

What makes intellectually gifted boys tick

In 2010, when undertaking the data-gathering phase of my PhD research with intellectually gifted Māori and Pasifika secondary school boys, I asked a 17-year-old, Pasifika boy, Mareko¹, why he had been academically successful. He responded: “The best help for me, the biggest part that has helped me to get where I am now, is the love that my parents show towards me. Without their help I wouldn’t be where I am now.” What became readily apparent as I discussed this further was that he had been privileged to live in a home characterised by unconditional love. That’s not a term you hear often at these sorts of talks: ‘unconditional love’. What on earth does unconditional love have to do with academic excellence? Simply put, unconditional love is the manifestation of these parents’ care for all their son’s needs: his physical, intellectual, emotional, social, cultural and spiritual needs. In a word, his holistic needs. In my view, meeting Mareko’s and other students’ holistic needs shows a good understanding of what makes intellectually gifted boys tick. It was, according to my research, fundamental to engaging them in their learning.

But, why is engaging students in learning so important? Because, quite simply, if the teacher does not engage students in learning, little else they do, actually matters. In Dr Jim Watters (2017) keynote address at the World Council for Gifted and Talented Children Conference in Sydney, he spoke about motivating student engagement. What I found particularly noteworthy was that what he said aligned very well with the findings of my PhD research, and postdoctoral research, as well as anecdotal evidence gathered during seven years as Dean of Advanced Learning Programmes at Hamilton Boys’ High School. Dr Watters outlined the drivers, conditions, and outcomes of engagement. He posited that the expectancy for success, and the value of the task being undertaken, are the key drivers for engagement. The conditions for engagement are considered to be a sense of autonomy, a sense of competence, and a sense of connectedness. When the drivers and conditions for engagement are present, the outcomes are emotional satisfaction with a holistic sense of wellbeing, and academic achievement.

In my research, numerous students had a clear expectation of success, considering that there would be likely to be worthwhile outcomes from their learning. In many cases the high, but realistic, expectations of parents and teachers appeared to influence the boys’ achievement. Expectancy of success was clearly a driver for their engagement. For some students this was articulated through the goals they set themselves. An example of this was a student from my research, Rawiri, who, on starting high school, was happy to be placed in a middle-band class because he did not want to stand out from the general student populace. However, during the course of the year his experiences and observations led him to believe that the students in top-band classes had the best teachers and had more opportunities than those in middle-band classes. Rawiri decided he wanted to move into the top band the following year. He therefore set himself several goals, which he worked hard to achieve. One of Rawiri’s goals was to achieve over 80% in all core subjects in the Year 9 end-of-

¹ All students’ names are pseudonyms

year examinations. His Social Studies teacher reported that before the examination he came and asked if he wrote an essay, would the teacher give him feedback on how to improve. The teacher said, "Yes." He gave the essay 6/10 and then explained to Rawiri what he needed to do in order to be given a 10/10 mark. Rawiri wrote three essays in the end-of-year examination, receiving 10/10 for all of them, placing first in class and scoring over 80%, a feat replicated in all three other core subjects, placing him first in class overall. As a result, he was moved to a top-band class the following year. Rawiri went on to top that class as well. In Year 13 he was the school's top Māori or Pasifika scholar, and also gained New Zealand scholarships in English and Media Studies. Rawiri had a clear expectation that he would achieve success through goal setting and a strong work ethic.

In addition to the expectancy of success, the perceived value of the task on which students were working, influenced their engagement. If tasks were related to them achieving their goals or were viewed as relevant learning, they had high value, and were drivers of engagement. One of the criticisms some students made of their primary and intermediate schooling was, that even work provided for withdrawal groups of gifted students, sometimes lacked relevance. For example, one student commented that an extension programme for gifted students in his school was "basically compulsory art" designing and making props and brochures for the school production. He himself had no interest in being extended in art but craved the opportunity to be challenged more in other domains.

When considering the conditions for engagement, the sense of autonomy, sense of competence and sense of connectedness all featured in my research. Several students made mention of the importance of choice, options, negotiation and self-rule that are features of developing a sense of autonomy. For example, some students commented positively about the range of subjects they could choose to study in their secondary school. In this school there were 36 different options that could be studied in the senior secondary school, providing a diverse range of enrichment opportunities. Students appreciated being able to pursue areas of study that particularly interested them. One student stated that learning how to learn in Year 9 was important to his future success, enabling him to make good decisions about how to study effectively, and to take responsibility for his own learning. Anecdotally, a profoundly gifted student, Horatio, remarked that the best experience of his entire schooling to date had been the opportunity to pursue an in-depth study on a topic of his choice in Year 9. The in-depth study is the highest level of the Autonomous Learner Model developed by Dr George Betts (1985). An autonomous learner is one who takes responsibility for his or her own learning. The research questions for the in-depth-study topic, are developed by the student in negotiation with the teacher but the format of the presentation is entirely the responsibility of the student. This process encourages the development of self-rule. Anyway, back to Horatio's story. His in-depth study was part of the extension programme for all students in top-band classes of his year level in his school. Horatio chose to focus his study on persona psychology, examining the psychological theories of Freud, Jung, Skinner and Rothbard, as well as the sociological theories of Weber. He developed an on-line

questionnaire which was completed by about 100 participants and then he collated, analysed and wrote up the findings in a Masters-style thesis of approximately 31, 000 words, all in the space of three months, mostly outside of school hours.

Developing a sense of autonomy through self-rule is not simply about choosing what topics to study and how to present research. It is also very much about developing the intrapersonal characteristics that are important keys to student success. In both my research studies it seemed that there was a cluster of traits that were particularly significant in assisting students to achieve highly. Those common to both studies were: a strong work ethic, determination, perseverance, self-motivation and goal setting. The highest achievers embodied all of these characteristics. One student who particularly stood out for his strong intrapersonal characteristics was Vamana, a Pasifika migrant who began his New Zealand schooling at the start of Year 10. The school's entrance tests placed him in the top class of his year level, although he had never before held a conversation in English. He had learned to read in English and listened to English but never engaged in a conversation in English. I asked him what it was like starting in his new school. He said he didn't understand what people were saying to him in the playground, and it was "so hard for the first hour." I thought, "Only the first hour?" I then asked how he coped with the class lessons. He said that every night he went home and discussed the lessons with his father and older sister until he understood them. I asked whether he ever wished he had been placed in an easier class. He responded: "No. If I fail this test, on the next one I'm not going to fail again. I'm going to keep studying and studying until I pass." Vamana set the goal of passing Level 1 of NCEA the following year, a goal he achieved gaining 150 credits at Level 1, easily surpassing the 80 required for a pass. What a remarkable work ethic, and what determination, perseverance and self-motivation!

Is there anything parents and teachers can do to foster the development of the intrapersonal qualities linked to high achievement? There most certainly is. First, parents and teachers do role model intrapersonal qualities whether these are positive or negative. For example a father who spends inordinate amounts of time sitting blobbed out in front of a television screen is not modelling a strong work ethic or self-motivation. In a similar way, the teacher who routinely races the students out the gate at the end of the school day to go home is not modelling a strong work ethic. There was one student, Salé, who told a particularly compelling story of his father as a positive role model. He described his father as "inspirational to us as kids." Salé's father dropped out of high school but went to university as an adult student, gaining a Masters degree in business management. He went on to become the manager of a major business. Second, parents and teachers can ensure boys persevere to complete tasks. They can be taught that when they make a commitment they must keep that commitment. . For example, if they join a sports team, they must support that team 100% for the full season. These simple steps can help positive intrapersonal characteristics to develop. It seems that providing opportunities for students to develop autonomy coupled with their own strong intrapersonal qualities contributed to

their emotional satisfaction and holistic wellbeing, enabling their giftedness to be brought “from the inside out”.

In both my PhD and postdoctoral research, numerous students remarked in some detail about issues related to a sense of competence. In fact, in my postdoctoral research, amongst a cohort of intellectually gifted Year 9 boys, by far the greatest hindrance to academic achievement was considered to be lack of challenge at some point, or indeed, throughout their primary and intermediate schooling. From a class of 31 students, this was mentioned by 18 of them. Students spoke of needless repetition, lack of teacher input into their learning because the teacher’s focus was on low-end students, waiting for others to catch up, waiting, and waiting, being left to their own devices by the teacher, being given breadth of learning without depth by having to complete irrelevant non-academic work, being grouped with slow learners and therefore having to teach them and do most of the work for group projects, lack of competition, boredom and depression. The boy who had been depressed commented:

At my old school I went through depression in Year 7 and 8 and I’m still coming out of that, whereas this school helped me out of it. One of the things I had been thinking at my old school was ‘Oh, they’re putting me on all this old homework that I’ve done ages ago because that’s obviously where I’m at.’ That’s how I started thinking.

Isn’t that a sad criticism of this boy’s intermediate schooling?

One significant concern to arise from students’ comments about lack of challenge was that what the students termed Modern Learning Environments or Open Plan classrooms but are generally known internationally as Innovative Learning Environments, were viewed as hampering achievement by nine of the eleven students who had experienced them. One of the other two students said that he would have loved to continue being in a Modern Learning Environment for his secondary schooling because it had “good learning vibes” with “different routines.” The second of these students explained that a Modern Learning Environment could be good or bad for learning depending on the day. The bad days were those where students were able to manipulate the teacher into allowing them to use their digital devices to play instead of working. For the nine students who criticised Modern Learning Environments, it seems they lacked appropriate academic challenge. Specifically, their complaints related to the lack of competition, difficulty with concentrating, less restrictions, an environment that was, incredibly, too relaxed with bean bags and couches, increased opportunities to play games on digital devices instead of working, more distractions, and insufficient tables to work at. Who would have thought that the humble desk, in use since the Middle Ages, is now missed by some students in our modern classrooms? One student compared his experience in Year 7 in a traditional classroom with his experience in Year 8 in a Modern Learning Environment: “In Year 7....we all actually excelled and we got a lot smarter...we had an incredible teacher...but then in Year 8 they incorporated Open-Plan classrooms and it was horrible and we all just felt like quitting. There were only a few really determined people that managed to get through the year and still be improving.”

The 18 boys who lacked challenge at primary and/or intermediate school were fortunate to attend a secondary school where all said they were being appropriately challenged. They, and others, commented that their academic achievement had been helped by being placed in a streamed, (or ability-grouped) environment. Students appreciated working with others of similar ability, being in a competitive yet supportive environment and having their learning accelerated. They were appreciative of being able to cover two years of content in one year in some subjects to enable them to start their National Certificate in Educational Achievement early in these subjects. It seemed that the streamed environment had provided for these intellectually gifted students' propensity to pursue challenges and had contributed to all developing in their own sense of competence. It was apparent that, in addition to providing academic benefits, the sense of competence developed through appropriate challenge had contributed to intellectually gifted boys' emotional and social wellbeing. The boy who had been depressed at intermediate school exemplifies this. He said this of his streamed-secondary-school teachers: " They were saying, 'You should be at this level. You should be right up there'They brought me up to where they felt I should have been and they were saying, 'You're here,' and that was really, really helpful." It was apparent that, in addition to providing academic benefits, the sense of competence developed through appropriate challenge had contributed to this boy's and others' intellectual and socio-emotional wellbeing.

In my research many boys explained how providing for their emotional, social, cultural, and spiritual needs, enabled a sense of connectedness to develop between their whānau and them, and their teachers and them. It seemed that in almost all families, positive and productive relationships existed between boys and their parents. Numerous boys spoke of their appreciation of the encouragement given to them by their parents and the way this had assisted with their academic achievement. It seemed that high expectations were generally coupled with encouragement. In my interviews with the parents of intellectually gifted Māori and Pasifika boys, several spoke of their commitment to their sons' academic success and the sacrifices made to give them the best possible educational opportunities, in spite of the financial pressure of doing so. These appeared to be environments characterised by unconditional love. Mareko's parents were a classic example. They were Pasifika migrants who spoke minimal English but were determined that Mareko should have every possible opportunity to achieve academically. Mareko's father (as translated by Mareko) said that the family could not afford to pay for the Internet. They came up with a novel solution. Mareko's father would drop him at the nearby university library where he would often study all day, using both the internet, and book resources. Mareko achieved highly at school, and some years later was admitted to the bar as a lawyer. As stated earlier, by Mareko's account, the love of his parents was the greatest contributor to his academic success.

It was noteworthy that some of the highest-achieving Māori and Pasifika students came from homes where the performance aspects of their culture were highly valued and one of these students was also the top te reo Māori scholar in

his school. The connection with their culture was significant for them. These boys identified strongly as Māori and/or Pasifika, and as academically high-achieving students. Several students, particularly those of Pasifika ethnicity, viewed the spiritual dimension as an element contributing to academic success. Students spoke of the spiritual dimension as important to them in coping with family crises, helping to clarify thinking in tests and examinations, providing a calming influence in their lives, and connecting them with other people. A Pasifika migrant student stated that his Christian faith was the most significant contributor to his achievement. For many boys it seems the connectedness within whānau, including the cultural and spiritual dimensions, had been the most significant element in developing giftedness from the inside out.

It seems, the father of one Māori boy, Wiremu, was particularly adept at connecting with his son by using incidental opportunities to teach. In addition to outlining the strong values base imparted by his father, Wiremu recounted in detail how his father used informal opportunities to engage him in learning. He spoke of the way his father would take him everywhere with him, for example, on the farms on which the family lived. According to Wiremu, his father would be consistently mindful of opportunities to ask questions that would teach his son. In advance, he would ask Wiremu why a particular action should be taken and then, while doing the task, would ask for an explanation of why that action was being taken. Wiremu's father would play enjoyable and engaging games with him and challenge him to learn new information and skills. One incident that Wiremu recalled was when, as a small child, he was splashing round in the bath and water cascaded from the bath all over the floor. His father then entered the bathroom and saw the mess. What would you have done if you had been Wiremu's father or mother? Wiremu's father excitedly said, "Son, you've just shown Archimedes' Principle!" An explanation was then given about how the principle was demonstrated by the water being displaced.

Wiremu achieved well at school gaining 35 Excellence credits at NCEA Level 2 in Year 12 and subsequent to the gathering of data through interview, successfully completed Year 13 then completed his first year of Health Sciences at university and was accepted into Medical School and last time I heard, was on track to become a doctor. He was asked the question, "If we look at how you've succeeded academically, can you think of any particular reasons you attribute that success to?" His response was:

I'd say my dad, when it comes to a lot of my success for the person I am today. He's just always pushed me in the right direction but not in a forceful way. He's sort of always been the guiding hand for me. I attribute a lot of the man I am today to my dad just because of the fact that he is, and he raised me really well.

It seems he was a father who understood well the importance of a sense of connectedness with his son

Although there was a sense of connectedness within whānau for many boys, it was not the case for all. It seemed that two of the boys were largely left to make their own way at school with little or no parental interest or encouragement. A couple of others were plainly in conflict with their parents. A further two commented that they were unduly pressured to study for what they considered were unreasonable amounts of time for students of their year level.

As with whānau, a sense of connectedness was also built between intellectually gifted boys and some of their teachers. In my research, many students spoke of the way they valued and appreciated teachers who focused on building positive relationships and knew students well. As with nurturing whānau, high expectations and encouragement were characteristic of teachers who built a sense of connectedness. Other features of relationship-focused teachers were that they conveyed to students that they cared about them as people, not just as students of their subject, and they incorporated humour and fun into the classroom.

During my research with intellectually gifted Māori and Pasifika boys, I observed in 13 different classrooms in two different state boys' secondary schools. These included five classes taught by teachers whom research participants had named as making a particularly positive difference to their learning. They all exemplified being relationship-focused, had high expectations, and were very encouraging to students. I thought, however, there was one teacher who was particularly outstanding. He did not know until just before the lesson that I was coming to observe him teach, so had no time to especially prepare anything for my visit. The teacher was a middle-aged Irishman, and was taking the first lesson in a unit of work on algebra. He asked what the person taking orders at the front desk wrote down when students ordered food from the fish and chip shop. An example given was 3f, 2c, 3s (i.e. 3 fish, 2 chips, 3 sausages). The teacher likened the f, c and s to the alphabet placeholders in algebraic equations. Later in the lesson, when demonstrating how to work out the value of a placeholder, he used self-created computer animations on balancing scales when solving equations. The animations were green Martians that hopped on and off the scales to enable them to balance. Interwoven with the direct skills teaching were stories he told to illustrate what was being taught. While students were working on practice examples, I wandered round the classroom and talked to several students about how they felt about being in this class. They were all extremely positive. In particular, they mentioned their love of the teacher's sense of humour. A classic joke of his was, "Do you know who invented the calculator?" Nobody did. The teacher then added, "It was an Irishman. His name was Sean O'Calculator." When the bell rang for the end of the lesson and the students were dismissed, several of them came to see the teacher for a friendly chat. They were in no hurry to get to the next class. When the teacher saw his next class waiting outside, he said to the students, "You'd better go now. My next class is waiting."

Following my lesson observation, I had an individual interview with a Year 12 student, Tauaarangi, who confided: "Emotionally I have been a wreck for a good four years. I'm only just getting myself back together." He had been through several significant personal and family traumas over the past four years which

all contributed to him feeling as he described “an emotional wreck.” In spite of these traumas, although placed in a middle-band class at the start of his secondary schooling, he later moved to the second top class and then to the top class. He attributed his success to his own intrapersonal qualities of a strong work ethic, determination and perseverance, and to the positive relationship built with two teachers. One of these teachers was the one in whose class I had observed the previous period. Having seen the way he related to students both in class and after class, I understood why he would make a positive difference in the life of a traumatised boy.

In contrast with most students I interviewed, there was one student who it seemed had only built a relationship of partial trust and connectedness with one teacher, his tutor teacher. He would not approach any teacher for help other than his tutor teacher. This student also had difficulties building relationships with his peers. It seems that throughout most of his two years in Year 9 and 10 he had been subject to almost daily verbal bullying in the form of racially based taunts that always took place below the teachers’ radar. There was no teacher in whom this student could confide on this particular issue, and the bullying did not come to the attention of a teacher until one day he “lost it” and threatened one of the bullies. It seems the matter was then sorted out. It appears that the education he received in Year 9 and 10 was lacking in the holistic care he needed.

In addition to relationship-focused teachers providing students with a sense of connectedness, my research with intellectually gifted Māori and Pasifika boys showed aspects of school organisation and programme provision contributed to the sense of connectedness, facilitating the meeting of social, emotional, cultural and spiritual needs of students. For example, the mere fact that both schools streamed their classes meant that students’ primary day-to-day connections were made with students of similar ability. This provided well for the boys’ social and emotional need to have friends with whom they could connect on an intellectual level. I cannot emphasise enough how important it is for intellectually gifted boys to have like-minded peers with whom they can connect. Anecdotally, the mother of a profoundly gifted boy told me that her son made the first real friends of his life at high school. There were three with whom he formed a particularly close friendship, all of whom were amongst New Zealand’s top scholars. He would not have found similar students to these friends in many, if not most New Zealand secondary schools.

Significantly, both schools sought to foster a sense of connectedness with students by providing ample opportunities for most Māori and Pasifika students to be involved in meaningful activities and studies associated with, and valued by their cultures. These included kapa haka, Pasifika dance and singing, tikanga Māori, Pacific Studies, te reo Māori and Samoan language. However, not every Pasifika student found a connection with his culture through what his school provided. One student, who was the only student from his island group in the school, remarked that his island group was not represented in any Pasifika activities, something which was a disappointment to him, particularly as he was a recent migrant from his Pacific Island homeland.

Facilitating a sense of connectedness for students' through recognising and valuing their cultures, is strongly linked to providing for their spiritual needs. A fundamental spiritual question being asked by gifted and talented secondary school boys is, "Who am I?" Part of the answer comes from involvement in their culture. For example, both Māori and Pasifika cultures highly value whakapapa. Learning about their whakapapa is part of a spiritual as well as a cultural journey. It makes connections to whānau, tupuna and the land. Making these connections are part of tikanga Māori and Pacific Studies classes. In addition, in one school, ethnically-based tutor groups or form classes provided opportunities to pray and sing spiritual songs in the indigenous languages of the students. The Māori and Pasifika groups got together once a week to share their prayer and singing time together. I trust you have now got a picture of what makes intellectually gifted boys tick – providing for their holistic needs.

The greatest concern from my research regarding unmet needs was around the failure of some schools and teachers to provide opportunities for intellectually gifted boys to develop a sense of competence. It is of particular concern that 18 out of 31 intellectually gifted boys in my postdoctoral research identified lack of challenge at some point in their primary and intermediate schooling as the main hindrance to their achievement in at least one academic area. These boys' propensity for challenge was ignored meaning that they never developed the sense of competence they should have with particular teachers or indeed, in particular schools. Furthermore, it must be of concern that Modern Learning Environments appear to have contributed to the lack of challenge experienced by 9 boys. Programmes that lack challenge go hand-in-hand with low teacher expectations. Because of low teacher expectations and programmes having insufficient challenge, academically gifted and talented students are not treated equitably and they are not achieving the standards of excellence of which they are capable. Clark (2008) argues that the mission of gifted education and talent development is a mission of equity and excellence. The secondary school with a streamed environment, which the 31 boys in my study attended, provides one model of how to achieve the mission of providing equity and opportunities to achieve excellence for intellectually gifted boys, and perhaps girls as well. First, engage students' minds and hearts by providing appropriate challenge in the context of meeting their physical, social, emotional, cultural and spiritual needs. Second, enrich students' learning through providing a wide range of curricula. Third, extend students' learning by enabling them to learn in greater depth. Fourth, accelerate students' learning by allowing them to learn at greater speed. When these four principles are put in place together with high teacher expectations and encouragement, the mission of equity and excellence for intellectually gifted learners is much more likely to be achieved than is currently the case for many such students. Yes, engagement + enrichment + extension + acceleration x (high expectations + encouragement) = equity + excellence.

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