

Student ZT
(Grades 1-12; HKUST Year 1)
in 2020-21

The impact of on- and off-campus learning on an academically advanced student

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The paper is one of the School Case Study Series which are meant to explore, understand, and refine the multiple intelligences (MI) education provided by the through-trained school. They are endeavoured to inform practices at school, in the community, and in the MI education in the global arena.

Secondary gifted or able learners have exceptional performance; findings have even revealed that the availability of options and choices can make a difference to these [secondary school] students in realising their potential (Dixon, 2015, "Options for Secondary Gifted Students," p. 234). Secondary gifted students have their learning characteristics, learning needs, and expectations of their learning, their peers, and career choices.

Dixon reckons that secondary gifted adolescents are "not a homogeneous group" and "they have different talents and different learning characteristics that may require special consideration in identification, selecting service delivery models, providing counselling, or creating curriculum" (Dixon, 2015, "Options for Secondary Gifted Students," p. 239, in *Fundamental of Gifted Education*, 2018).

The case study explored in this paper addresses the academic and affective needs of a highly able or talented secondary school student, Student ZT, in a far from traditional secondary school setting in Hong Kong—the first school for MI students. A semi-structured interview was conducted between this gifted learner of Maths and Physics and his English teacher (the chief investigator of the case study series). Some quantitative data were obtained via a questionnaire (see Appendices A,B,C,&D).

The study attempts to share some insight with teaching practitioners, school administrators, parents, and students that off-campus learning opportunities when given to some high-potential learners may motivate them to ask more advanced questions, to self-learn more actively, to desire more comparable peers, and even to create more impact on their college major choices and careers in their adulthood (see Appendices A,B,C,&D).

The three research questions guiding the case study are as follows:



1

Have on-campus and off-campus learning opportunities created impact on the academically advanced or potentially able student? [e.g., on learning, schooling during adolescence, teacher effect, peer effect, self-understanding]

2

Which kind of learning opportunities has created more satisfaction and impact on the academically advanced or potentially able student?

3

What are the roles of comparable peers to the high performing/ academically/ potentially able students?

There are two stages of data retrieval and report in the Case Study Series in the school (2019--2020):

Stage 1 (2019-2021): Six potentially gifted/ MI (adolescent) students

Case/Student/ Gender (F/M)	Grade/ Award Period	Award period	Interview Period	Intelligence	Theme emergence / Findings period
Case 1 Student SL (F)	G1-9 at school G10 to be 11	2018-2020	2020 Dec 31	Linguistic Music Intrapersonal Interpersonal	Parenting Comparable peers Mentoring effects (2021 Feb)
Case 2 Student ZT (M)	G1-12 at school University Year 1	2018-2020	2020 Dec 31	Logical-mathematical	Off-campus learning & the need of comparable peers (2021, April)
Case 3 Student JC (M)	G1-12 at school University Year 1	2018-2020	2020 Dec 31	Bodily-kinesthetic	School-based/ on-campus curriculum design & balance (2021, March)
Case 4 Student JL (M)	G1-11 at school G11 to be 12	2018-2020	2021 July	Logical-mathematical	To be investigated
Case 5 Student KK (F)	G1-10 at school G10 to be 11	2018-2020	2021 July	Music	To be investigated
Case 6 Student NW (M)	G1-8 at school G8 to be 9	2018-2020	2021 Aug	Logical-mathematical	To be investigated

Stage 2 (2021-2023): A comparison of the six individual cases; some categories and themes will emerge in the interviews and data analysis period (2020-2022) and they will be analysed for more crucial or insightful findings (2022-2023) about MI or gifted education in secondary schooling.

Data Collection Process

The data in the individual case study was collected from one highly gifted or talented student via a 45-min interview on 31 Dec 2020. Before that, a three-part survey on on-campus and off-campus learning (adopted from Dixon in *Fundamentals of Gifted Education* (2018) was given to the participant to collect some crucial background information about his schooling. Official documents from school (*GT Blog*, *GT Newsletter*, GT videos from 2018 to 2020) were used for extracting data, cross-checking, and triangulation. This report was based on the Stage 1 work: the individual case study of Student ZT.

Data Analysis

In the case study, 8 questions were originally planned and around 20 Questions were eventually asked in the semi-formal interview, concerning the very able/talented/gifted learner's learning process, perception of school, peers, teachers, and schooling, as well as off-campus learning experience. The survey form was adapted from some fixed items/aspects about the on- and off-campus learning experience of the student Felicia Dixon in "Options for Secondary Gifted Students" (Callahan & Hertzberg-Davis, 2018; see the excerpt of Appendix A).

Initial findings from Student ZT in Stage 1

i) Some quantitative data findings from a survey instrument:

From the survey instrument, it is clear to see that the informant was provided with all of the three main domains of learning by the school:

(1) in-school options

(2) out-of-school options

(3) special school options

For in-school options, he had attended all courses in advanced placement, IB, Honour courses, seminars, and independent study. He had acceleration options, service club, training with sport team, and drama; he was given chances to counselling options and overseas study.

For out-of-school options, he was given distance education, internship, mentorships, contests, and summer programs, as well as special school options like STEM training and international contests. He had more than half of each domain (see

Appendix A)

ii) Some in-depth qualitative data findings from a semi-structured interview:

Fixed questions or categories in the survey form can only show the types of options and broad experiences the student had. They have the limitation in revealing more depth or shedding more insight into more abstract, yet significant aspects of life concerning the students' values, concepts, thoughts, and reasons for choices in life. With a semi-structured interview, more insider stories and perception can be known, which will help generate more implications for improvement in different domains pertaining talented or very able/advanced learners.

The 20 questions and answers – the Q-and-A approach--had generated patterns of the learner's thinking tendency, characters, abilities/intelligence, learning needs, expectations of school, teachers, play peers, critical peers, as well as his reflection on the on-campus and off-campus learning experience **[related to Research Q.1]**.

With the spontaneous flow of conversation, the interview was developed into 20 questions in this case which had covered a few areas for investigation **[related to Research Qs 2 & 3]** and had provided deep information for further details or insight into five domains: (A) personal background and perception of achievements and favourite subject, (B) adolescence at School A, (C) in-school learning experience, (D) a comparison of his on-campus and off-campus learning, and (E) personal traits. The following is the grounding of the data into patterns and themes:

The key informant: The secondary school boy outperformed other students in maths and physics; he had achievement in the domains and finally found his dream university subject for study and future career as a researcher.

Three General Themes Emergence

(see the excerpt of **Appendix B** "Interview Data Transcription"):

There are three general themes generated from a coding process and pattern emergence analysis of the grounded data collected in the designated period above. The following are the three aspects/themes of the initial findings about the academically advanced adolescent student:

i) About his learning during the on- and off-campus learning:

- a) to be recommended/given off-campus learning experience is crucial;
- b) to allow the able student to research and to be interested in topics which demands creativity and diligence (= to leave the comfort zone);
- c) to have a great need for advanced knowledge of the subject of deep interest **(related to Research Q3)**;
- d) to have a sense of loneliness due to a lack of comparable peers **(rela o Research Q3)**. concept & skill in the subject of deep interest

ii) About his schooling via the on- and off-campus learning:

- a) about having teachers--being supportive & passionate teachers during the adolescence in the secondary school has guided his learning;
- b) about having peers at school--to have fun learning and purer friends via group learning; and
- c) about not having comparable peers at school--to desire comparable peers via real life contact than in the virtual world **(related to Research Q.3)**.

iii) About himself (self-understanding) via the on- and off-campus learning:

- a) to know that he himself is more diligent and passionate about the subject rather than others labelling him as "gifted;"
- b) to have more passion, interest, curiosity, fun, and more time in learning;
- c) to like to self-learn is a way of enjoying life in the solitude; and
- d) to have learners' autonomy and creativity is to have chances to create or to compose, to play or to have fun, despite constraints in his/one's personality, gender, or environment/background.

Final Themes Identification

Two final themes are generated during the theme identification and combination process as reflected in the excerpt of Appendix B “Interview Data Transcription”:

(a) On-campus and off-campus learning experience has definitely created significant impact on the schooling (with teachers & peers), learning, self-understanding of the academically advanced/able or talented student **(related to Research Q.1; see Appendix C).**

(b) Off-campus learning experience has given more satisfaction to the academically advanced student and played a more determining role in providing comparable peers and sharpening and/or shaping his learning concept, college major choice, and future career aspiration **(related to Research Qs 2 & 3; see Appendix D).**

Discussion and Implications for Practice

Implications on different domains or stakeholders can be made via the mixed methods—surveying and interviewing.

For the academically able student:

Some background information is found in the survey. He has directly admitted his sense of loneliness and need for comparable peers which can be provided via off-campus learning (see “Case Study—ZT—Interview Data Transcription,” p. 7). More personal traits are identified via the in-depth case study interview; instead of using the label “gifted” to describe the able/talented learner, the data from the case interview have revealed more dimension and depth about the able learner who has witnessed much understanding and maturity in his own self (his personality as being more independent, critical, and objective; his being more lonesome and less sociable, yet more confident and receptive) and in others (his more perspectives in understanding matters, concepts. and other people).

For the school of the academically able student:

Parents are a key factor of student success, especially in the development of opportunities for talented children (Clark, 1983; Gelbrich & Hare, 1989; Reis, Colbert, & Hebert 2005). The family does not seem to be much mentioned in the interview. The student’s internal world as a lonesome learner and a need of great fun is reinforced in the interview data (see “Case Study—ZT—Interview Data Transcription,” p. 7, Track 36:08). The family of the very able/talented student can be better informed of the development and needs of the able/talented learner.

The parents or guardians should have more knowledge about the kind of support (the dos and don’ts) they can provide for the student in the academic and the non-academic domains (e.g., Social-emotional support)

The psychological and counselling services can be provided as some intervention strategies for the student in the case school—as a kind of moral or value education program. A better balance or more intelligences can be developed in the able learner when the needs are detected earlier.

For policy-makers in education for the academically able student:

From the interview data, it is evident to see that the very able student has a sense of appreciation for the teaching that happened at school and the learning environment cultivated. The lack of comparable peers at school can be balanced by the presence of competitive peers via the off-campus training provided by the school’s acceleration programs for the intellectually advanced learners (see **Appendix B** “Case Study—ZT—Interview Data Transcription,” p. 7, Track 31:29).

For the policy-making in education for the able/talented students, there are two aspects in this kind of policy-making and policy-makers—the government education unit can provide more long-term gifted / MI education objectives and policies for students with special needs and talents. The school policy-makers can tailor-make more need-oriented programs for on- and off-campus learning.

For scholar-researchers in education for the able student:

The MI awards were created by the school; the case study investigation (via surveying and interviewing) was initiated and conducted by the teacher-researcher of the student in his own school. This has reflected a core concept of the school and its practitioners as the centre of research and teaching, supporting the growth and the development of its diverse learners. The school can create more chances and channels for its various learners to perform and experience successes in different domains.

More diverse research methods can be employed to explore the needs of different learners beyond the school walls. Quantitative data may show some trends and tendency for the education of the talented/able learners; whereas qualitative data can provide more insight into the instructions and teaching-and-learning strategies, and assessments for the talented or able students.

More joint efforts can be made by schools with MI data, school policy-makers, teacher-researchers, and the government policy-makers in the domain of the MI or gifted education. In this way, more quantitative and qualitative data and findings can be generated to inform the relevant stakeholders of the needs, strategies, and developmental work in education, especially the MI education in the local and global arena (Robinson, Shore, & Enersen, 2007; HKAGE, 2021).

Conclusion:

Gifted/ MI education should be " the mission of All schools" (see GE in Hong Kong) as it tends to respect and develop diverse talents (Hoerr, 2000; Armstrong, 2018), to stress school-based curriculum for the needs and strengths of its learners. The case in this paper suggests that off-campus learning opportunities can be or are as important or even more important than on-campus learning opportunities (see **Appendix C** "Interview Data Transcription," p. 8 Track 36:08).

The findings show the academically able/advanced student has grown from the in-school and out-of-school options during his 12 years of secondary school life. He has benefitted from the off-campus exposure which has affected his learning concept and skills, schooling experience, and self-understanding. As reflected in the interview data, his college subject choice and future aspiration have been mainly influenced by the off-campus learning experience (see **Appendix D** "Interview Data Transcription," p. 9 Track 38:07).

As manifested in the interview data, additional research is needed to further understand why and how comparable peers are significant or crucial to the emotional traits and academic development of the highly talented or academically advanced secondary school students.

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