Teach for Hong Kong

Impact Assessment

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EXECUTIVE SUMMARY

I. Introduction of the evaluation study

- The present evaluation study ("the Study") is commissioned by Teach for Hong Kong ("TFHK") to examine the social impact of its Fellowship Program ("the Program"). The study objectives include:

  i. Identifying the social impact of the TFHK Fellowship program;
  ii. Illuminating the mechanisms the Program created its social impact; and
  iii. Identifying areas of exploration that the Program can further enhance its social impact.

- The research was independently carried out by The Impact Hub Limited between Sep 2019 to Jun 2020. The research comprised two phases, the first phase focused on formulation of the Social Impact Model ("the Model") and the second on refinement and validation of the Model. Research activities included documentary review, qualitative focus group and individual interviews, and quantitative questionnaire-based surveys. In total, 8 focus groups and 62 participants were recruited for the interviews and quantitative surveys separately.

II. Social impact of the Program

- Through in-depth investigations, the team identified two target beneficiaries, namely the young graduates who have emerging interest in education ("the Fellows") and the students among the participating schools. Moreover, the social impact of the program extended beyond the Fellows and the students and exerted a positive influence on the education system in Hong Kong.

- Impact on the Fellows:
    - Significant influence on the Fellows' leadership skills, empathy level, interpersonal skills and change in growth mindset.
    - Enhanced the Fellows' teaching skills and offered opportunities for career exploration within the education system.

- Impact on the Students
    - Improved the students' learning through increased motivation from the creative teaching methods of the Fellows.
    - Additional care and support from the Fellows conducive to change in growth mindset.

- Impact on the education system
    - Drew young talents with strong motivation into the local education sector to improve the education system.

III. Areas of consideration to further enhance the impact of the Program

- Refine the Training and Learning Program for the Fellows.
- Enhance the Program's focus and develop a standardized assessment for quality assurance.
- Further engage potential (private) parties in value co-creation.

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Introduction of the evaluation study

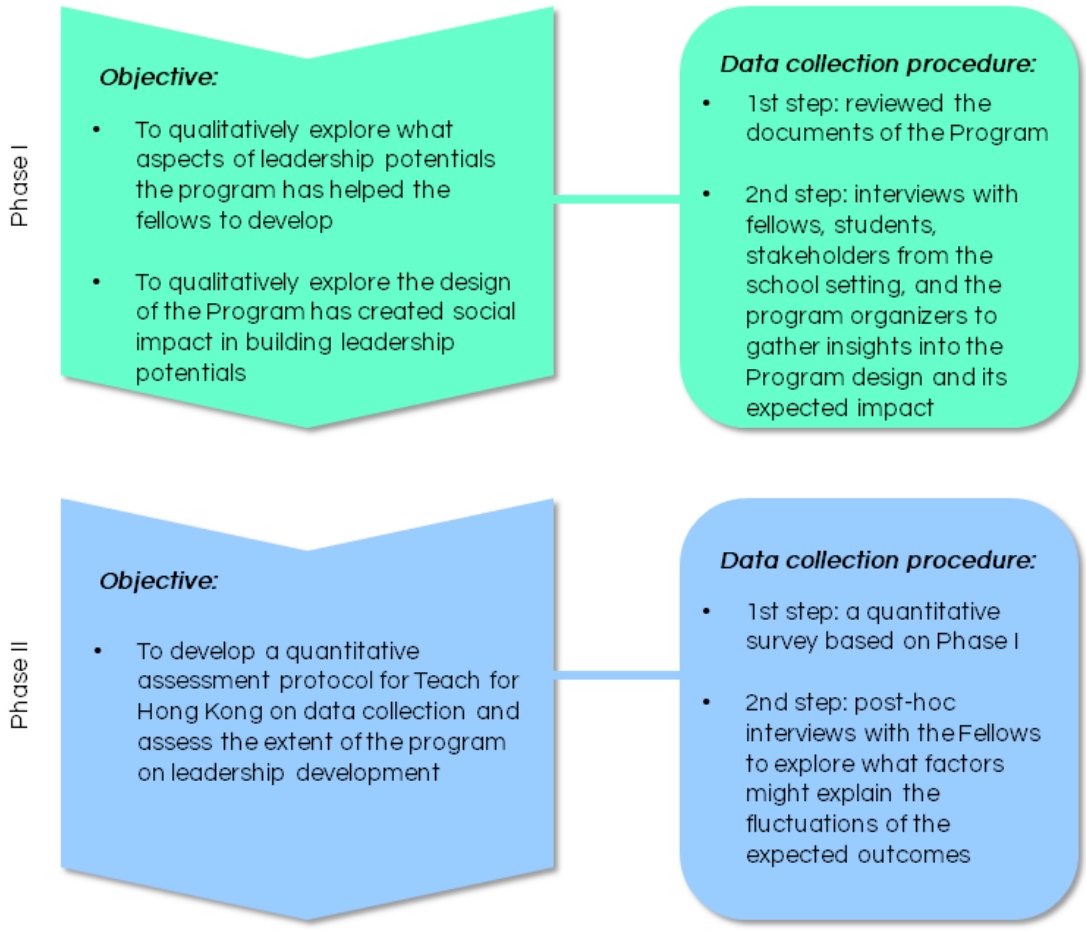
Teach for Hong Kong ("TFHK") has commissioned The Impact Hub Limited to conduct an evaluation study ("the Study") to examine the social impact of its Fellowship Program ("the Program").

Specific objectives of the Study include:

- identifying the social impact of the TFHK Fellowship program;
- illuminating the mechanisms the Program created its social impact; and
- identifying areas of exploration that the Program can further enhance its social impact.

Design of the Evaluation

Figure 1. Two-Phase Evaluation design.



The Study has a two-phase design. A schematic form of the evaluation design is shown in Figure 1.

Phase I – Formulation of the hypothesized Social Impact Model

The Study has a two-phase design. The objective of the first phase was to identify the 'intended' impacts the Program attempted to create for the target beneficiaries. In so doing, relevant documents of the Program were reviewed. Additionally, to gain insights into the Program's objectives and rationale behind its design, face-to-face interviews were conducted with the Program organizers (i.e., staff of TFHK). Through this procedure, a hypothesized impact model of the Program was first formulated.

Phase II – Refinement and validation of the Social Impact Model

After developing the 'hypothesized' social impact model of the Program, the Study went on to the second phase, which aimed at refining and validating the social impact model. As will be elaborated later, the Study identified the Program to consist of two main groups of target beneficiaries. The first group was the young graduates who had an emerging interest to be developed as educators (hereafter known as the "Fellows"). The second group was the students among the schools participated in the TFHK's Program. While the impact of the Program to a wider extent was not exclusive to these two groups (will be further elaborated in section II), apparently they were the most "direct" groups that benefitted in this setting. Hence, to make this evaluation study succinct, the impact model focused on delineating the impacts of the Program on these two groups.

A qualitative inquiry of the impact on Fellows and Students

The research team relied on two lines of work to refine the hypothesized social impact model. The first strategy was through qualitive interviews with multiple key stakeholders involved in the Program. The first group of stakeholders was the Fellows. In particular, the research team invited those Fellows who had completed the Program to provide reflections on the impact of the Program toward them. In other words, the Study used the Fellows' own perceptions to explore the Program's impact, and in what areas the Program had impacted them.

During the interviews, it was made clear to the Fellows that this Study was carried out by a third-party research team, separated from the TFHK agency. Second, constant reminders were made to ensure that their disclosure would be kept anonymous. Both procedures were used to reduce the potential emergence of "desirable answers". Speaking from the researchers' observations, the informants quite openly discussed the impacts they perceived and did not overwhelmingly support or refute some

potential contributions of the Program. Therefore, based on the observations, we believe that the data collected during the interviews were sufficiently valid.

Similar procedures were used to explore the impact the Program on the students. Specifically, students from the participated schools were invited for interviews. To enhance validity of the Study (data triangulation procedure), the research team also invited the involved stakeholders for interviews to provide perspectives on the impact of the Program outside the mentioned groups of informants. Other stakeholders interviewed included principals and teaching staff of the participated schools and corporate parties of TFHK involved in the Program.

After collecting the data from all relevant stakeholders, the researchers extracted key codes from the data, and through iterative work identified the themes of the impacts. Based on the themes identified through this process, we first matched and compared the reflections across the stakeholders for consistency. Inconsistencies were interpreted as potential bias, and additional data collection was made to clarify the issues. After cross checking, a comparison was made between the emerged themes and the hypothesized model. Through detection of consistencies/inconsistencies between the hypothesized impact model and the empirical data, the researchers derived a refined impact model (presented in the later section) which seems to more accurately mirror the "actual" impacts of the Program on the Fellows and the students.

A quantitative repeated-measure survey to validate the impact of the Program

While on one hand the qualitative work assisted the development of a refined Social Impact Model of the Program, the nature of the enquiry did not allow us to 'capture' the extent of the impact created. One particular issue is the 'additionality' of the Program. That is, whether and to what extent the impact captured and reflected from the qualitative work could be attributable to the Program itself. Or whether the impact expressed by the informants is simply some natural change 'occurred' across time. To gain additional insight into this 'additionality', a survey with a quasi-experimental design was incorporated into this Study.

The survey focused on examining the impact of the Program on the Fellows. Specifically, it focused on four outcomes. The selection of these four outcomes was a mutual decision made a priori to the implementation of the Study. The outcomes included leadership abilities, growth mindset, empathy level and interpersonal communication skills. Measures of these four constructs were based on a modified version of the validated and commonly used scales. Details of the items used in the survey can be found in the Appendix.

The survey has a case-control design, allowing us to gain insight into the additionality issue as highlighted. Specifically, we invited the participants who shared similar background with the Fellows (i.e., individuals who were within the age range of 20-24 and who are either studying their undergraduate degrees or had just completed their undergraduate studies) to participate in the survey as a comparison group. By comparing and contrasting the survey results from the Fellows and their comparison counterparts enabled us to identify the "added value" of the Program.

The research team set the following hypotheses. Assuming the Program would create positive impact on the Fellows, the results of the survey should numerically reflect an improvement of the Fellows' scores on the four outcomes. Also, the improvement of the outcomes would comparatively be bigger than the improvement (or change) in their comparison group (who did not participate in the Program). Thus, where the survey results fit these two mentioned hypothesized criteria, the research team would argue that they reflected the impact of the Program (i.e., the added value of the Program over the natural change). To make this comparison plausible, the data were collected at three timepoints, i.e., at pre-Program (T_0), halfway through the Program (T_1; i.e., six months after commencement of the Program), and post-Program (T_2; i.e., ten months after the commencement of the Program). While the research did not have specific predictions how the scores of the four outcomes change over the three measurement timepoints, the general expectation was that they would improve over the course of the data collection period.

The quantitative survey recruited 62 participants. Thirty-four were Fellows and twenty-eight were their comparison counterparts. Recruitment of the comparison was through referrals from the Fellows. Emphasis was to recruit individuals with similar socioeconomic background as theirs. Table 1 in Appendix II shows the demographic and socioeconomic characteristics of the Fellows. A point worth noting is that this collective group (Fellows) was relatively well-educated (100% self-equipped) and came from relatively economically affluent families. Second, it is observed that the characteristics of the comparison group were quite comparable to the Fellows (Appendix II). The survey successfully retained 76% and 85% of Fellows in the follow-up (T_1 and T_2, respectively). Comparatively, the survey only retained 36% of the comparison at T_1, and unfortunately, none of the comparison could be retained until T_2. Therefore, in subsequent analyses, comparison of the changes of the four outcomes between the two groups could only be made for the first two data collection phases.

Social Impact of the Program

This section summarizes the findings on the social impact of the Program.

Beneficiaries of the Program

Reviewing the objectives and contents of the Program clearly demonstrates that it has two major groups of target beneficiaries. The first group is the young graduates who have an emerging interest to be developed as educators (the "Fellows"). Broadly speaking, the Program provides an opportunity for this group to be educators in the Hong Kong public education system. Through their experiences, TFHK aims to (1) *nurture the Fellows to be competent to excel in all work settings; and (2) support the Fellows to realize and develop their career path.*

The second group is the students among the schools participated in the TFHK's Program. It is expected that a notable proportion of students among these schools come from families with a lower socioeconomic status. The rationale underpinning TFHK's Program is, via the empowering of the Fellows, this group of young potential educators can "*drive a positive impact on schools".*

Overall, the social impact of the Program extends beyond the value it has created for the Fellows and the Students, it also has a positive impact on the education system. It is recognized that TFHK plays a role in attracting young talents into entering the education sector.

The impact of the Program on the Fellows and the Students

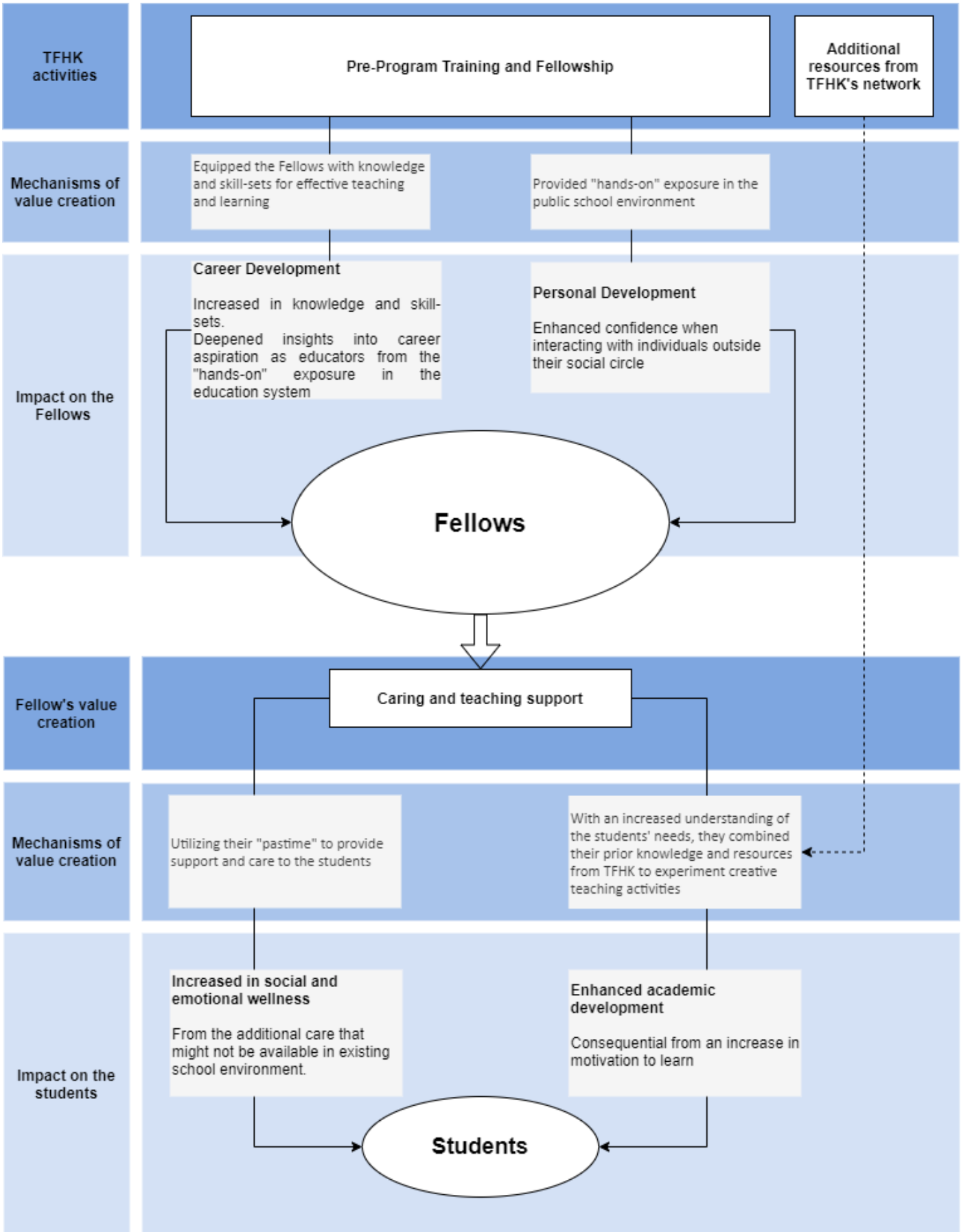
Figure 2 illustrates the empirically informed Social Impact Model of the TFHK's Fellowship Program on the Fellows and the Students. The upper panel of the figure illustrates "what" (activities) and "how" (mechanisms) the components of the Program create social impacts on the Fellows. Correspondingly, the lower panel portrays "what" and "how" the empowered Fellows in turn deliver impacts on the Students. The arrows linking the parts of the Program reflect the flow of the impact. The social impacts illustrated in this Model were empirically supported by the data collected through the aforementioned procedures.

Social impact created on the Fellows

Based on the data collected in the Study, we conceived that the Program has created a positive impact on the Fellows, particularly in facilitating/enhancing four major core attributes in leadership skills, growth mindset, interpersonal

skills as well as empathy. Almost all the interviewees in the quantitative results supported the enhancement of empathy among the Fellows in this one-year fellowship experience.

Figure 2: Empirically informed Social Impact Model of the TFHK's Fellowship Program



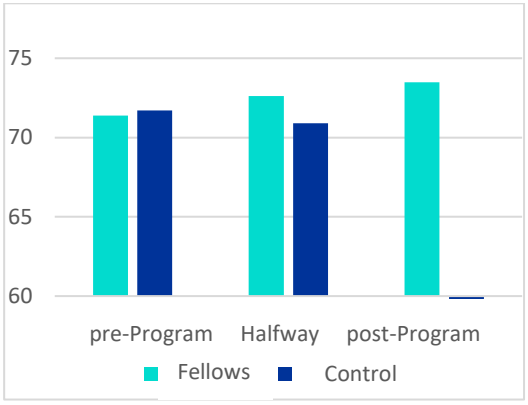
Empathy

From the Fellows' reflection, the opportunity to be an educator in the school environment enriched their personal growth, particularly in empathic understanding. One of the repeated themes reflected among the Fellows was the rich exposure to students from underprivileged families. Many of the Fellows reflected that they have had developed deep emotional bonding with them.

> *"Because of the small class size, I had more time to interact with the kids and realized many of them came from grassroot families. Few of them had rather complicated family background and inharmonious family relationship… I remember once a student told me that he (student) wanted to resume school as soon as possible, he (student) did not want to stay at home and always being beaten up by his father….I felt so sad after hearing this and talked to him (the student) all the time." (Fellow)*

The increase in empathic understanding can also be drawn from the results of the quantitative survey. Particularly, with the use of the modified Basic Empathy Scale, it is discovered that the Fellows' empathy score increased from 71.4 at pre-Program (T_0) to 73.5 post-Program (T_2), whereas comparable over time, the scores of their counterparts remained.

Figure 3: Changes in empathy level



Note: Empathy level was measured by a 19-item question set in the format of a five-point Likert scale. The range of the total empathy score was 19-95, with the higher score indicating higher empathy level.

According to the schools' principals and management of some corporates, they perceived that having strong empathy is an important quality they treasure and 'look for' in recruitment, since they perceived that empathic understanding is essential in communication and "working as a team". Some further even suggested that having empathy may drive the personnel to "do more for the clients" *(e.g., students)*, which can potentially facilitate innovation in value delivery.

> *'Empathy is a crucial element in building up a trustful relationship between teachers and students, they can understand students better and students can also share more with the teachers, such relationship is definitely beneficial to our students' personal growth…the*

Fellows can be the role models to the students.' (Principal)

Results of the Student Survey - Fellows' Empathy

Question	Pre-Program	Post-Program	Differences
Primary School Students (N=120)			
The teachers understood our needs and provided appropriate guidance (1-5)	\	4.28	\
Secondary School Students (N=117)			
We could share our needs with the teachers for appropriate guidance (1-7)	5.15	5.49	+0.34

The students' survey also echoed the importance of empathy shown by the Fellows. In particular, primary school students appreciated the Fellows' genuine understanding and guidance in their studies.

Leadership skills

Several Fellows revealed that the one-year fellowship experience had availed them chances to organize a variety of activities including field visits, provided guidance to students joining interschool STEM competitions, set up interest clubs, and one Fellow also assisted in developing the IB program in a school.

> *"Even though we are still supervised by the mentors (full-time teachers) here, we have plenty of chances in designing and leading different types of activities, I am particularly impressed by the chance of working to initiate the IB program here, as they (school teachers and principal) value my own IB background and hope I can help the minority group students here taking IB program in the future…." (Fellow)*

Growth mindset

After joining TFHK, the Fellows show a stronger belief that they have the qualities and abilities in not just helping themselves, but also contributing in a more macro scale: to the students, school, and the education system in Hong Kong. They found that the summer training programs on growth mindset and creativity had well-equipped them to face the challenges in the one-year teaching experience. During the fellowship, Fellows needed to be more flexible in tackling students' unprecedented problems, especially the behavioral and emotional issues of the SEN students. Furthermore, their belief in helping to change the environment enabled them to try looking for solutions in facilitating their teaching. Due to the social unrest in Hong Kong in late 2019 and also the COVID-19 in 2020, most of the classes were

suspended, and the Fellows needed to change to online teaching. They had to shift their planned classroom activities and teaching materials to Zoom and regularly cater for the needs of their students.

> *'Many students lack family support and thus not so confident in themselves… (to increase the learning motivation on SEN students) … I had read some journals and found that the use of the yoga ball in the kinesthetic classroom was useful and common in Western countries. I applied for the Teach for Hong Kong funding and joined a 3-day training workshop (on the operation of this classroom) … students liked this very much!) (Fellow)*

> *"This is indeed quite challenging and difficult for us (Fellows) during this period. I am now required to teach via Zoom, prepare the PowerPoints and videos and liaise with different parties at the same time. There are a number of students in our school at the grass-root level and they cannot afford a computer/tablet and internet, which makes our teaching more difficult. Besides, the students' emotions are definitely affected, and I needed to talk to them regularly via phone calls." (Fellows)*

In this year, despite most of the classes were suspended, the Fellows still worked hard to deliver online classes to the students, and the students' feedbacks were positive. They recognized the extra effort exerted by the Fellows in helping them to engage and learn in the online classes.

Results of the Student Survey - Fellows' Growth Mindset

Question	Pre-Program	Po
Primary School Students (N=120)		
The teachers' online teaching was more interesting and engaging (1-5)	\	4.
The teachers provided extra support to help us learn and study in an online environment (1-5)	\	4.
Secondary School Students (N=117)		
The teachers' online teaching was more interesting and engaging (1-7)	\	4.
The teachers provided extra support to help us learn and study in an online environment (1-7)	\	4.

Interpersonal skills

The Fellows' revealed having greater confidence in interacting with people from a diverse background. Explained by the Fellows, a plausible reason for such improvement lied upon the numerous interactions with individuals typically outside their personal social circle, school principals, colleagues and students, and representatives from corporates.

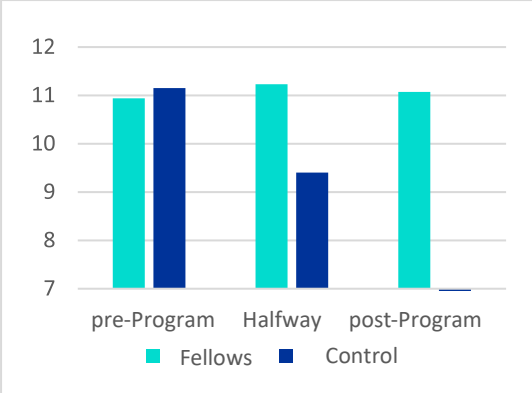
> *'Part of the Fellowship Program encouraged me to design some activities together with the volunteers from the corporates [for the students]. The experience was valuable since I had never been situated in such an environment [in my prior study or work]. Since we [participants and several other Fellows] are the organizers, we have to drive the work and communicate with different parties. We were given the chance to present some ideas [with feedbacks provided by experienced workers]. I feel that I am more confident to initiate some ideas.' (Fellow)*

One of the emergent themes reflected by the informants (i.e., the Fellows, teachers, and students) on the impact toward the students was the additional care and support provided by the Fellows. Reflected by the Fellows themselves as well, given their load of teaching and administrative work were relatively less than a "regular" teacher at school, they could use the 'pastime' to interact with students. During these interactions, they would share their personal life and experiences with the students and they found the students felt 'supported and cared for' when they started to "open-up" themselves.

> *'I have plenty of chances to talk with them (students) and I can share with them my experience in choosing which subjects (university majors) to pursue…and I believe this fellowship experience has strongly strengthened my communication skills….' (Fellow)*

There is burgeoning evidence supporting this proposition. In particular, from the Fellows' reflection, increased interaction with the students drove them to share more of their personal experiences [a sign of greater bonding with the students]. This phenomenon was also notable in the quantitative survey where the Fellows' score of self-disclosure had improved from pre-Program (T_0) to post-Program (T_2), whereas over the same period of time, the scores of their counterparts had decreased.

Figure 4: Change in self-disclosure tendency level



Note: Self-disclosure tendency level was measured by a 3-item question set in the format of a five-point Likert scale. The range of the total self-disclosure tendency score was 3-15, with the higher score indicating higher self-disclosure tendency.

Given the additional support and care from the Fellows, reciprocally, the students reflected that they sometimes felt 'secure' and 'safe' to disclose personal difficulties to the Fellows. They reflected seeing the Fellows as "senior" peer-supporters.

> *'I found myself coming to him (Fellow) even with issues about family and friends, he is always here to help…he is always giving good advice, that's something students need but often can't get. He is always there for students, no matter what the topic is…the teacher was very lively and ready to interact with us, that was very sweet…He has a very lively personality, many teachers are very hard to approach.' (Students)*

> *"One of the main reasons I [the school] participated in TFHK's program is the additional care the Fellows provided to my students. Other teachers in the school have some other teaching and administrative matters to attend to. Hence, they do not have extra time [compared to the Fellows] to give to the students. However, I recognize this support is conducive to the students. The [existence of the] Fellows in the school fill this 'gap'." (Principal of a participated school)*

Teaching skills and career exploration

Additionally, this group of young graduates reflected a major impact the Program yielded was enhancement of their skillsets in teaching. The Fellows reflected that some of the lectures and sharing offered by the Program equipped them with important skillsets which were found to be useful in their later teaching.

> *'I found that the lectures on classroom management and teaching SEN students were useful, the sharing by the speakers on handling SEN students inspired me a lot. When I dealt with the SEN students in my class, I suddenly recalled what she taught in the lecture and her methods helped me to settle the problems in class at last.' (Fellow)*

In addition, another key mechanism the Program offered to the Fellows was the provision of a crucial opportunity to "explore" or "further reinforce" their career aspirations as educators. As the Fellows reflected, the one-year fellowship offered them a hands-on experience working "within" the system. The experience offered an opportunity for them to develop a clear understanding in his/her aspiration to further pursuing their career in education-related areas.

> '*The [teaching] experience is valuable. [Before participating in TFHK's program], I realized myself as interested in teaching work. But frankly speaking, I wasn't sure whether I will enjoy being a full-time teacher. Now I tried [had been a Fellow of TFHK's program]. I learnt the pros and cons of being a teacher in Hong Kong. I think I am much more prepared now to decide in my career choice. {So, what's your decision?} I am now taking the PGDE certificate.' (Fellow)*

> *"[Before the exposure of working in schools] I hope to change the education system in Hong Kong as I think the system has some deficiencies. While after this experience, I think I have developed a clearer picture [of the system]. I have developed an [adjusted] view of the education sector. {So, will you continue to work in the education system?}*

> *Although I do not see myself "fit-in" the existing education system, I believe I will develop some innovative education work, particularly in the line of the STEM education. Overall, the experience [of TFHK's program] was good to me. I know what I will do next." (Fellow)*

From the students' survey, they agreed that the Fellows have made classroom learning stimulating and interesting, which in turn have enhanced their motivation to learn.

Results of the Student Survey - Fellows' Teaching Skills

Question	Pre-Program	Pos
Primary School Students (N=120)		
The teachers made the classroom more interesting and engaging (1-5)	\	4.2
The teachers stimulated our learning motivation (1-5)	\	3.8
Secondary School Students (N=117)		
Classroom learning could be interesting and engaging (1-7)	5.19	5.6
We have developed strong learning motivation (1-7)	4.72	5.1

Social impact created on the students

Via the teaching and caring support delivered by the Fellows (during their one-year fellowship program), the TFHK's Program apparently created two positive impacts on the students: increased exposure and change of growth mindset.

Students' exposure

Apart from the additional support and caring the Program afforded the students, the data also revealed evidence of enhanced students' learning. This positive impact seems to have created through an interesting mechanism. First, as highlighted earlier, the Fellows is a group of well-educated young graduates who themselves are equipped with knowledge and skillsets in various academic areas (i.e., Engineering, Economics, Psychology, Politics, etc.). This group, as observed by the researchers, is also a group of individuals who exhibit strong altruistic motivation. [1] As reflected by the Fellows, during the fellowship, they increasingly learnt some learning difficulties faced among the students. Owing to an increased understanding of the students' needs of learning, they had gradually become motivated to 'help' resolving their issues (the altruistic intent). There is evidence that, under these circumstances, the Fellows were motivated to develop ways to tackle the students' learning problems. As noted from multiple case sharing, the Fellows drew on their prior knowledge [or sought 'new' skillsets] to develop 'creative' teaching ideas to facilitate the students' learning experience and exposure.

> *'They (Fellows) are continually active and try to make changes in the school… I remember she (one Fellow) started a (student) club for mystery solving and then set up the Psychology Club which I joined also…They (Fellows) are very active in finding people who have similar interests and getting them interested in different fields.' (Student)*

Results of the Student Survey - Students' Exposure

Question	Pre-Program
Primary School Students (N=120)	
The lessons broadened our horizons (1-5)	\
Secondary School Students (N=117)	
Teachers were helpful in broadening our horizons (1-7)	5.42

[1] This proposition is supported by the results of the survey (Table 3) showing that the Fellows were getting quite high scores in the scale; they had very strong and positive attitude in helping others.

'Fellows have lots of creative ideas. They organized extra-curricular activities based on their own interests…say bringing students to visit a Bank office and (students) had a chance to talk with the professionals working in the Finance field… they (fellows) have also arranged the organizations to hold a fun fair at our school. They brought us positive energy and happiness.' (Teacher)

A school principal reflected the creativity the Fellows brought into the school a positive influence on the school as well, since it brought new thinking to the school, and provided stimulation to existing colleagues.

'To teachers who have been teaching for so many years like us, the presence of the Fellows is very stimulating. The new generation is very different. This is encouraging as they (Fellows) motivate the current teachers to try something new. There is positive influence on the teaching and learning environment in our school.' (Principal of a participated school)

Students reflected their appreciation on the Fellows' efforts in preparing and delivering creative teaching in classes. They expressed, inside the classroom, the Fellows have brought new teaching pedagogies to the class (including a more structured class, more in-class discussions, more chances to present students' ideas, and added more visual details and references to enrich and stimulate learning in the class). They conceived that this has enhanced their motivation to learn.

'His [Fellow's] teaching in the classroom is very structured. In addition, he likes to add visual details and different materials that makes the class less 'boring'… I believe he really made a lot of effort in motivating us to concentrate [be engaged] in the class.' (Students)

Quantitatively, students from the primary and secondary schools agreed that the Fellows had opened many learning opportunities outside the classroom. Secondary school students, in particular, appreciated the Fellows' efforts in broadening their horizons.

Growth mindset

Thinking that it was not explicitly mentioned, the students found that the Fellows had always encouraged them to be more flexible and strengthened their confidence in expressing themselves.

"He teaches us and gives us comments, he will tell you what you do well and what not… this will help me keep track and see what I should continue doing and what I should improve on…. He tries to make sure that even the quietest students get involved and engaged….' (Students)

> "*How much do you like the Model United Nations class [an innovative teaching activity created by the Fellow]?'*
> *The '[Model United Nations class] was one of my favorite activities that I have ever participated in. At first I was skeptical, as it seems to be out of my comfort zone…after the lesson, I really want to try again…. It was really fun.' (Students)*

Through teaching in the classes and the extra-curricular activities, the Fellows were encouraged and empowered to solve problems and met with challenges. From the students' survey, the results reflected that secondary school students specifically had stronger confidence in dealing with difficulties positively.

Social impact created on the education system

Apart from the impacts created on the Fellows and the students, another crucial social impact of the TFHK's Program is its contribution in attracting and aspiring young prospects to enter the education system. Through participation in the Program, TFHK essentially has become a channel providing these young talents who previously might not be interested in being educators an opportunity to explore their career prospects to becoming teachers. Conceptualizing from a system perspective, it has become a channel to enticing young graduates to enter the education system. Reflection from the Fellows illustrated the impact of TFHK as drawing them (or strengthening their interest) into working in the education sector. Comments from a representative of the schools also touched on this.

'I hold an undergraduate degree in Economics and Politics from a [university] in the US. After graduation, I worked in the banking industry for a few years. However, I don't think my career aspiration is being a banker, and at that time, I thought of being a teacher. I learned about TFHK when my interest of being an educator emerged. I felt honored being selected into the Program…. The Program gave me some new perspectives in my career. I decided to get my PGDE this year and I would like to continue to be a teacher [after completion of the Fellowship].' (Fellow)

> *'I studied Geography in my undergraduate and, since graduation, I worked in a surveying company. Actually, being a teacher was one of my interests [but I did not take the career aspiration seriously at first]. After a couple of months working in the company, I realized that I may not fit well in the industry. Hence, I searched for some career opportunities and that's when I came across TFHK. In essence, TFHK is a gateway for me to enter into the education sector. The Fellowship experience motivated me and drove me into this industry.' (Fellow)*

'I reckon that TFHK indeed provides opportunities for my graduates to become educators. This is one of the reasons of my participation [in TFHK's work]. [It gives] a chance [for us] to nurture young talents. I think it is beneficial for the education field development.' (A primary school principal)

Summary of the Program's impact

Overall, the Study identified evidence supporting positive impact the Program created on both the Fellows and the students. For the Fellows, the Program has made significant influence on their leadership skills, empathy level, interpersonal skills and change in growth mindset. These positive impacts seem to be conducive to the Fellows' career development as well as their personal growth.

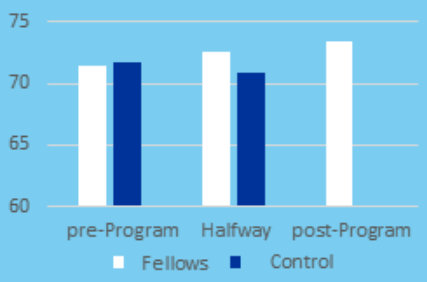
The positive impacts of the Program on the students are two-folds. First, having the Fellows as "senior" peer-supporters, the students received additional care and support within the school setting and had also been exposed to a variety of new ideas and activities that might not be available without the presence of the Fellows. The second is an increase in learning motivation generated from the creativity of the Fellows in their teaching. The emergence of "creative" teaching ideas seems to arise from a mix of input from the Fellows' prior knowledge, their increased empathic understanding and interactions with the students, and the additional intellectual and financial capital offered by the Program. These teaching methods had made changes to growth mindset among the students that the research team interviewed. This unique combination of different elements sparked creativity and enthusiasm that reportedly were positively appreciated among members of the teaching staff and school principals. All in all, the Program has notable positive impacts on the Fellows and students and extending to the school environment as well.

From the field development perspective, TFHK also serves as a role in drawing young talents who previously might not be interested in becoming teachers to enter the education sector. It definitely has a positive impact in field development.

IMPACT OF TEACH FOR HONG KONG PROGRAM ON THE FELLOWS

EMPATHY

- Rich exposure to underprivileged families
- Established deep emotional bonding with students
- Enhanced empathy level

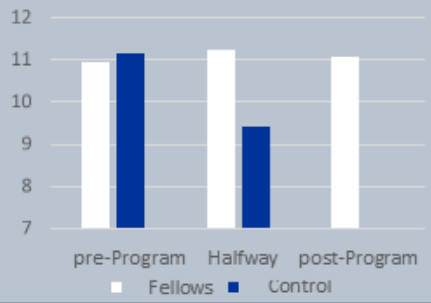


LEADER-SHIP SKILLS

- Fruitful experiences in initiating student activities
- Developed school-based curriculum (e.g. IB program) and interest clubs

GROWTH MINDSET

- Strengthened self-confidence during exploring solutions to challenges
- Strong belief in own ability to help the students and the education system



INTER-PERSONAL SKILLS

- Improved interpersonal skills
- More willing in self-disclosure to students

TEACHING SKILLS AND CAREER EXPLORATION

- Improved teaching skills
- Higher aspirations as educators in Hong Kong

Areas of consideration to further enhance the impact of the Program

This section summarizes some areas of consideration that potentially further enhance the impact of the Program. Particularly, they are three avenues for exploration:

(1) Refining the Training and Learning Program for the Fellows. Reflected by some Fellows, they conceived that the Training and Learning component (e.g., Friday sharing) was not well-structured. They argued that some materials did not fit their 'appetites' and did not add much value to their development. Elaborating on this, some Fellows have exhibited signs of discouragement and loss in motivation in further engaging in the Program. TFHK should be mindful of potential ramifications, as teachers and principals who have repeatedly participated in the Program have reflected their observations of an increased variation of the Fellows' quality. One principal perceived the reason to be potential deficiency in the Fellows' pre-Program training. When further "tapped", the principal rephrased that the quality issue of the Fellows was not a 'vital' issue but added remarks for a revisit.

(2) Enhancing the Program's focus and developing a standardized assessment for quality assurance. The present evaluation study developed a clear impact model for the TFHK's Program. Arguably, the Impact Model should have provided a way for TFHK to better capture its impact, and as a whole, will contribute to enhancing the focus of the Program. For instance, while TFHK itself identified four components as their main Program outcomes, this Study seems to point to the Program's major impact on the Fellows' development in teaching skills and empathetic understanding. Moreover, while emergent evidence suggested some impact of the Program's on the Fellows' leadership skills, and growth mindset, they however seemed more distal. A potential (re-)focus on the Program (tying to its program design) would seem conducive to the program development.

An extension to this is the potential in developing a standardized assessment for the Program. Given the Study has laid out the key impacts of the Program, a future step TFHK can consider is to

develop a standardized assessment to continuously monitor its Program efficacy. This has an advantage to ensuring the quality of the Program.

(3) Further engaging potential (private) parties in value co-creation. One of the tasks TFHK requested the research team to perform was to explore potential involvement of other (private) parties in the value creation work. Up until the end of the data collection period, only one party agreed to participate in an interview. From the interview, it was quite clear that the interviewed party shared the social value held by TFHK and was satisfied with their previous collaborations, as its staff "enjoyed their co-creation". When tapped for future collaboration, one weakness of TFHK that its Program was somewhat fragmented and was mostly in an ad hoc basis surfaced. The party expressed its willingness to further participation given a more structured program (e.g., an annual planning for consideration). Based on these comments, TFHK can re-think its strategy in attracting (private) parties for future development of the organization.

Appendix. I: List of Interviews

Dates	Time	Schools	Stakeholders
4/25/2020	10:00-12:00 pm		Four TFHK current Fellows and alumni
5/12/2020	4:00-5:00 pm	Primary School	Principal
5/15/2020	3:00-4:00 pm	Secondary School	Vice –Principal
5/19/2020	11:00-12:00 pm	Primary School	Principal
5/20/2020	3:00-4:00 pm	Secondary School	Fellows and students
5/22/2020	3:00-4:00 pm	Secondary School	Principal and alumni fellows
5/25/2020	3:00-4:00 pm	Secondary School	Secondary School students and Fellows
6/6/2020	10:00 – 11:00 am	Corporate	

Appendix. II Summary of Surveys

1. Demographic and Socioeconomic Characteristics of the Fellows and their counterparts

Table 1: Demographic and socioeconomic characteristics of the Fellows and the control groups at baseline (T0)

	Fellows (n =34)	Control (n =28)	Total (n = 62)	*p* -value
Sex (missing: N = 1)				.61
Male	18 (52.9%)	13 (46.4%)	31 (50.8%)	
Female	15 (44.1%)	15 (53.6%)	30 (49.2%)	
Age (missing: N = 5)				.77
18-19	0 (0%)	1 (4%)	1 (1.8%)	
20-21	4 (12.5%)	3 (12%)	7 (12.2%)	
22-23	23 (21.9%)	18 (72%)	41 (72.0%)	
24-25	2 (6.3%)	2 (8%)	4 (7.0%)	
26-27	3 (9.4%)	1 (4%)	4 (7.0%)	
Educational attainment (missing: N =1)				.49
Bachelors	27 (79.4%)	25 (89.3%)	52 (85%)	
Postgraduates	6 (17.6%)	3 (10.7%)	9 (15%)	
Location of higher education (missing: N=1)				.20
Hong Kong	26 (76.5%)	26 (92.9%)	52 (85%)	
Others	7 (20.6%)	2 (7.1%)	9 (15%)	
Economic activity status (missing: N=1)				<.001***
Full-time employed (30+ hours per week)	34 (100%)	17 (60.7%)	51 (82.3%)	
Part-time employed (<30 hours per week)	0 (0%)	3 (10.7%)	3 (4.8%)	
Full-time students	0 (0%)	8 (28.6%)	8 (12.9%)	
Fathers' educational level (missing N=3)				.39
Primary school	3 (9.4%)	3 (11.1%)	6 (10.2%)	

Secondary school	16 (50%)	11 (40.7%)	27 (45.8%)	
Tertiary education	4 (12.5%)	8 (29.6%)	12 (20.3%)	
Postgraduate	9 (28.1%)	5 (18.5%)	14 (23.7%)	
Fathers' economic activity status (missing N=4)				.41
Full-time employed (30+ hours per week)	18 (58.1%)	17 (63%)	35 (60.3%)	
Part-time employed (<30 hours per week)	1 (3.2%)	1 (3.7%)	2 (3.4%)	
Retired	7 (22.6%)	9 (33.3%)	16 (25.8%)	
Refused to answer	3 (9.7%)	0 (0%)	3 (5.2%)	
Self-employed	1 (3.2%)	0 (0%)	1 (1.7%)	
Deceased	1 (3.2%)	0 (0%)	1 (%)	
Mothers' educational level (missing N=4)				.92
Primary school	4 (12.9%)	2 (7.4%)	6 (10.3%)	
Secondary school	16 (51.6%)	15 (55.6%)	31 (53.4%)	
Tertiary education	9 (29%)	8 (29.6%)	17 (29.3%)	
Postgraduate	2 (6.5%)	2 (7.4%)	4 (6.9%)	
Mothers' economic activity status (missing N=4)				.23
Full-time employed (30+ hours per week)	17 (54.8%)	14 (51.9%)	31 (53.4%)	
Part-time employed (<30 hours per week)	4 (12.9%)	3 (11.1%)	7 (12.1%)	
Homemaker	4 (12.9%)	8 (29.6%)	12 (20.7%)	
Retired	1 (3.2%)	2 (7.4%)	3 (5.2%)	
Refused to answer	3 (9.7%)	0 (0%)	3 (5.2%)	
Self-employed	2 (6.4%)	0 (0%)	2 (3.4%)	
Housing types (missing N=4)				.10
Public housing	5 (16.1%)	4 (14.8%)	9 (15.5%)	
Private rental housing	3 (9.7%)	5 (18.5%)	8 (13.8%)	
Self-owned private housing	20 (64.5%)	18 (66.7%)	38 (65.5%)	
Dorm	1 (3.2%)	0 (0%)	1 (1.7%)	
Civil Service Quarters	1 (3.2%)	0 (0%)	1 (1.7%)	

Home Ownership Scheme Flats	1 (3.2%)	0 (0%)	1 (1.7%)	
Family size (excluding domestic helper)				.68
2	1 (3.2%)	0 (0%)	1 (1.8%)	
3	10 (32.3%)	7 (26.9%)	17 (29.8%)	
4	16 (51.6%)	15 (57.7%)	31 (54.4%)	
5	4 (12.9%)	3 (11.5%)	7 (12.3%)	
6	0 (0%)	1 (3.8%)	1 (1.8%)	
Family monthly income (missing N=9)				.08
No income	0 (0%)	1 (4%)	1 (1.9%)	
Below $4,000	0 (0%)	1 (4%)	1 (1.9%)	
$4,000 - $12,999	2 (7.4%)	1 (4%)	3 (5.7%)	
$13,000 - $18,999	0 (0%)	2 (8%)	2 (3.8%)	
$19,000 - $39,999	8 (29.6%)	4 (16%)	12 (23.1%)	
$40,000 - $159,999	11 (40.7%)	15 (60%)	26 (50%)	
Above $160,000	5 (18.5%)	1 (4%)	6 (11.5%)	
Family monthly income per capita	Mean = $20,532.1	Mean = $18,826.7	Mean = $19,713.5	.70

P: p-value; *<0.05; **<0.01; ***P<.001.

2. Personality traits of the Fellows and their counterparts

Personality traits were measured by the Big Five Inventory (Rammstedt & John, 2007). The personality traits of both groups are shown in Table 2. Even though there were no statistical group differences, the Fellows were more curious (openness to experience), more efficient and organized (conscientiousness), more sociable and energetic (extroversion), warm, sympathetic (agreeableness) and less moody and irritable (neuroticism). A slight increase in conscientiousness and a drop in neuroticism was found from T_0 to T_2.

Table 2: Personality traits of the Fellows and the control groups at different timepoints

	Between-group differences	***Within-group differences*** (T_2 - T_0)

	Pre-Program (T_0)	Halfway (T_1)	Pos-Program (T_2)	*p*-value
Big-Five personality traits				
Openness to Experience (2-10)				
Fellows	7.03 *(1.26)*	7.24 *(1.17)*	7.07 *(1.22)*	.65
Control groups	6.79 *(1.34)*	7.00 *(1.63)*	NA	
p-value	.45	.26	NA	
Conscientiousness (2-10)				
Fellows	6.71*(1.64)*	6.44*(1.36)*	6.93*(1.46)*	.45
Control groups	6.36 *(1.57)*	5.50*(1.18)*	NA	
p-value	.34	.06	NA	
Extroversion (2-10)				
Fellows	6.61*(1.89)*	6.72*(2.03)*	6.66*(1.90)*	.82
Control groups	6.18 *(1.63)*	5.40*(1.71)*	NA	
p-value	.32	.08	NA	
Agreeableness (2-10)				
Fellows	7.42 (*1*.15)	7.24(1.17)	7.41 (0.98)	.63
Control groups	7.29 (1.41)	7.10(0.74)	NA	
p-value	.88	.73	NA	
Neuroticism (2-10)				
Fellows	6.03 (1.81)	6.28 (2.13)	5.83 (1.75)	1.00
Control groups	6.11 (1.57)	5.40 (1.78)	NA	
p-value	.86	.26	NA	

P: p-value; *<0.05; **<0.01; ***P<.001.

Mann-Whitney tests were used to compare the Fellows and the control groups at T_0 and T_1.

Non-parametric tests were used to compare the within-group differences.

NA: No data from the comparison group were received.

3. Empathy levels and prosocial attitudes of the Fellows and their counterparts

Table 3 reveals that the empathy level of both the control groups and the Fellows were similar. We adopted some relevant questions from the Chinese version of the Basic Empathy Scale (Geng, Xia, & Qin, 2012) and the scales measuring prosocial attitudes (Webb, Green, & Brashear, 2000). Comparatively, both groups had less affective empathy (sharing others' emotional state) than cognitive empathy (understanding others' emotional state). Both groups had high level of prosocial attitudes toward volunteering. There was also a slight increase of total empathy level among the Fellows from T_0 to T_2.

Table 3: Changes in the means of the empathy levels and the prosocial attitudes across the measurement timepoints (T_0, T_1, T_2)

	Between-group differences			***Within-group differences*** (T_2 - T_0)
	Pre-Program (T_0)	Halfway (T_1)	Post-Program (T_2)	*p*-value
Empathy levels				
Affective empathy (11-55)				
Fellows	39.41(6.30)	40.77(6.10)	40.72(5.76)	.85
Control groups	41.50 (6.14)	40.50(3.66)	NA	
p-value	.18	.90	NA	
Cognitive empathy (8 - 40)				
Fellows	31.97 (4.21)	31.85(3.50)	32.76(4.11)	.69
Control groups	30.21 (3.72)	30.40(2.01)	NA	
p-value	.06	.23	NA	
Total (19 – 95)				
Fellows	71.38 (8.09)	72.62(7.48)	73.48(7.02)	.85
Control groups	71.71 (8.99)	70.90(3.57)		
p-value	.94	.50	NA	
Prosocial Orientation (4-20)				
Fellows	16.71 (2.41)	16.69(2.41)	16.45(2.34)	.50
Control groups	17.07 (2.03)	16.50(1.65)	NA	
p-value	.64	.82	NA	

P: p-value; *<0.05; **<0.01; ***P<.001.
Mann-Whitney tests were used to compare the Fellows and the controls groups at T_0 and T_1.
Non-parametric tests were used to compare the within-group differences.
NA: No data from the comparison group were received

4. Problem-solving skills of the Fellows and the control groups

Questions from the Personal Problem-Solving Inventory (Heppner & Petersen, 1982) were adopted to investigate problem solving among the Fellows and their counterparts. Table 4 shows that both groups had no differences in terms of problem-solving confidence (confidence in engaging in a wide range of problem-solving activities), approach-avoidance style (avoid different problem-solving activities) and personal control (self-control in dealing with problems). Among the three major factors, all of them were more confident in solving problems and controlling themselves, compared with avoiding and facing problems. Nonetheless, it is observed that the total problem-solving ability had slightly dropped from T_0 to T_2.

Table 4: Changes in the means of problem-solving skills across the measurement timepoints (T_0, T_1, T_2)

	Between-group differences			***Within-group Differences*** (T_2 - T_0)
	Pre-Program (T_0)	Halfway (T_1)	Post-Program (T_2)	
Problem-solving skills				
Problem solving Total (27-135)				
Fellows	87.15 (5.77)	85.69(4.60)	85.52(4.45)	.25
Control groups	85.88 (4.21)	86.20(3.99)	NA	
p-value	.51	.50	NA	
Problem-solving confidence (8–40)				
Fellows	29.67 (5.21)	29.58(4.74)	30.48(4.59)	.44
Control groups	28.50 (4.31)	29.40(4.70)	NA	
p-value	.39	.92	NA	
Approach-avoidance style (14–70)				
Fellows	42.56 (2.98)	41.31(2.65)	41.34(2.42)	.54
Control groups	42.12 (2.29)	41.00(2.16)	NA	
p-value	.53	.75	NA	
Personal control (5-25)				
Fellows	14.91 (3.64)	14.81(3.80)	13.69(3.62)	.12
Control groups	15.27 (3.08)	15.80(2.44)	NA	
p-value	.86	.45	NA	

P: p-value; *<0.05; **<0.01; ***P<.001.

Mann-Whitney tests were used to compare the Fellows and the control groups at T_0 and T_1.

Non-parametric tests were used to compare the within-group differences.

NA: No data from the comparison group were received.

5. Interpersonal communication competence of the Fellows and the control groups

Some questions from the Interpersonal Communication Competence Scale (Rubin & Martin, 2009) were used to measure the Fellows' abilities to engage in interpersonal

communication. In Table 5, both groups showed no difference in different aspects under interpersonal competence, including immediacy (whether they can immediately show others that they are approachable and available for communication), self-disclosure (the ability to open up or reveal to others their personalities through communication), social relaxation (lack of anxiety in daily social interactions), environmental control (an ability to achieve predetermined goals and satisfy needs), altercentrism (paying attention and respond to what others say), interaction management (ability to handle ritualistic procedures in everyday conversation) and expressiveness (ability to communicate feelings through nonverbal behavior). Among all aspects, all of them revealed lower levels in social relaxation and expressiveness.

From T_0 to T_2, among the fellows, there was a slight increase in self-disclosure but a drop in environmental control.

Table 5: Changes in the means of interpersonal skills across the measurement timepoints (T_0, T_1, T_2)

	Between-group differences			***Within-group Differences*** (T_2 - T_0)
	Pre-Program (T_0)	Halfway (T_1)	Post-Program (T_2)	
Interpersonal skills				
Total interpersonal skills (21-105)				
Fellows	77.56(12.32)	76.04(9.32)	77.90(10.12)	.15
Control groups	76.19 (8.03)	74.30(9.70)	NA	
p-value	.54	.81	NA	
Immediacy (3-15)				
Fellows	12.47 (2.22)	12.27(1.82)	12.55(1.84)	.66
Control groups	12.23 (1.70)	12.20(1.62)	NA	
p-value	.48	.92	NA	
Self-disclosure (3- 15)				
Fellows	10.94 (2.57)	11.23(2.07)	11.07(2.05)	.84
Control groups	11.15 (1.76)	9.40(2.17)	NA	
p-value	.84	.03	NA	
Social relaxation (3-15)				
Fellows	10.35 (2.23)	10.08(1.67)	10.38(2.27)	.65
Control groups	10.50 (1.58)	10.50(2.07)	NA	

p-value	.53	.53	NA	
Environmental control (3-15)				
Fellows	11.09 (2.29)	10.54(1.98)	10.90(1.97)	.65
Control groups	10.58(1.72)	10.90(1.60)	NA	
p-value	.35	.61	NA	
Altercentrism (3-15)				
Fellows	11.03 (1.53)	10.77(1.42)	11.24(1.46)	1.00
Control groups	10.46 (1.30)	10.60(1.17)	NA	
p-value	.19	.74	NA	
Interaction management (3-15)				
Fellows	10.79 (2.14)	10.88 (2.01)	10.79 (1.72)	1.00
Control groups	10.46 (1.30)	10.70 (2.31)	NA	
p-value	.93	.81	NA	
Expressiveness				
Fellows	10.88 (2.63)	10.27 (2.07)	10.97 (2.38)	.15
Control groups	10.46 (1.98)	10.00(2.36)	NA	
p-value	.51	.74	NA	

P: p-value; *<0.05; **<0.01; ***P<.001.

Mann-Whitney tests were used to compare the Fellows and the control groups at T_0 and T_1.

Non-parametric tests were used to compare within-group differences.

NA: No data from the comparison group were received.

6. Growth mindset of the Fellows and the counterparts

In this study, Theories of Intelligence Scale, Implicit Theories of Personality and 'Kind of Person' Implicit Theory were used to measure growth mindset (Dweck, 2000). Table 6 focuses on the growth mindset of both Fellows and their counterparts. Both groups showed lower levels in believing the world they lived in could be shaped (the world) rather than intelligence (whether the level of intelligence is fixed or malleable) and the 'kind of person' (whether the type/kind of person can be changed). There was a slight drop in the total growth mindset from T_0 to T_2 among the Fellows.

Table 6: Changes in the means of the growth mindset across the measurement timepoints (T_0, T_1, T_2)

	Between-group differences		***Within-group***

				Differences **(T_2 - T_0)**
	Pre-Program (T_0)	Halfway (T_1)	Post-Program (T_2)	
Growth mindset				
Total growth mindset (17-85)				
Fellows	45.59(11.85)	46.15(11.59)	44.24 (11.69)	1.00
Control groups	48.42(10.82)	55.30 (7.62)	NA	
p-value	.77	.03	NA	
Intelligence (6-30)				
Fellows	15.68 (4.58)	16.08(4.53)	16.03(4.74)	.56
Control groups	18.12 (5.03)	19.50(4.28)	NA	
p-value	.10	.05	NA	
'Kind of person' that can be changed (8-40)				
Fellows	21.47 (5.98)	21.54(6.07)	19.83 (5.61)	.06
Control groups	21.08 (5.50)	25.30 (4.42)	NA	
p-value	.47	.08	NA	
The world (3-15)				
Fellows	8.44 (2.68)	8.54(2.44)	8.38(2.69)	.65
Control groups	9.23 (2.16)	10.50(1.08)	NA	
p-value	.15	.02	NA	

P: p-value; *<0.05; **<0.01; ***P<.001.

Mann-Whitney tests were used to compare the Fellows and the control groups at T_0 and T_1.

Non-parametric tests were used to compare within-group differences.

NA: No data from the comparison group were received.

7. Additional questions on empathy levels, problem-solving skills, and interpersonal skills competence

	Between-group differences			***Within-group Differences*** **(T_2 - T_0)**
	Pre-Program (T_0)	Halfway (T_1)	Post-Program (T_2)	
Empathy level				

20. I usually find others' emotions/feelings unnecessary/exaggerated (1-5)				
Fellows (n=21)	3.62 (1.02)	3.58(1.06)	3.79(0.73)	.80
Control groups (n=10)	3.61 (1.03)	3.10(0.88)	NA	
p-value	.99	.21	NA	
21. I have body sensations and physical reactions toward others' emotions and situations (1-5)				
Fellows	3.56 (0.89)	3.65(0.94)	3.72(0.88)	.36
Control groups	3.50 (1.00)	3.30 (0.82)	NA	
p-value	.94	.37	NA	
22. Having heard their situations or experience I easily recognize others' emotions (1-5)				
Fellows	4.21 (0.77)	4.19(0.63)	4.24(0.51)	1.00
Control groups	4.04 (0.51)	3.90 (0.32)	NA	
p-value	.24	.24	NA	
23. I acknowledge feedback/criticism toward me and ask questions to further understand the issue (1-5)				
Fellows	4.32 (0.64)	4.15(0.68)	4.34(0.67)	1.00
Control groups	4.11 (0.63)	4.30 (0.48)	NA	
p-value	.18	.72	NA	
24. When I respond to others' sharing, I start by paraphrasing what the person has said (1-5)				
Fellows	3.76(0.78)	3.62(1.10)	3.76(1.18)	1.00
Control groups	3.50 (0.88)	3.80 (0.63)	NA	
p-value	.29	.77	NA	
25. I stop listening and start formulating my responses when others have not yet finished talking (1-5)				
Fellows	3.26(1.05)	3.11(1.21)	3.41(0.98)	1.00
Control groups	3.43 (1.10)	2.90(0.74)	NA	
p-value	.62	.66	NA	
26. I listen not only to what is expressed in words, I also pay				

attention to others' both verbal and non-verbal implications (such as their gestures, eye contact, tones, etc.) (1-5)				
Fellows	4.32 (0.64)	4.31 (0.74)	4.38 (0.62)	1.00
Control groups	4.11 (0.83)	4.10 (0.32)	NA	
p-value	.33	.32	NA	
27. I listen to others with genuine concern (1-5)				
Fellows	4.32(0.68)	4.27 (0.67)	4.24 (0.51)	.28
Control groups	4.07 (0.72)	4.10(0.32)	NA	
p-value	.16	.41	NA	
Problem-solving skills				
23. I set objectives to align with broader organizational goals (1-5)				
Fellows	3.59 (0.96)	3.65(0.94)	3.69(0.89)	1.00
Control groups	3.54 (0.81)	4.30(0.48)	NA	
p-value	.74	.93	NA	
24. To achieve a goal, I plan for multiple simultaneous activities/initiatives (1-5)				
Fellows	3.74 (1.00)	4.04(0.82)	4.03(0.63)	.77
Control groups	4.00 (0.69)	4.00(0.67)	NA	
p-value	.32	.82	NA	
25. I stage activities with relevant milestones and schedules (1-5)				
Fellows	3.68 (0.88)	3.69 (0.93)	3.93 (0.65)	.55
Control groups	3.69 (0.74)	3.50(0.97)	NA	
p-value	.99	.61	NA	
26. I plan to mobilize and utilize resources, e.g., people, funding, materials, support, to get things done (1-5)				
Fellows	3.82(1.00)	3.85(0.93)	4.07(0.70)	.61
Control groups	3.73 (0.60)	3.90(0.88)	NA	
p-value	.35	.90	NA	

32. I consciously experiment new solutions and approaches in my routine tasks (1-5)				
Fellows	3.71 (0.97)	3.62(0.80)	3.90(0.77)	.58
Control groups	3.46 (0.86)	3.50(0.71)	NA	
p-value	.27	.79	NA	
33. I proactively seek feedback without being defensive (1-5)				
Fellows	3.88 (0.77)	3.58(0.95)	3.90(0.82)	.77
Control groups	3.42 (0.76)	3.70(1.16)	NA	
p-value	.04*	.59	NA	
34. I am unaware of my own strengths, weaknesses, and interpersonal impact (1-5)				
Fellows	2.41 (1.05)	2.38(1.02)	2.28(1.22)	1.00
Control groups	2.65 (1.32)	2.60(1.07)	NA	
p-value	.48	.64	NA	
35. I delay making decisions, for fear of offending or disappointing anyone (1-5)				
Fellows	3.62 (0.99)	3.31(0.88)	3.31(1.04)	.63
Control groups	3.08 (0.93)	2.70(0.68)	NA	
p-value	.03*	.05*	NA	
Interpersonal skills				
22.I seldom engage with people beyond my immediate work area (1-5)				
Fellows	2.68 (0.95)	3.00(1.11)	2.79(1.11)	.63
Control groups	2.65 (1.02)	2.50(1.08)	NA	
p-value	.81	.23	NA	
23.I connect deeply with others (1-5)				
Fellows	3.88 (0.98)	3.85(0.93)	3.79 (0.90)	.80
Control groups	3.85 (0.73)	3.70(0.82)	NA	
p-value	.76	.61	NA	
24. I feel comfortable relating to people, regardless of their cultural backgrounds and any existing hierarchy (1-5)				
Fellows	3.88 (0.73)	3.85(0.93)	4.10(0.72)	.45

Control groups	3.88 (0.82)	3.70(0.68)	NA
p-value	.98	.26	NA

P: p-value; *<0.05; **<0.01; ***P<.001.

Mann-Whitney tests were used to compare the Fellows and the control groups at T_0 and T_1.

Non-parametric tests were used to compare within-group differences.

NA: No data from the comparison group were received.