

**Talent Development for the Talent Developers:
Identifying and Developing the Qualities of Effective Teachers of Gifted Students**

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Abstract

This paper contains a literature review concerning the qualities of effective teachers of the gifted. The research analysed 15 empirical studies and identified several common qualities of effective teachers. It is proposed that the qualities of effective teachers of the gifted are equivalent to talents in Gagné's differentiated model of giftedness and talent. Based on this theory, it can be deduced that effective teachers of the gifted possess natural abilities that have the potential to be transformed into talents within the domain of gifted education. This paper therefore argues that Gagné's differentiated model of giftedness and talent should be applied, not just to gifted students, but also to the teachers of the gifted, thus facilitating the identification of potentially effective teachers and ensuring the complete talent development of existing teachers.

1. Introduction

In his thought-provoking paper entitled *Unthinkable Thoughts: Education of Gifted Students*, Gallagher (2000) argues that gifted students, i.e. individuals who learn faster and produce more original ideas than their peers, exist within most classrooms (pp. 5-7). Gallagher continues to argue that gifted students require a special education programme to ensure that their natural abilities are challenged and that their potential is fully developed, thus allowing them to make a positive contribution to their culture or society (pp. 7-8). He concludes that gifted education programmes should be delivered by specially trained teachers who are able to identify and meet the particular requirements of gifted students, such as acceleration and differentiation (pp. 8-9).

After reviewing the literature and performing his own empirical research into the qualities of effective teachers, Stronge (2007) is adamant that the classroom teacher is the single most important factor in a child's academic development:

Teachers have a powerful, long lasting influence on their students. They directly affect how students learn, what they learn, how much they learn, and the ways they interact with one another and the world around them. Considering the degree of the teacher's influence, we must understand what teachers should do to promote positive results in the lives of students with regard to school achievement, positive attitudes toward school, interest in learning and other desirable outcomes. (p. ix)

It can be concluded from the contributions of Gallagher and Stronge that gifted students require their own education programmes, which should be delivered by specially trained teachers. In addition, teachers of the gifted bear the responsibility of being the single most important factor in their students' academic, and possibly social / emotional, development. Considering that today's gifted students have the greatest potential to develop into tomorrow's business leaders, research scientists and performing artists, their education should not be left to chance.

This paper contains a review of 15 qualitative and quantitative empirical research studies into the effective characteristics of teachers of the gifted. By comparing a range of

different studies, conducted using a variety of different instruments, it is anticipated that several common key qualities of effective teachers of the gifted will emerge. Once these essential characteristics have been identified, it is proposed that they are treated as talents that should be developed by all teachers within the domain of gifted education. Development of these talents amongst teachers is desired to ensure that gifted students receive the best possible education.

It is proposed that Gagné's differentiated model of giftedness and talent (Gagné, 2007) is one possible strategy that can be used to develop the talents of teachers of the gifted. An effective teacher of the gifted can be considered as possessing natural abilities which are developed into talents within the domain of gifted education. Development of these natural abilities into talents will take place through learning and practice, under the influence of intrapersonal and environmental catalysts, both of which are affected by chance.

Some anticipated problems are:

- There may be gaps in the empirical research, i.e. there may be research methods that have been applied to the area of general education, but not the area of gifted education.
- There may be essential qualities of teachers of the gifted which empirical studies, as yet, have failed to identify.
- It may be impossible to develop some of the essential qualities that are identified into talents because they are personality traits (Stronge, Little & Grant, 2008, p. 5).
- Gifted students are all different and will consequently demonstrate different preferences for different teacher qualities within the classroom.

2. Methodology

Recently published textbooks on gifted education, edited by respected professionals within the field, were acquired. Within each textbook, the chapter on teacher characteristics (Croft, 2003; Roberts, 2006; Robinson 2008; Stronge, 2007) was studied and frequently cited journal articles were identified and obtained for analysis. Subsequently, references from these journal articles

were scrutinised for additional sources of information, eventually yielding a total of 15 empirical research articles for review. Once acquired, the journal articles were coded and divided into eight categories based on the source of primary data being analysed; cross-cultural study, expert judgement, parents' perspectives, peer evaluation, principals' perspectives, students' academic achievement, student preferences and teachers' perspectives.

The collection of journal articles that are reviewed in this paper is by no means exhaustive, but a reasonable attempt has been made to ensure that the various approaches undertaken by scholars focusing their research on this important area of gifted education, have been included. In addition, an attempt has been made to ensure that contemporary journal articles from the past ten years form a majority of the information that is reviewed in this paper. However, older articles have been included if they were found to be frequently cited in recent literature or contribute thought-provoking perspectives.

Finally, it should be noted that most of the articles reviewed in this paper are taken from journals dedicated to the field of gifted education, for example, *Gifted Child Quarterly*. However, articles from other journals have been included where empirical research in the field of gifted education was found to be lacking, for example, in the analysis of the relationship between teacher qualities and student achievement. The gaps that have been identified by this literature review offer promising areas for future research within the field of gifted education.

3. Literature Review – 10 of the journal articles are summarised in the table below:

Coding:	Author and Date:	G.E. Lit.:	Sample and Methodology:	Summary:
Cross-Cultural Study	VanTassel-Baska, MacFarlane and Feng, 2006	✓	Qualitative study. Thirty-one exemplary teachers from Singapore and 12 exemplary teachers from America were interviewed and/or surveyed. Teachers were randomly selected from a pool of nominated teachers. Note: It is unclear why the Singapore sample is much larger than the American sample.	<p>Singapore teachers: 13 years teaching experience, 73% bachelor's degree holders, 96.8% trained in gifted education.</p> <p>American teachers: 20 years teaching experience, 71% master's degree holders, 51.5% trained in gifted education. Teachers from both cultures value content expertise, a passion for their subject and a repertoire of instructional skills.</p>

Coding:	Author and Date:	G.E. Lit.:	Sample and Methodology:	Summary:
Expert Judgement	Cramer, 1991	✓	Qualitative study. A panel of 29 experts in the field of gifted education, recognised at a national, state and local level, were asked to rank 12 issues pertaining to the field of gifted education.	Top six issues in order of importance: <ol style="list-style-type: none"> 1. Curriculum for the gifted. 2. Identification of gifted children. 3. Teacher training. 4. Special populations of gifted. 5. Goals of gifted programmes. 6. Definition of the term “gifted.”
Expert Judgement	Whitlock and DuCette, 1989	✓	Quantitative study. Ten outstanding and 10 average teachers of the gifted were randomly selected from a pool of 65 teachers to be interviewed. All 65 teachers were surveyed (85% response) using a four point Likert scale designed by a panel of eight experts.	Both outstanding and average teachers of the gifted recognised the importance of liking gifted children. Outstanding teachers valued enthusiasm, self-confidence, role as facilitator, application of knowledge, motivation and commitment.
Principals’ Perspectives & Parent’s Perspectives	Epstein, 1985	✗	Quantitative study. Seventy-seven first-, third-, and fifth-grade teachers were rated by principals and parents using a 6 point Likert scale from poor to outstanding.	Teacher education and years of experience are not perceived to be important. Principals value leadership and additional responsibility. Parents value co-operation and quality of classroom life.
Peer Evaluation	Graffam, 2006	✓	Qualitative study. Case studies of two highly effective (award-winning) teachers of the gifted are presented in the research. Data was collected through long interviews, lesson observations and job shadowing.	Highly effective teachers form positive relationships with their students. They have mastered the essential concepts of gifted education and use them to great effect either individually or in combination. They place importance on personal background, training and reflective practice.
Students’ Academic Achievement	Sanders and Rivers, 1996	✗	Quantitative study. Data drawn from the Tennessee Value-Added Assessment System (three million records). Longitudinal analysis of student performance from second- to fifth-grade.	Students who study under an effective math teacher may score up to 50% higher than those who study under an ineffective math teacher. This effect on student performance is residual.
Students’ Perspectives	Emerick, 1992	✓	Qualitative study. Ten students (eight males, two females) between 14 and 20 years of age were purposefully sampled based on academic underachievement. Each subject completed an open-ended questionnaire and an in-depth interview. Note: The data appears bias in favour of males, but this may reflect a quantitative difference in underachievement between males and females.	All students believed that a specific teacher was the single most important factor in reversing their underachievement. The teacher cared for the student, communicated like a peer, was enthusiastic and knowledgeable, was flexible in his / her teaching style and set high yet realistic expectations.

Note: G.E. Lit. identifies whether or not the article is taken from a journal that is dedicated to the field of gifted education.

Coding:	Author and Date:	G.E. Lit.:	Sample and Methodology:	Summary:
Students' Perspectives & Teachers' Perspectives	Dorhout, 1983	✓	Quantitative study. Two hundred and seventy-nine academically gifted students and 110 teachers, all from fifth- to twelfth-grade classrooms, were randomly selected. Subjects answered 36 questions from the Preferred Instructor Characteristics Scale. For each question, the subjects had to state their preference for one out of two specified teacher characteristics.	Secondary school students demonstrate a preference for teachers with good personal and social characteristics. However, the teachers themselves believe that students demonstrate a preference for teachers with good cognitive and intellectual characteristics. Note: This has implications if gifted students learn more when taught by teachers who exhibit behaviours favoured by the students.
Teachers' Perspectives	Starko and Schack, 1989	✓	Quantitative study. One hundred and seventy-six pre-service teachers, 85 regular classroom teachers and 57 teachers of the gifted completed an original seven-point Likert scale questionnaire to identify perceived need, self-efficacy and the use of 10 teaching strategies for the academically gifted. Note: The exact method of sampling; random, purposeful or convenient, is unclear.	Perceived need, self-efficacy and use of the teaching strategies increased with classroom teaching experience and experience teaching gifted students. Teachers are more likely to use a teaching strategy, e.g. differentiation, if they are confident in its operation. This has implications for training teachers of the gifted. Note: Some of the terms used on the questionnaire may be familiar to teachers of the gifted, but unfamiliar to the other teachers. This may threaten the validity of the instrument.
Teachers' Perspectives	Stronge, Little and Grant, 2008	✗	An international qualitative study performed in America, Australia and New Zealand. Case studies of 10 teachers, six from elementary schools and four from secondary schools, were conducted. The teachers for the study were identified based on the grounds that they had won teaching awards within the field of education. Data was collected through semi-structures interviews with each teacher.	Themes arising from the interviews. Effective teachers: <ul style="list-style-type: none"> ● Have a sense of purpose. ● Are aware of larger systems and their influence. ● Have well developed pedagogical knowledge and skills. ● Have good content knowledge and content-specific pedagogy. <ul style="list-style-type: none"> ● Have mastered differentiated instruction. ● Recognise the importance of personal and professional growth. <ul style="list-style-type: none"> ● Make good use of reflective practice. ● Have positive relationships with students.

Note: G.E. Lit. identifies whether or not the article is taken from a journal that is dedicated to the field of gifted education.

The five remaining journal articles are reviewed in greater detail below:

3.1 Maddux, Samples-Lachmann and Cummings (1985) performed a well cited (Robinson, 2008, p. 673) quantitative study that was designed to investigate the preferences of gifted students for selected teacher characteristics. Two groups of students were selected for this study, although the sampling strategy that was employed is not explicitly stated in the research. One group of 123 gifted junior high school students were involved in the construction of the

research instrument, known as SPOT-E. The students, all from an honours English class, were required to write an essay about their favourite and least favourite teachers. From these essays, 54 descriptors were identified and passed to 24 experts within the field of gifted education who proceeded to categorise the descriptors as either; personal-social, cognitive, classroom management, or undecided. The 10 most frequently occurring descriptors from each of the three sub-scales were used to create a 30 item, five point Likert scale questionnaire that was administered to a second group of 98 gifted students. A majority of these students ($n = 66$) were female, although gender differences were taken into account during the data analysis.

Students in the study, especially females, demonstrated a statistically significant ($p < .001$) preference for the personal-social domain over the cognitive domain. Students also demonstrated a statistically significant ($p < .001$) preference for the cognitive domain over the classroom management domain. A main effect for IQ was found, students with higher IQs demonstrating a greater preference for the cognitive domain compared to students with lower IQs. The three most valued characteristics for each domain are summarised below:

Personal-social:	Cognitive:	Classroom Management:
1. Friendly.	1. Knowledgeable in the subject taught.	1. Allows open class discussion.
2. Confidence in students.	2. Imaginative.	2. Treats student as an adult.
3. Sense of humour.	3. Teaches useful information.	3. Organised teaching.

This research supports the findings of Dorhout (1983) and Emerick (1992) who determined that gifted students demonstrate a preference for personal and social attributes amongst their teachers.

3.2 The research performed by Hansen and Feldhusen (1994) comparing trained and untrained teachers of gifted students is frequently cited in the literature on gifted education (Stronge, 2007, pp. 149-150; Croft, 2003, p. 560). To be precise, none of the 54 teachers who were identified in the study as trained teachers of the gifted had actually completed their formal instruction in gifted education. Instead, they were in the process of completing their teaching

practicum at the time of the study and may have been chosen as a convenient sample. Sixty-eight untrained teachers of gifted students were purposefully selected by the co-ordinators of gifted education programmes to participate in the study. Of these 68 teachers, 28 agreed to do so. All of the teachers selected for the study taught at the elementary or secondary school levels.

Teaching skills were graded by trained observers using the 12 item Teacher Observation Form. Class climate was evaluated by students who completed the Class Activities Questionnaire. Finally, all of the teachers completed the Participant Information Questionnaire to gather information on 11 variables.

The research discovered significant differences between the trained and untrained teachers of the gifted. Trained teachers were found to employ more effective teaching strategies, create more positive classroom environments and were more highly rated by their students than the untrained teachers. These research findings suggest that all teachers of the gifted should be educated in the needs of gifted learners and trained to use effective teaching strategies such as student-directed activities and higher-order thinking skills.

3.3 To investigate characteristics of exceptional teachers of gifted students, Mills (2003) administered the Myers-Briggs Type Indicator (MBTI), a self-report personality inventory, to both teachers and gifted students attending a summer school programme at John Hopkins University. In addition to completing the MBTI, the teachers also completed a background questionnaire in order to determine their level of teacher training and academic qualifications.

Eighty-five teachers were purposefully sampled for this quantitative study from a pool of 400 teachers. All of the teachers that were selected had been teaching the summer school programme for at least two years and were identified as exemplary by both administrators and students. Of these 85 exemplary teachers, 63 agreed to participate in the study. The teachers that took part in the study varied significantly from university professors to middle school

teachers. As a consequence, generalising and extrapolating the findings to any one particular group of teachers should be done with discretion.

The summer school programme is attended by 6,000 gifted students each year. Of this cohort, 1,247 students between 13 and 16 years of age were selected to participate in the study.

Several conclusions can be drawn from the study. Firstly, a majority of the exemplary teachers (84.1%) held master's or doctoral degrees while only a minority (17.4%) had received formal training in gifted education. It may therefore be argued that formal training in gifted education is not as important as subject mastery or passion for the discipline. This contrasts with studies (Graffam, 2006; Hansen & Feldhusen, 1994; VanTassel-Baska et al., 2006) which indicate that specialised teacher training within the domain of gifted education is extremely important. Secondly, the exemplary teachers were found to have personality traits and cognitive styles that were comparable to those of the gifted students, for example being intuitive and demonstrating higher-order thinking skills. It may be concluded from this that gifted students show a preference for teachers with specific traits and personalities that are similar to their own. This is comparable to the research performed by Dorhout (1983), i.e. it has implications if gifted students learn more when taught by teachers who share certain personality and cognitive traits with their students.

3.4 In a multi-site case study performed by Westberg and Archambault (1997), classroom observations, interviews and document analyses were performed at 10 elementary schools which were deemed by administrators to have successfully implemented differentiated classroom practices for gifted learners. Six important findings emerged from this qualitative study:

1. The teachers had undertaken training in either special needs or gifted education.
2. The teachers were prepared to try new pedagogies in the classroom.
3. The teachers were given time to collaborate and used this time effectively.
4. Teachers recognised the importance of differentiation, i.e. individualised instruction.

5. The elementary school administrators were themselves advocates for gifted education.
 6. Administrators supported the teachers' implementations of new teaching strategies.
- 3.5 The relationship between teacher quality and students' academic achievement is an area of empirical research that is absent from the field of gifted education. In a study reminiscent of Sanders and Rivers (1996), Wenglinsky (2000) identified correlations between the results of 7,146 eight-grade math students, 7,776 eighth-grade science students and the qualities of their classroom teachers. The results are startling. For math, students whose teachers employ higher-order thinking skills in the classroom outperform their peers by 0.4 of a grade level. For science, students whose teachers have attended training in laboratory skills outperform their peers by 0.4 of a grade level.

4. Conclusions

The objective of this paper was to examine the literature on gifted education in an attempt to identify the common characteristics of effective teachers of the gifted. It is proposed that once identified, these common characteristics (or talents) are nurtured in all teachers of the gifted through professional development programmes.

The rationale for focusing on the teacher of the gifted student, rather than any other variable in the child's educational environment, is justified when reviewing the work of Sanders and Rivers (1996) and Wenglinsky (2000). Although performed within the field of general education, their research clearly illustrates the importance of teacher quality on student achievement and development. It is anticipated that similar results would be obtained if such studies were replicated within the field of gifted education. Remembering that the gifted children of today are the problem solvers of tomorrow, it is clear that neither their education *nor the training of their teachers* should be left to chance.

The various research methodologies reviewed in this paper offer slightly different perspectives on what the qualities of effective teachers of the gifted are. Studies that investigate student preferences for teacher behaviours (Dorhout, 1983; Emerick, 1992; Maddux et al.,

1985) identify cognitive traits, but tend to place more importance on personal attributes, for example, being friendly, having a sense of humour and being enthusiastic. Studies that seek expert opinion and the results of peer evaluations (Cramer, 1991; Graffam, 2006; Hansen & Feldhusen, 1994; Whitlock & DuCette, 1989) tend to list teacher competencies, for example, the ability to differentiate and use higher-order thinking skills effectively in the classroom. Studies that elicit the opinions of teachers who have undergone training in gifted education (Starko & Schack, 1989) show that the teachers like gifted students and recognise the importance of implementing specific teaching strategies for gifted learners in their classrooms. All studies, with the exception of Mills (2003), place a high value on teacher training.

It can be argued that many of the qualities that have been identified are not unique to teachers working within the field of gifted education, but also apply to general classroom teachers as well. However, there are certain skills, such as ability grouping, acceleration and differentiation which are quite unique to gifted education (Gallagher, 2000, p. 9).

It is proposed that the qualities of effective teachers of the gifted, for example, the ability to plan and successfully implement differentiated lessons and apply critical thinking skills to solving poorly defined problems, should be developed as talents in accordance with Gagné's differentiated model of giftedness and talent (Gagné, 2007). In this model, effective teachers of the gifted are perceived to possess certain natural abilities which are developed into talents within the field of gifted education under the influence of intrapersonal catalysts, such as motivation, and environmental catalysts, such as professional development courses. One limitation of this model is that there are certain personality traits, such as humour, which are impossible to develop through practice.

Finally, it should be noted that many of the studies included in this literature review were performed in a Western culture. Replicating the research in an Asian culture, involving both single gender and co-educational schools, would make an interesting and valuable contribution to the literature.

References

This paper contains 21 references. Four text books were used as sources of secondary information to locate the 15 primary research articles that were used for the main literature review. In addition, two articles were used to develop arguments and suggest areas for future study.

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