possessed at least seven intelligences described as (a) spatial, (b) musical, (c) bodily-kinesthetic, (d) interpersonal, (e) intrapersonal, (f) linguistic, and (g) logical-mathematical intelligence strength areas. In 1993, Gardner added an eighth naturalistic intelligence and has tentatively suggested the possible, but yet unconfirmed, existence of spiritual and existential intelligences (Gardner, 1999). Gardner believed that the intelligences generally developed unevenly in individuals. It was, therefore, more typical for someone to be highly capable in two or three areas and less capable in others. In this theory, giftedness can be defined as exceptional competence in one or more intelligences. Interestingly, Rinn and Plucker (2004) cautioned that talented tertiary students' knowledge of the potential for success within multiple areas of aptitude may serve to be counterproductive. They may ultimately fail to actualize their abilities in any particular field.

Creative abilities and innovative approaches to coursework were also regarded as indicators of a talented student by staff participants across all faculties and several students within one faculty. Creative aptitude is recognized as one of Gagné's four general aptitude domains with the potential to be actualized as outstanding creative achievement in a specific field or fields (Gagné, 2000, 2003, 2007, 2008). Sternberg (1985) similarly highlighted the valued role of creative abilities alongside analytical and practical thinking abilities within his triarchic theory of intelligence. Renzulli (1986) also prioritized the role of creativity as one of three sets of characteristics, along with above average intellectual ability, and task commitment, which intersect to produce gifted behavior. Giftedness, in this three-ring model of giftedness, equals creative productivity evidenced within any performance area of value. Valued creative performance is regarded as context and time-specific and, therefore, subject to change.

It is affirming to note that many staff participants in the current study were able to recognize and describe the multidimensional nature of talent within their undergraduate student cohort. It could be suggested that, within the current study, talented undergraduates' abilities were not forgotten. However, given the small-scale nature of this study, there is a definite need for more extensive research into the characteristics of academic staff working alongside talented students in undergraduate programs.

It could be particularly worthwhile to investigate the characteristics of academic staff that choose to work with

talented students in Honors programs. As Rinn and Plucker (2004) surmised, could academic staff possibly be drawn towards working in Honors programs because of “a genuine interest in gifted students, or do [they] end up in honors programs entirely out of chance?” (p. 63).

Key Factors Relating to Identifying and Providing for the Talented Undergraduate Student

Findings in the current study highlighted student, staff, and systemic factors inclusive of faculties and the wider university as being particularly influential in determining the experience of talented undergraduate students.

Faculty and/or University Related Factors and the Talented Student

There was significant variation in the degree of university and faculty wide responsiveness to the cognitive, social, and emotional needs of talented undergraduate students. At the university level, it was encouraging to note the commitment to a Young Scholars program option for talented students focused on accelerated learning practices. Accelerated learning can take one of two forms. Talented students are either (a) exposed to new content at an earlier age than their same-aged peers or (b) the pace of learning is accelerated (Townsend, 2011). In the latter instance, students master the same content in less time (Townsend, 2011). The Young Scholars program offers valuable opportunities for talented secondary school students to benefit from dual enrollment and subsequent curriculum acceleration opportunities.

Dual enrollment is described as a “form of subject-specific acceleration which allows gifted and talented students the opportunity to move beyond the curriculum of their expected age level in one or more areas” (Riley et al., 2004). In this university, high achieving students in their final year of secondary schooling are able to enroll in one university-level course per semester. Students who pass their course(s) are then able to enroll directly into second year courses when they become full-time students. The pace of delivery and exposure to content is consequently accelerated. The content of a four-year undergraduate degree is essentially “compacted” into three years of full-time study.

The Young Scholars Program presently offers around 12 course options. In the current study, it was only an option for those students who could select, and had passed, courses linked to the two science related faculties. (These two faculties referred to their offerings within the Young Scholars program as AP and MAX program options respectively). Given that talented students demonstrate advanced capabilities across multiple intelligence domains there would

appear to be scope for this positive program initiative to be further developed.

Braggett and Moltzen (2000) reported that dual enrollment opportunities appear to be less common within New Zealand universities. It is interesting to note that, from the mid-1980’s in the United States, state-level legislation guaranteeing talented secondary school students early access to university-level courses has greatly increased the occurrence of dual enrollment opportunities (Gifted Child Today Magazine, 1999; McCarthy, 1999). The New Zealand Ministry of Education (2012) promoted dual enrollment as part of a continuum of programming options, but there is no existing legislation to formalize this practice.

Staff consciously identified the most talented second year undergraduates for a post-graduate Honors program within one faculty in the current study. Academic staff then undertook to provide on-going mentoring and support for these students throughout their undergraduate degrees. Staff regarded high levels of perceived student focus towards attaining their goals and increased retention rates as being potentially positive outcomes of their input. In other faculties there was no planned approach to identifying and mentoring talented undergraduate students for Honors programs. Rules relating to Honors programs also appeared to vary between faculties.

It would be interesting to research talented students’ perceptions of the role of mentors in enhancing their learning experiences within the tertiary sector. Bisland (2001) cautioned that the teacher mentor role extends beyond having the required expertise to challenge a talented student in their ability strength area. Mentors also need to have a genuine interest in, and understanding of, talented students (Bisland, 2001).

Regardless of whether faculty members encouraged talented students towards Honors studies or not, students would ultimately need to apply themselves. In this instance, the self-nomination process would have been explained as an example of a deliberate act rather than a chance occurrence within Gagné’s (2008) revised DMGT. In ranking environmental influences, such as the role of significant people, programs and chance opportunities below the structured process of learning and practice, Gagné (2008) contended that “the bulk of the environmental stimuli have to pass through the sieve of an individual’s needs, interests or personality traits” (p. 4). He believed that individuals can determine the degree to which they will be influenced by particular environmental stimuli presented at any given point in time. However, like all gifted and talented individuals, talented tertiary students are not a homogenous group, and they may vary considerably in their degree of personal motivation.

Motivation is a complex concept, inclusive of such ideas as task commitment, the eagerness to learn, the

volition to succeed and intrinsic or extrinsic motivations (Friedman-Nimz & Skyba, 2009). In the current study, students from one faculty particularly valued receiving recognition for their achievements through a variety of extrinsic means, such as congratulatory letters, certificates, afternoon tea functions, and personal invitations to faculty events.

In this instance, extrinsic environmental motivation would appear to enhance and support an individual's intrinsic motivation in the development of expertise. Intrinsic motivation and personal identity are believed to be positively enhanced by positive teacher feedback and respect for effort, ability, and performance (e.g., Hunt & Seney, 2005; Rawlinson, 2004; Street, 2001). While both kinds of motivation have a value, intrinsic motivation is viewed as being particularly important and critical to the development of high levels of aptitude, creativity, and achievement (Lens & Rand, 2000).

Bloom (1985) acknowledged the important role of competition as a component in motivation. It is possible that faculties could consider formalizing annual awards initiatives for outstanding course achievement within their various course programs. Such awards could recognize the top achievers across programs at a special celebratory function. Awardees would receive appropriate recognition and acclaim for their abilities and skills from invited peers, family, friends, and academic staff.

Interestingly, some talented undergraduate students in other faculties who did not receive recognition for outstanding levels of achievement felt wronged. Other students felt that a similar lack of recognition for achievement was de-motivating. It would appear that these students could potentially be at risk of over-dependency on extrinsic forms of evaluation. Such dependency could ultimately lead to a loss of control over their own learning and possible underachievement (McNabb, 2003). It is also probable that these students may not have possessed the typically high levels of academic motivation and self-regulatory abilities indicative of highly gifted students.

Staff Related Factors and the Talented Student

Staff participants appeared to demonstrate high levels of awareness of the indicative abilities and characteristic behaviors of talented students. Staff perceptions of the talented student closely aligned with talented undergraduate students' self-perceptions. It is possible that the staff participants in the present study are highly effective practitioners who are more open to recognizing expressions of talent in their undergraduate student cohort. Four of the academic staff participants had been awarded teaching excellence awards at a faculty and/or university level in recognition of their

exemplary teaching abilities. All other staff participants had been approached to participate in the study by these four staff members on the basis of their evident interest in teaching and learning.

Staff participants may not have specific knowledge or qualifications related to gifted education. However, they may be very effective teachers with the necessary awareness and skill to successfully differentiate programs of work for the talented students in their classes. Teachers' abilities to know their students' needs and capabilities and to respond with a range of flexible instructional strategies are two quality indicators of effective differentiated teaching practice for talented students (Heacox, 2009).

Within the current study, staff participants were easily able to identify highly talented students through excellent in-class participation and outstanding grades within course assessments. In this respect, talented undergraduate students were clearly able to exert a positive influence on the tertiary learning environment. As Gagné (2008) asserted, an individual's high level of interest in a talent domain or sub-component of a domain is potentially the most powerful intrapersonal catalyst in the talent actualization process. Many writers regard enjoyment or passion for a particular talent area as the necessary personal energy to cope with challenging tasks, achieve personal goals, and attain higher levels of performance (e.g., Chan, 2002; Csikszentmihalyi, 1996; Gagné 2007).

However, it is also evident that the tertiary learning environment has the potential to impact positively on students in the form of support and stimulation from lecturing staff. Staff in the current study generally appeared to be adept at identifying potential and actual ability through more informal methods such as in-class observation, student questions, and classroom discussions. Most were also able to offer student choice and extra challenge within course assessment tasks. Although Gagné (2008) prioritized the catalytic potential of various intrapersonal influences over environmental influences in his revised DMGT, he was aware that "in most situations *all* components play an important role in the talent development process" (p. 6).

It is probable that many talented undergraduate students could set and pursue personal learning goals in an independent and highly successful manner while still selectively utilizing environmental supports to their advantage. Talented students are capable of incorporating extra challenge into their studies through self-initiated means such as reading beyond course readings, researching topics in greater depth, and forming study groups with like-minded peers. Undergraduate students in the current study did actively seek the support of like-minded peers to work alongside, both within and outside of class sessions. Such actions support Van Tassel-Baska's (1998)

assertion that “talented individuals do not make it on their own . . . the need for support from others is crucial for ultimate success” (p. 763).

Some students did report less positive experiences with certain staff members from the four faculties involved in the study. Some lecturers were perceived to lack empathy and understanding, particularly in their responses to student questions and comments about a lack of intellectual challenge within coursework and assessments.

Within the general literature relating to gifted education, mention is made of a lack of understanding of the particular cognitive, social, and emotional needs of gifted students by some teachers (e.g., Heacox, 2009; Tomlinson, 2003). Indeed, some teachers may lack the necessary skills and motivation to differentiate student learning appropriately, thereby validating Moltzen’s (2008) view of a “one size fits all approach” to tertiary education. There may also be a tendency for some staff to perpetuate the widely believed myth about gifted individuals of all ages: that they are capable of making it on their own (Rinn & Plucker, 2004).

Alternatively, while it is generally accepted that talented individuals possess high levels of self-belief in their own competencies, high self-concept does not always ensure prosocial behavior and may result in negative consequences (Dawes, 1998). While lecturers’ reactions to talented students’ questions and comments about unchallenging coursework and assessments may have been perceived negatively by students, a case could be made for greater understanding by both groups.

Self-determination characteristics of gifted and talented students include such indicators as skepticism towards authoritarian pronouncements, a tendency to question arbitrary decisions and ask searching questions, as well as forthrightly expressing ideas, preferences, and opinions (Moltzen, 2011a). While such behaviors are deemed to be characteristic of gifted and talented students, teachers often misinterpret these behaviors in their students and react negatively. It could be argued that what constitutes prosocial, egotistical, or arrogant behavior may depend on the “eye,” or the attitudes, of the beholder. Similarly, talented students often lack the personal awareness of these traits within themselves and the potential for such traits to impact negatively on teacher-student relationships.

Conclusion

The current study, while small-scale and exploratory in nature, provides several messages for educators working alongside talented undergraduate students within a tertiary learning environment. Findings highlight the critical importance of shared, university-wide understandings of the talented student,

and common cross-faculty methods for identifying talented tertiary students early in their undergraduate degree courses. Talented undergraduate students’ talents need to be fostered through appropriately challenging coursework, alternative assessment options and facilitative and leadership opportunities. There is also a perceived need to recognize and celebrate excellence in achievement. The current study has highlighted some positive staff, faculty, and university-level program responses to the needs of talented undergraduate students. Yet, there may presently be little cause for complacency within the tertiary sector. Talented undergraduate students may not be forgotten, but are they fully understood and catered to?

References

- Abeyssekera, I. (2008, November). *Researching gifted and talented in tertiary education: Issues and directions*. Paper presented at the Australian Association for Research in Education International Education Research Conference, Brisbane, Australia.
- Bisland, A. (2001). Mentoring: An educational alternative for gifted students. *Gifted Child Today*, 24(4), 22-25, 64-65.
- Bloom, B. S. (1985). *Developing talent in young people* (1st ed.). New York, NY: Ballantine Books.
- Braggett, E. J., & Moltzen, R. I. (2000). Programs and practices for identifying and nurturing giftedness and talent in Australia and New Zealand. In K. A. Heller, F. S. Monks, & R. F. Subotnik (Eds.), *The international handbook of giftedness and talent* (2nd ed., pp. 779-797). Oxford, UK: Elsevier.
- Chan, L. K. S. (2002). Metacognition and the motivational orientations of intellectually gifted students. In W. Vialle & J. Geake (Eds.), *The gifted enigma: A collection of articles* (pp. 164-184). Cheltenham, VIC: Hawker Brownlow.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York, NY: Harper Perennial.
- Dawes, R. M. (1998). The social usefulness of self-esteem: A skeptical review. *Harvard Mental Health Letter*, 15, 4-5.
- Friedman-Nimz, R., & Skyba, O. (2009). Personality qualities that help or hinder gifted and talented individuals. In L. V. Shavinnia (Ed.), *International handbook on giftedness* (pp. 421-435), Quebec, Canada: Springer Science and Business Media.
- Gagné, F. (2000). Understanding the complex choreography of talent development through DMGT-based analysis. In K. A. Heller, F. S. Monks, & R. F. Subotnik (Eds.), *The international handbook of giftedness and talent* (2nd ed., pp. 67-79). Oxford, UK: Elsevier.

- Gagné, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 60-74). Boston, MA: Allyn and Bacon.
- Gagné, F. (2005). From gifts to talents: The DMGT as a developmental model. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (2nd ed., pp. 98-119). New York, NY: Cambridge University Press.
- Gagné, F. (2007). Ten commandments for academic talent development. *Gifted Child Quarterly*, 51(2), 93-118. doi:10.1177/0016986206296660
- Gagné, F. (2008). *Building gifts into talents: Brief overview of the DMGT 2.0*. Unpublished manuscript, Université du Québec à Montréal, Montreal, Canada.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.
- Gardner, H. (1985). *Reintroducing frames of mind*. New York, NY: Basic Books.
- Gardner, H. (1987). The theory of multiple intelligence. *Annals of Dyslexia*, 37(1), 19-35. doi:10.1007/BF02648057
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York, NY: Basic Books.
- Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. New York, NY: Basic Books.
- Gifted Child Today Magazine. (1999). Dual enrollment programs increase. *Gifted Child Today Magazine*, 22(4), 6.
- Heacox, D. (2009). *Making differentiation a habit: How to ensure success in academically diverse classrooms*. Minneapolis, MN: Free Spirit.
- Hunt, B. G., & Seney, R. W. (2005). Planning the learning environment. In F. A. Karnes & S. M. Bean (Eds.), *Methods and materials for teaching the gifted* (2nd ed., pp. 37-74). Waco, TX: Prufrock Press.
- Lens, W., & Rand, P. (2000). Motivation and cognition: Their role in the development of giftedness. In K. A. Heller, F. S. Monks, & R. F. Subotnik (Eds.), *The international handbook of giftedness and talent* (2nd ed., pp. 193-202). Oxford, UK: Elsevier.
- McCarthy, C. R. (1999). Dual enrollment programs: Legislation helps high school students enroll in college courses. *Journal of Secondary Gifted Education*, 11, 24-33.
- McNabb, T. (2003). Motivational issues: Potential to performance. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 417-423). Boston, MA: Allyn and Bacon.
- Moltzen, R. (2008). *Tertiary teaching excellence profile*. Retrieved from <http://akoaoaterrora.ac.nz/community/akoaoaterrora-academy-tertiary-teaching-excellence/resources/pages/roger-moltzen-tertiary-t>
- Moltzen, R. (2011a). Characteristics of gifted children. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. 71-72). Auckland, New Zealand: Pearson.
- Moltzen, R. (2011b). Conceptualising of giftedness and talent. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. 31-53). Auckland, New Zealand: Pearson.
- New Zealand Ministry of Education. (2012). *Gifted and talented students: Meeting their needs in New Zealand schools*. Wellington, New Zealand: Learning Media.
- Rawlinson, C. (2004). Self concept, self efficacy and special abilities. In D. McAlpine & R. Moltzen (Eds.), *Gifted and talented New Zealand perspectives* (2nd ed., pp. 467-481). Palmerston North, New Zealand: Kanuka Grove Press.
- Renzulli, J. S. (1986). The three-ring conception of giftedness: A developmental model for creative productivity. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (pp. 51-92). New York, NY: Cambridge Press.
- Riley, T., Bevan-Brown, J., Bicknell, B., Carroll-Lind, J., & Kearney, A. (2004). *The extent, nature and effectiveness of planned approaches in New Zealand schools for providing for gifted and talented students*. Wellington, New Zealand: Ministry of Education.
- Rinn, A. N., & Plucker, J. A. (2004). We recruit them, but then what? The educational and psychological experiences of academically talented undergraduates. *Gifted Child Quarterly*, 48(1), 54-67. doi:10.1177/001698620404800106
- Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. New York, NY: Cambridge University Press.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research techniques and procedures for developing grounded theory* (2nd ed.). London, UK: Sage.
- Street, P. (2001). The role of motivation to the academic achievement of gifted secondary school students. *Gifted Education International*, 15, 164-177.
- Tomlinson, C. A. (2005). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: ASCD.
- Townsend, M. (2011). The need to balance acceleration with enrichment in gifted education. In R. Moltzen (Ed.), *Gifted and talented: New Zealand perspectives* (3rd ed., pp. 252-275). Auckland, New Zealand: Pearson.

Van Tassel-Baska, J. (1998). The development of academic talent: A mandate for educational best practice. *Phi Delta Kappan*, 79(10), 760-763.

LYNDA GARRETT is a senior lecturer in the School of Learning Development and Professional Practice in the Faculty of Education at the University of Auckland. Her research has focused on motivation, social-emotional aspects of giftedness, the talent development process for young gifted and talented students in the verbal-linguistic domain, and the influence of teacher expectations on young gifted and talented readers. Lynda has presented at national and international conferences on gifted and talented education, and is currently building a publishing profile within journals such as *English Teaching: Practice and Critique*, and the *European Journal of Social and Behavioural Sciences*. Correspondence concerning this article should be addressed to: Lynda Garrett, School of Teaching, Learning and Professional Practice, University of Auckland, Private Bag 92601, Auckland 1150, New Zealand. Lynda's e-mail address is: l.garrett@auckland.ac.nz

CHRISTINE RUBIE-DAVIES is an associate professor and Head of School in the School of Learning Development and Professional Practice in the Faculty of

Education at the University of Auckland. Her research is mostly focused on teacher expectations at the whole class level and how various teacher beliefs and personality characteristics influence the instructional and socioemotional climate of classrooms. Christine also has interests in ethnic issues and gifted students. Christine is a Fellow of the Association for Psychological Science (US) and a recipient of a National Tertiary Teaching Excellent Award. Her work has been published in journals such as *Journal of Educational Psychology* and *British Journal of Educational Psychology*.

Acknowledgments

The authors wish to acknowledge the contribution of Christine Rubie-Davies, Sandy Farquhar, Catherine Rawlinson, Heather O'Neill, Paul Heyward, and Anne Sinclair, in completing an exploratory study, presented as a report: What About our Talented Students?: An Exploratory Study. The research team gave permission for the authors to publish from this original report. The exploratory study was supported by Ako Aotearoa through a Regional Hub Project Funding Scheme grant to the second author. The report was published as an Ako Aotearoa publication in August, 2010. The current article has been extensively revised and rewritten for publication.

Appendix
Staff and Student Focus Group Prompts

Staff focus group prompts:

1. What do you understand by the term “talented students”?
2. What are the characteristics, dispositions and /or behaviors of a “talented student”?
3. What do you consider to be the place of faculties or departments in fostering the learning and abilities of talented students?
4. How do you identify talented students?
5. What do you currently do to support and enhance the learning and experiences of talented students?
6. What does your faculty currently do to support and enhance the learning and experiences of talented students?
7. Are you aware of any other strategies or programs in place at this university, or others that are designed to support talented students?
8. Do you have any strategies that could be implemented within your faculty, or across the university, which might further enhance the learning and experiences of talented students?
9. If an overall plan or program was introduced within your university to support talented students, what do you see as the benefits?

Student focus group prompts:

1. Why do you think you were selected to participate in this focus group? How did the staff members know this, do you think?
2. Is your learning supported in any way? How?
3. What does your faculty do currently to enhance your learning and experiences at university?
4. How could your faculty or the teaching staff do more to make your learning at university more engaging or more challenging?
5. Is there anything about your learning experience at the university that has not been good?
6. Do you have any suggestions of strategies that could be implemented within your faculty or across the university that might further enhance the learning and experiences of talented students like yourself?
7. If an overall plan or program was introduced within your university to support talented students, what do you see as the benefits?