Case Study Series 5: Musical Intelligence-Motivators, Contributors, and Pacifiers to Achievement

Dr. Clara Cheng

Because what is considered exceptional performance today may not be viewed as exceptional in a few years, we need to understand the process by which levels of performance are both determined and achieved, a goal that can only be ascertained with the study of outliers, such as exceptionally gifted children · · · Albert (1969) noted that the study of giftedness in American psychology began with a focus on genius. · · · Likewise, Gardner (1983) studies of human extremes helped expand our conceptions of giftedness by focusing beyond the academic/intellectual domains. Feldman (1994) made the case for developmental theories taking into account outliers from the normal curve.

From Rena F. Subotnik, Paula Olszewski-Kubilius, & Frank C. Worrell, (2022). Rethinking giftedness and gifted education: a proposed direction forward based on psychological science. https://altascapacidadesrioja.com/wp-content/uploads/2018/11/Subotnik.pdf%E2%80%9D.pdf

Introduction

Unlike the general expectation of investigating the talented or gifted individuals for their failure factors or for the process to achieve at high levels or enter specific fields, this case study series has taken the reversal direction to trace the factors contributing to the achievement of talented or gifted individuals. This trend is more understandable and less discomforting for the interview data of the study participants and their families involved. The data might be too sensitive to be disclosed for sharing (VandeVusse et al., 2021).

The ultimate purpose of supporting giftedness or cultivating talent development is to bring more significant impact and contribution to society in the long run (Subotnik et al., 2011; Wai & Lovett, 2021). Evidence shows us that the main goal of supporting the talented or gifted individuals is to yield larger benefits for the wellbeing of the globe. Giftedness, however, has long been a much contested domain or discipline in education or socio-economic reforms (Subotnik et al., 2011; Wai & Lovett, 2021). The nature and development of giftedness or talent nurturing has often been distorted and shifted to issues related to elitism and equity (Colangelo & Davis, 2003).

Gifted or talented students are always showered with terms pertaining to willful, arrogant, clever, unsociable, uncooperative despite their outstanding performance or achievement in specific domains (Behary, 2021; "Types of Challenges Gifted Children Face," 2021; Education Bureau). Their motivation for work is often believed to be automatically or naturally related to their passion or deep interest in their domain of giftedness or talent areas (Subotnik et al., 2011). As a result, their absurdity or obsession for the subject or domain requires no additional support in general or in special education, family provision, and personal health services (Parr & Stevens, 2019).

This paper aims to challenge some previously held assumptions about gifted and talented students via an indepth investigation into a gifted or talented student case about the development of her musical intelligence. A case study approach was adopted to the three key research questions guiding the whole process about the motivational factors and different roles played in the participant's

achievement or life in Hong Kong. With systematic coding and pattern emergence, three types of factors have subsequently emerged: motivators, contributors, and pacifiers to achievement in the process of nurturing a person with musical intelligence (MI).

The study responds to the long-held assumptions or beliefs about gifted or talented students' being able to "do fine on their own" (see National Association for Gifted Children) and their motivation for excellence, the developmental trajectory, the societal obligation of the gifted or talented individuals, as well as the calls to the socio-emotional health of such type of individuals in society.

Research Questions

The following leading research questions were addressed:

- Q1: What has motivated the gifted or talented student in music to push for excellence? [Motivators to her achievement]
 - --interest/passion/aspiration?
 - --more satisfaction, challenge, or fun or contests?
- Q2: What has contributed to the eminence of the gifted or talented student in music? What are the roles of her personal traits? Family? School and Teachers [Contributors to her achievement]
 - --her own tendency (innate interest, talent to performance)
 - --no need too much external support or solid practice?
- Q3: What are the specific needs of the participant student? [Pacifiers to her achievement]
 - --more advanced knowledge or more competitive peers?
 - --things related to the talent area (skill support, financial support, socio-emotional support)?

Method

Overview

Some field notes, observation data, and school documents have been kept for this case since the chief investigator first met the subject. As for the case study, there were two parts in it: (a) a questionnaire; (b) an interview which lasted for one hour and a half in a conference room on the school campus. Twenty questions were originally planned for the interview of 45

Research MI / 18

minutes. For data triangulation, multiple sources of data were referred for use in the case study. Data accuracy and research ethics were also observed in the whole process (Wiersma & Jurs, 2009, p. 287).

Subject

The student in the case was one of award winners of "School X Stars" in the gifted/talented school in 2020. She has started to obtain local and international music awards since she was in Grade 7. She has joined more than 20 local and international contests during her primary and secondary schooling (see Appendix A). The interview was conducted in English on the following day after her school graduation ceremony in her G12. The time was suitable because there would not be any power conflict or conflict of interest as her role was an alumnus of School X (12 years from the primary section to the secondary section).

Design

A mixed research method approach was adopted in this case study. The data derived from the interview were decoded several times with the major support from the grounded theory proposed by Anselm Strauss and Juliet Corbin in *Basics of Qualitative Research: Grounded Theory Procedures and Techniques* (1990). The qualitative methods suggested by Strauss and Corbin (1990) were used to "uncover and understand what lies behind any phenomenon about which little is yet known [the development process and factors of a student with musical intelligence]" and to "give the intricate details of phenomena that are difficult to convey with quantitative methods" (p. 19). In general, some of the data were quantified but the analysis itself is a qualitative one.

Instrument and procedure

Four methods were used to collect data to construct the case study: (a) observation notes; (b) a questionnaire (see Appendix B); (c) a semi-structured interview; (d) school documents (see Appendix C).

Some observation notes about the participant were kept since she was in Grade 8. With her brilliant off-campus achievements, most of her teachers nominated her as one of the gifted and talented students for musical intelligence when she was in Grade 11.

A questionnaire (Part 1) was first given to the student for collecting information about her personal data and her schooling record on- and off-campus:

- (A) In-school options: courses, acceleration options, mentoring, club activities, sport teams, music, drama, counselling options, and study abroad;
- (B) Out-of-school options: distance education, internships & mentorship, contests, private lessons & coaching, summer programs, maker faire; and
- (C) Special school options: residential academics, private schools, magnet schools, early entrance to college, and specially designed curriculum.

It was found that the participant had joined (B) only (contests and internship & mentorship, private coaching & summer programs).

After Part 1 was completed, Part 2 being a semi-structured

interview was conducted and the questions were expanded from 20 into 41 questions in the casual exchange (from 45 mins to 90 min). The 41 questions asked in the interview were mainly about five domains:

- (1) the student's passion subject / giftedness area (music and her instrument);
- (2) student's perspective of her diligence and achievement and the label of giftedness on her;
- (3) the role of school in her achievement process;
- (4) the role of her family and peers in her achievement process; and
- (5) some imaginative scenarios evaluating her perception of life, needs, and values.

Results

It is important to note that this is an evidence-based case study that selects a student in recognition of her musical intelligence and brilliant achievement at her age (see Appendices A & C). The semi-formal interview conducted in 2023 [when she graduated from the school] aims to captured data related to factors or elements in her musical achievement during her 12 years of education at School X.

Full data transcription based on the 1.5 hours of interview was obtained with the support of some software first, then handled by two student researchers in the draft process and assisted by the chief investigator for the accuracy check; the data were also reviewed by the participant. Further data analysis was launched: open coding from the questions into categories, from axial coding of categories into the development of sub-categories, from the selective coding of core categories into emerging patterns then they were combined into emerging themes and (main) themes. An examination of the interview data indicated four levels of data coding of the 41 questions and five domains, namely the subject/talent area, school, teachers, parents, and peers. Table 1 lists the categories, patterns, themes, and main themes that emerged in the data transcription process.

As for the **talent area/domain/subject**, the themes emerged from the recurrent patterns in the interview are: (a) goaldriven, (b) competition-needed, and (c) perfection expected or desired by the talented student.

Concerning the **school system**, it was her appreciation for the school curriculum, the teacher support with opportunities and network, inspiration, as well as emotional support provided for her (see Appendix G & Table 1). For the **parents' roles** in the talent development, the student's parents provided the resources necessary for her skill advancement, talent development, and emotional growth as well as supporting her need to live a more balanced life (see Appendix J & Table 1).

Interests were stated to create difference and fun in the student's life. In a way, it might mean a kind of balance for her growth (see Appendix H). The least explained or described item was peer interaction and effects. Peers were mentioned and referred to as some kind of emotional support via chatting and hanging out. In general, **peers** seemed to be given the least and brief data in the interview (see Appendix I).

Table 1 Four Levels of Data Coding

Domain from	Level 1 Codes:	Level 2 Codes:	Level 3 Codes:	Level 4 Codes:
the script	Category	Pattern	Theme	Main theme
Talent/Subject	Practice hard	Diligence	Goal-driven	The talent student was
	Really hard process	Goal/Willpower	Motivation-driven	in need of motivation
	Productive/ Produce/my CD	Motivation		and competition in her
	Contests	Purpose	Competition-needed	pursuit of perfection/
	Concerts & Performance	Goal		growth/ excellence
	Confidence/Be more confident	Excellence	Growth/	
	Unfair / not professional	Imperfection	Improvement/	
	Satisfaction / I am proud	Excellence	Perfection Excellence	
	This knowledge lacking	Standard	Expected/	
	I do want/ we have to/ I wont /	Standard / Quality	Desired	
	I am proud			
	Harp	Uniqueness		
	Still have time	Opportunities		
School	Opportunities	School curriculum	School System	The talent student has
	Time /long leave	School policy/practice	appreciated	the opportunity to be
	Guidance / she would / he would	Teachers' backgrounds	Teacher effects	provided with two
	Network/ Venue	Teachers' network	appreciated	systems: (1) a school
	Inspiration	Teachers' experience		with a talent-friendly
Parents	Accompanying / being with me/	Time & skills	Resources necessary/	curriculum and the
	never going (coming to the school)		success factors	right teacher effects;
	Working / would be late / money	Financial support	appreciated	(2) a family with
	They can see (my emotions)	Emotional support		time, mentoring and
				financial support
Interests	Different interests / I just want to	Variety	Moods/	Two emotional
	Different fun	Moods & Balance	Balance needed	support systems are
Peers	Chatting	Support	Emotional outlets	provided: (1) different
	Hanging out	Freedom		interests and (2) peers
	Having fun and distraction	Balance		

20

Discussion

The use of thematic analysis was essential to the gradual revelation of diverse, recurrent meanings and some deep meanings. Diverse meanings can be viewed as the different yet repetitive elements for talent development. Deep meanings can be obtained from the hidden or unconscious needs during the growth process of the talented student.

The following are the three types of factors identified after the category identification, coding, as well as patterns and themes emergence in the thematic analysis of the case:

Table 2 Three Types of Factors Identified after Patterns and Themes Emergence

(1)Motivators to achievement

Extrinsic motivator:

--Contests, concerts, performance

Intrinsic motivator:

--Personality (competitive, practical, perfectionist)

(2) Contributors to achievement

Extrinsic contributor: Opportunities and Support from School, teachers, and parents

- --School curriculum, policy, and practice
- -- Teachers' backgrounds, network, and guidance
- --Parents' mentoring and financial support

(3)Pacifiers to achievement

- -- Different interests
- --Peers

(1) Motivators to Achievement

Concerning the motivators to achievement, the case study suggests that there are two types of motivators dominating and crucial to the achievement of the student.

Extrinsic motivator: Contests, concerts, and performance Intrinsic and extrinsic motivators are often researched and related to the level of achievement of a gifted or talented student. The former can be the innate passion or deep interest in (learning) the subject or talent area; the latter can be the awards for future development or recognition of the students' abilities. Covington and Dray (2002) found out that many high academic achievers are motivated by both factors. While Kover and Worrell (2010) showed that grades proved to be a stronger motivator than the intrinsic interest for some academically talented students.

In this case study, the participant admitted that her diligence or motivation depended on the contests, concerts, or competitions that she could join. The pandemic state of "social distancing" had stopped all physical contests which required much repertoire and stage experience. For her the whole world and the whole year 2021-22, she found it "empty and blank." She questioned her own need for diligence and level of motivation and even satisfaction (see Appendix D). It seems that the extrinsic motivator from competition or demonstration was a more influential push or motivation for her advancement and excellence.

Intrinsic motivator: Personality-competitive, practical, perfectionist

Intrinsic motivators are often referred to one's passion, interest, or even innate talent in a specific domain. A higher achiever student may be found more passionate or attracted to a domain in which he or she has more talent or performs better. Much has been mentioned than researched about the relationship among passion, interest, and talent (Goodwin & Rouleau, 2023; Subotnik et al., 2011). "Single-minded drive" (Ochse, 1990) as in passion or differences in interests are usually believed to lead to great intellectual and creative achievement(Milgram & Hong, 1999). Innate talents may not develop into achievement which also explains the reason for more underachievers and average achievers than the higher achievers at school and at work (see NAGC).

As reflected in the case study, the intrinsic motivator can be interpreted as the personality traits of the participant whose data showed that she was a competitive and practical or even perfectionist. Her need of competition and comparison as in contest, performance, concert had nudged her to set higher goals and standards for her high achievements as a teenager. Her behaviour/motivation to practice her instrument was goal-directed and purpose-driven (see Appendix D). She admitted she was a practical person in the interview. Her evaluation of her more doing, less doing, or no doing has shown not just her musical intelligence, but also as a kind of "practical intelligence" which has guided her rational and "wise thinking" (Sternberg, 2000, cited in Rimm et al, 2018) in her process of growth as in her achievement of releasing her CD at a young age, her decision to improve her music skills with music history and classical knowledge, and to have become one of the youngest musicians in Asia in 2022 (see Appendix A: personal statement /extract of her CV).

(2) Contributors to Achievement

Extrinsic contributor: Opportunities and support from school, teachers, and parents

No one will object to the fact that most outstanding performance or achievement usually depends on the chances or opportunities that the talented or gifted students are endowed or provided with in the real world context. As it goes, "Opportunity provides a context for talent to be nurtured, sometimes even before it is recognized" (Gottfried et al., 1994; Syed, 2010; cited in Subtonik et al., 2011, p. 20). Other than school and teachers, parents are another crucial contributor to the eminence of the gifted or talented students (Gottfried et al., 1994). Their great importance, encouragement, and stimulation have been one consistent theme found by Goertzel and Goertzel (1962) and Ochse (1990) and Simonton (1997).

Instead of categorizing the following part into "motivator" the researcher tends to see the part below as the contributors to a gifted or talented student's achievement. Without the opportunities from her school and teachers, as well as the support from her parents, her talent might not have been developed into achievement as she might have been held back by her relatively weaker socio-emotional skills as shown in the data. Evidence was shown in the categories and patterns about the key word "opportunities" from the school,

teachers, and parents (see Table 1).

School curriculum, policy, and practice

This study showed that the talented student expressed her appreciation to the school for her frequent application for leave/time/opportunities for taking part in contests, performances, or concerts (see Appendix E). Her talent development seemed to have benefitted hugely from the consistent school curricula, policies, and practices of supporting gifted or talent development from the primary to the secondary sections.

Teachers' backgrounds, network, and guidance

Interview data from the case study indicated that the participant expressed her recognition and gratitude for teachers' great support in her music development and achievement: It was teachers' musical backgrounds, network, and inspiration that have boosted her success rate in her talent development (see Appendix F).

Parents' mentoring and financial support

As revealed in the interview data, great and unconditional support in emotional and financial aspects has been provided by the student's parents. The lifelong companionship and mentoring by the mother as well as the financial status have enabled the student to pursue music as her interest and future career (to study the subject of music in an international elite university). The chances of creating more contribution to the world of music are definitely higher for this young budding musician as compared to others without background or support.

(3) Pacifiers to Achievement

It might be quite common and early to have seen that there are some "special perplexities by the "highly intelligent" (Hollingworth, 1930). Concerns or those perplexities include: social difficulties provoked by a mismatch between physical and cognitive development (asynchrony), disadvantages in demonstrating leadership among older mental peers, and lack of close friendship among age peers (Neihart et al, 2016, pp. 3-4). These highly intelligent students are sometimes too focused on their own passions or talent development programs that they tend to have less interaction with the people around them. Because of this kind of relatively less socio-emotional life or skills, the emotional states of these students tend to be less stable or even more vulnerable. And this logic seems to have been witnessed in the case study data (see Tables 1 & 2).

Other than the motivator or contributor factors that push for the talent development of the student, the case study did provide some findings about the roles of the different interests and peers that support the growth process of the gifted and talented student.

Different interests

The role of interests in this study is more for diversification or balance than for further talent selection or enhancement (see Appendix H). The interview data showed that there were two other types of creative or emotional outlets needed by the student: (a) creative writing in her personal life when she felt the need to purge and (b) the different interest classes

in the school curriculum such as crochet and dancing. She expressed the importance of having different interests and fun in her life of talent development (see Appendix H).

Peers

The study provided data about the role of the peers in this case which seemed to be more for the emotional outlet via chatting or hanging out together. Data about deep or close friendship were very limited which indicates the lack of social skills of the talented student (see Appendix I). Further investigation might help provide more in-depth data about the social interaction aspect in this type of intelligent student in MI.

Implication for Future Directions

Implication for the motivators—the students and talent development

The case study reveals both the intrinsic need of excellence and competition as well as and the extrinsic need of more reward or recognition via contests or performance. The data coding has shown that the motivator and contributor factors might have overpowered the talented student (see Tables 1 & 2), which may create some risks or crises in her life if/when the two key factors disappear or are affected by some other external factors. For this reason, a balanced growth mindset needs to be cultivated via:

- (a) more emotional support programs made necessary by school and family (e.g., peers of the same age; more interaction with people);
- (b) more independence or life skills training made compulsory by school, family, and one self (e.g., more interests be introduced, developed, or chosen); and
- (c) different mindsets to be cultivated in the formal education setting of school as parts of the curriculum (e.g., less perfection be expected; redefined values be introduced as "no competition/excellence/achievement" does not mean "emptiness" or "blankness").

Implication for the contributors and pacifiers--the school, teachers, parents, and peers

As reflected in the case, there seemed little collaboration between the school and the family except the formal parents' meetings. This kind of "distancing" can be damaging to the gifted and talented student when there are inadequate organized or deliberate activities to improve her lack and need of socio-emotional skills as her motivators and contributors are simply too taxing and blasting as compared.

(a) For the school and the family

From the case, it can be noted that the main resources of supporting the talented student are from her school (curriculum, policy, practice, and teacher effects/quality) and from her parents (financial, knowledge-skills, and emotional support). For the school, a long-term, consistent, holistic school curriculum for more time/space, flexibility, and variety of program or balance is crucial to the successful or healthy development of the talented or gifted student.

It also seems unreasonable to expect or assume that all talented or gifted students be born in families with such "high-profession" backgrounds as in the case study (doctor and part-time/home-mom). Without the two contributors, it is likely to see the seemingly gifted students will end up the average or underachievers. There is no denial that more support from the government in resources--hardware and software support (for school with more land, teachers, research back-up, emotional services, systems support; and for parents with more subsidies and training).

(b) For peers and interests

The case study has indicated a most telling irrefutable part of a healthy and balanced person—the components of different interest classes and peers as ways of creating more social interaction, fun, and even "distraction" for a talented/gifted person whose sole purpose, goal, meaning, and satisfaction are from her talent achievement. The other-interests-learning or other-entertainment-seeking and peer effects should not be underestimated by all parties: the student, peers, parents, and teachers. More legitimate ways of improving peer interactions or socio-emotional health should be emphasized and upheld.

Limitations of the Case Study

The case study has its own limits. As in most case studies, this case study involved the subject's privacy which is "a particular important issue in qualitative research" and some contents related to the participant's backgrounds like parents and peers are rather personal. Some organisation and third-party were mentioned. This can create problems to do with research ethics and also lead to other feasible complexities that indeed have hindered the diction selection, citation, and the publication as some adjustments were done with deliberation. Mezmir even (2020) puts it this way: We researchers even need to "suppress details" in order to "respect the privacy of those we study" (p. 25).

To this end, the chief investigator must admit that the interview time was unusually prolonged (from 45 min to 90 min; from 20 questions to 41 questions); some emotional pauses were found in the interview; some citations or contents were deliberately not used or "hidden" for the sake of research ethics (see Appendix J). It is suggested that more pre-, while-, and post-interview feedback can be provided. Further investigation is recommended for unclear but important questions related to emotional insecurity or oppression in the growth of the highly intelligent.

Research validity

Data triangulation and data validity were conducted. As mentioned, the multi-sources of data and participant data review were done before the analysis and writing. For better research validity, an informal focus group interview was conducted after the data analysis was completed; this was an important step as the findings from the data analysis aligned well with the additional data from the focus group interview.

Conclusion

The case study demystifies the notion that "gifted [or talented] students will make it on their own" (see NAGC "Myths about Gifted Students" https://nagc.org/page/myths-about-gifted-students). All the systems from the school,

teachers, parents, peers, and interests have their shares in creating the talent individual. It must be stressed that the chief goal of nurturing any gifted and talented students is to support further advancement and excellence of society and the globe. The mutual benefits in the long term should not be belittled (Subotnik, et al., 2011; Li, 2012; Tam, 2015; OECD, 2018).

Let there be more opportunities for this small group of students who should not be discriminated against because of their intelligence levels or domains or gift areas. Society should give fair treatment to both the "weak" or the "strong" whose domains are diverse and even relatively subjective in significance, value, and time.

Interventions need to be tailored in order to (1) improve the three factors of talent development (motivators, contributors, and pacifiers to achievement) and to (2) promote the understanding of socio-emotional health/needs of the talented or gifted individuals in their growth or talent development process.

Remarks:

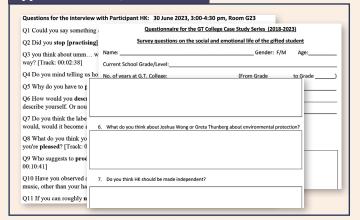
Data transcription of the case study was handled by Brandon Tse (12A) and Hayden Lam (12A), members of the Students Research Team.

Appendices

Appendix A: Some achievements from the participant's personal statement (2022)

... In 2016 and 2019, I had the honor to be the first young harpist representing Hong Kong to perform in the Stars of tomorrow concerts at the 10th and 11th USA International Harp Competition. I also held my first recital at the age of 14 at the Tsang Shiu Tim Art Hall, Hong Kong University of Science and Technology. Apart from concerts, I have participated in numerous competitions as well. My major achievements include the first prize at the Young Artist's Harp Competition 2018 New Artist Division in the USA, second prize at the Young Artist's Harp Competition 2020 Emerging Artist Division, and the third prize at the 2018 and 2019 Osaka International Music Competition Senior Harp Section in Japan. In 2022, I was awarded Annual Ranking Number two by London Young Musician in the World Top 50 Musicians Award and Grand Prix "Crown of Stars" (Best Instrumentalist) at Music and Stars Awards 2021. Recently, I was awarded the FTCL Performance Diploma in 2022 and I am currently recording my first CD album with KNS Classical. These experiences have motivated me and helped me gain experience in performing . . .

Appendix B: The Questionnaire



Appendix C: School documents: Blogs / Newsletters



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