



Radboud University
Nijmegen, the Netherlands



Supporting Underprivileged Students with Underachievement by School-based Enrichment Programme

以校本增潤課程支援低收入才華未展的資優生

Funding Organizations:

(Phase II 2022-2023)



Supporting Organizations:



Background

Underrepresented Talent

As know as invisible talent, usually refers to the underprivileged, ethnic minority or second language (English) learning students with high ability (Peter & Engerrand, 2016)



Underachievement

Underachievement is described as a discrepancy between expected performance and actual performance (Siegle & McCoach, 2018)



Project Aims

1. To provide **suitable education for the children** to develop their talents in school
2. To provide an opportunity for **teachers to gain insights** of their students' talents and **receive guidance** on their talent developments
3. To assist Hong Kong schools to map the stronger and weaker capacities of the underprivileged students by **providing training** to them in the **basic knowledge of education** for high ability students
4. To develop a **local community of talent development** experts in long run
5. To **change the perspective** the general public in **gifted education**

Project Logic Model

30
TEACHERS

- 10 Seed teachers
- RITHA Training (Block 1)
- Seed teacher learning community
- 10 Partner teachers
- 10 Network teachers
- 10 Teacher Workshop

10
SCHOOLS

School-based enrichment program develop by seed teachers
1on1 consultation by experts



132
STUDENTS

- Underprivileged high ability students with underachievement
- 4-6 weeks enrichment program
- Invited by seed teachers
- Evaluated by CSENIE

Promotion Video



Project Activities

RITHA Specialist
Training (Block 1)

Seed teachers
learning community

School-based
enrichment
program
development

Individual consultation on
designing the enrichment program

3 Teacher
workshops

After the development, seed teachers conduct the enrichment program at schools with the help of partner teachers to support **136** students.



Figure 2 & 3: Photo of project activities

RITHA Training (Block 1)

- From June 2021 to September 2021
- RITHA Training Block 1: **Foundations of Gifted Education**
- Provide **professional training** for seed teachers
- **Scientifically based framework** of gifted education
- Critically review new information for purposes of shaping and building teachers **own personal views and practices.**

RITHA Specialist Training (Block 1) Outcome

100% Passing Rate

- Comments from seed teachers to RITHA Training**

“First of all, I would like to say thank you to all our lecturers and administration. There’s a lot of resources and they really like the discussions. Level of the topics is appropriate. Balance between theory and practice. They match the learning goals. The seminar is a way for them to express their ideas. They love the lecturers and the feedback they receive. They like the flexibility and the solutions the lecturers are suggesting regarding the work schedule.”

RITHA 2021-07 Hong Kong - Educating Gifted and Talented Youth

Report composed on 05-11-2021

Subject name	Educating the Gifted and Talented Youth (EGTY)
Evaluation name	RITHA 2021-07 Hong Kong - Educating Gifted and Talented Youth
Evaluation start- and end date	03-10-2021 t/m 31-10-2021
Amount of respondents	5 from a total of 10 (50%)

Average scores

Below are the average scores. These averages are composed of all results on all questions, with the exception of the questions with the scales "Yes / No" and "Open question", and questions in which the set of questions states that they may not be included in the average.

Average score total	Average score subject	Average score teacher
7.3	7	7.6

Questions	Average score (out of 5)
During the online course, I was able to further develop the required competencies	3.8
The content ties with the learning objectives for the online course	4
I put into practice what I have learnt	3.6

Figure 3: Overview of the RITHA questionnaire

Teacher Workshop 1 – Introduction of Gifted Education

- Opening ceremony
- Introduction of Gifted Education: Say “NO” to Gifted Under-achievers
 - By Dr. Patrick Hak-Chung Lam
 - Introduce Dr. Sylvia Rimm’s 4 types of underachiever
 - Sharing the strategies to support various types of underachievement in Hong Kong
- Panel Discussion with seed teachers
 - By Prof. Sin Kuen Fung Kenneth
 - Discuss the difficulties of exercising gifted education in schools and the expectation for this project



Figure 5 & 6: Photo of teacher workshop 1

Teacher Workshop 2 – Supporting Gifted Student at schools

- Talent Development of Gifted Students for the 21st Century through STEM and beyond
 - By Dr. Wong Kam Yiu, Jimmy
 - Introduce how to develop gifted students
 - Provide examples and stories of developing underachievers
 - Demonstrate the plasticity and achievements of underachievers
- Teacher sharing
 - By seed teachers
 - Share scientific articles
 - Share their school-based enrichment program

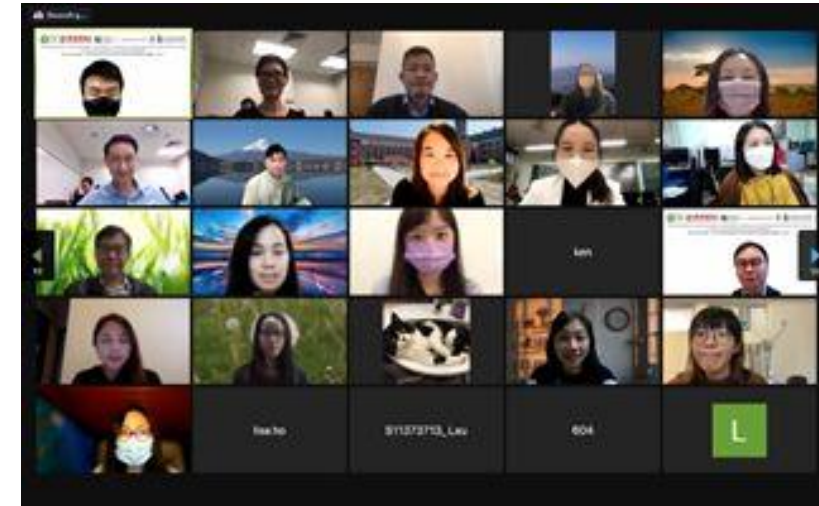


Figure 9 & 10: Photo of teacher workshop 2



Development of school-based enrichment program

- Seed teachers develop school-based enrichment program based on the student's need at their schools
- 1 to 1 consultation with the project consultant to revise the lesson plan
- 10 well-developed school-based enrichment program

「促進平等學習機會—為才華未展的學生製定有效的校本增潤課程計劃」
課程目的、活動目標、內容大綱

活動名稱：P.4 STEM UP Reading Fun
負責老師：馬綺廷、高惠慧
適合學生：小四才華未展學生
挑選學生準則：
1. 去年期末評估中的英語成績與去年期末評估中的STEM科目成績比較，在STEM科目中獲得A或B級或在英語中獲得B級或以下成績的學生將被提名。
原因：這些學生的英語語言或閱讀能力影響他們未來在以英語閱讀的STEM科目中的表現，希望預早發掘他們和幫助他們建立閱讀科學文本的習慣和耐力，熟悉有效的閱讀要領。
2. 有參加STEM校隊原班，老師認為有潛能或有高於平均水平的能力，但因名額已滿，不被挑選的學生將被提名。
原因：這些學生有創造力，或對有熱情任務或工作的承擔，希望提供平台給他們發展才能和加強英文閱讀水平和習慣，能夠預早發掘自己，在STEM中取得優異成績需要大量的跨課程閱讀，英語對於在STEM科目或學業中取得成功至關重要。
3. 老師透過觀察、平日的學業評估、或學生其他表現，提名於STEM科目才華未展的小四學生。
原因：選擇小四學生是因為之前一至三年級STEM相關的增益性或校本增潤課程較少，有才華的小四學生往往欠缺平台，有機會導致才華未展。高小有更多以英文教授有關科學的恆常課程，這課程可促進這些學生

Teaching plan for FK YouTuber
Theory behind FK YouTuber
FK YouTuber is an enrichment program for students to further develop the use of language (English) and skills of information technology. Creativity, problem solving skills as well as students' motivation in learning will also be nurtured in the program. It is expected that after the program, students are able to create their own YouTuber channel by using English as the language media. The differentiated model of giftedness and talent by Gagne in 2010 is used as it matches our school missions towards students. It is believed that every student has their unique natural abilities. By providing environmental inputs in the developmental process, students are able to develop competencies including fields of technology, arts, social service etc. On the other hand, cognitive approaches for studying information processing can also be applied to tasks with series problems, which we found can mature students' skills of problem solving (Sternberg,1977). Our schools put great efforts on creating healthy learning environment to peak students' potential in multiple aspects, STEM is one of the largest paths in students' development. However, the selection of students to those programs often depends on their academic performance. Since high intelligence is commonly assessed through IQ tests (Dai, 2010; Newman, 2008; Sternberg, 1997), and academic performance, only students with excellent grade earn opportunities for further development. It is my assumption that there are a lot of kids who are gifted in creative, social and perceptual domains that are under-achieved because their gifts are not seen academically. The enrichment program FK YouTuber, under the concerns of having underachievers, aims to provide opportunity for

Emyl Jen 7:19:50 10月17日
How many seats?

Emyl Jen 7:19:50 10月17日
If so, this is not a strength-based program. In other words, it is not a gifted program.

Emyl Jen 7:19:50 10月17日
Using the word to polish your program, highly motivated students

Emyl Jen 上午7:05 10月19日
Why? Ethical issues? What if they create something not good afterward?
My suggestion is to help them create videos but don't try to encourage them to set channels or accounts. Be careful about the negative influences of social media.

Emyl Jen 上午7:06 10月19日
STEM?

Emyl Jen 上午7:07 10月19日
In a well-written program, your personal assumption is a weak reason. Your teaching observation/based on your teaching experience is an acceptable reason.

Figure 13: Example of enrichment program teaching plan

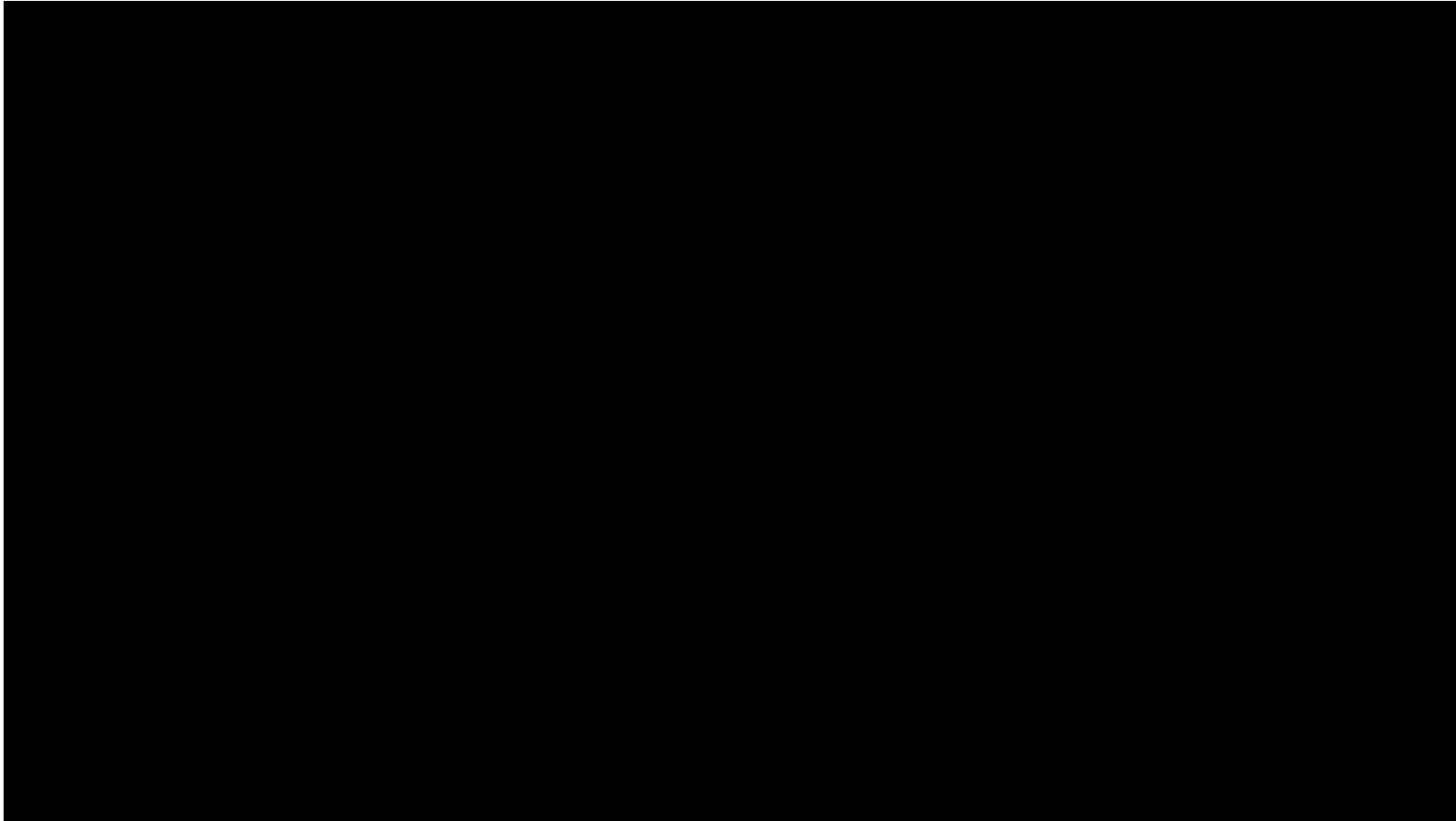


Overview of School-based Enrichment Program

學校	種籽老師	校本增潤課程	科目	時數	參與 學生 人數
中華基督教會譚李麗芬中學	林嘉俊老師	“Be a professional foodie” -- An English based enrichment Program	英文	10 小時	10
鳳溪第一小學	麥舒老師	“FK Youtuber” – An English and IT enrichment programme	英文及資訊科技	24 小時	13
香港學生輔助會小學	李敏儀老師	“Improving the viewing rate of videos of the school YouTube channel” – An English & Leadership programme for Primary 2 students	英文	10 小時	10
保良局莊啟程小學	梅佩佩老師	Enhancing Mathematic Ability through Racing Car Activities	數學	10 小時	17
聖公會天水圍靈愛小學	盧玉淇老師	For underrepresented talent students in English Drama because of language variables	英文	12 小時	8
大埔舊墟公立學校	馬綽婷老師	運用學生 STEM 潛能，帶動學習英文的 動機	英文及科學	15 小時	24
香港教育大學賽馬會小學	陳韻橋老師	“Becoming a YouTuber”	英文及資訊科技	10小時	20
東灣莫羅瑞華學校	余潤霞老師	“Expression” – A visual art enrichment programme	視藝	10 小時	6
滙基書院	徐銘恩老師	For underrepresented talent students in Mathematics because of the language variables	數學	10 小時	13
青年會書院	張芷恩老師	Secondary Science Enrichment Program— “Be a Scientist!”	科學	20 小時	11

Dr. Lui's Feedback

Dr. Lui's Feedback





School-based Enrichment Programme Outcome

Overall Result

Mean of Pre-test (out of 100)	Mean of Post-test (out of 100)	Pre-Post Difference	Effect size*	<i>p</i> -value#
47.56	68.45	↑20.90	8.33	<i>p</i> <.001

*Effect size is a quantitative measure of the magnitude of the experimental effect. The larger the effect size the stronger the relationship between two variables. Cohen's *d*: 0.2=small, 0.5 = medium, 0.8 = strong effect

#A *p*-value is a statistical measurement used to validate a hypothesis against observed data. A *p*-value of 0.05 or lower is considered the difference of students' performance changes statistically significant.

Overall Result (per school)



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	Mean of Pre-test (out of 100)	Mean of Post-test (out of 100)	Pre-Post Difference	Effect size*	p-value#
01	15.90	43.70	↑27.8 (174.84%)	16.92	$p < .001$
02	74.40	88.00	↑13.6 (18.28%)	6.07	$p = .007$
03	68.33	76.67	↑8.33 (12.21%)	2.89	$p = .038$
04	14.60	33.80	↑19.2 (131.51%)	17.06	$p = .002$
05	79.86	96.53	↑16.67 (20.87%)	4.20	$p < .001$
06	64.29	92.86	↑28.57 (44.44%)	3.78	$p < .001$
07	40.44	64.22	↑23.78 (50.80%)	23.16	$p = .015$
08	-	-	-	-	
09	29.68	64.06	↑34.38 (101.16%)	7.22	$p < .001$
10	40.50	56.25	↑15.75 (38.89%)	2.30	$p = .019$

Student's Perception

增潤課程有否提高你的學科興趣，為甚麼？



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一邊學習理論知識，一邊動手做實驗

可以將畫畫及科學結合，未來想做科學家

透過話劇能提高其英文興趣

不只是沉悶地練習撰寫書信 **課堂很有趣** 印象更加深刻

每個學科都很好玩
融合了不同科目的知識

同意

我更喜歡做實驗

喜歡做話劇

學習到更多英文生字

課堂難度比一般課堂高

課堂很有趣提高了我的專注從而培育了興趣

以前完全看不懂英文數學題目，現在至少還能看得懂



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Student's Perception

如果有機會，你會想再參與這個增潤課程嗎？

>90% 同學願意再次參與



Output



教

Enhancing Equality in Learning Opportunity:
Develop effective school-based enrichment programmes for
under-achievers with high ability in low social economic status

促進平等學習機會—為才華未展的基層學生製定有效的校本增潤課程計劃

TEACHER'S RESOURCE BOOK

Sharing of Lesson Plans for the
Seed Schools' Enrichment Courses

教師資源冊

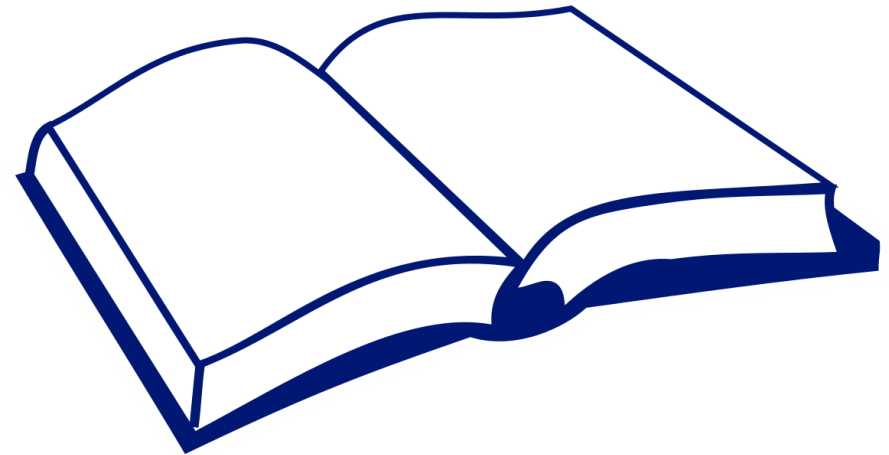
種子學校增潤課程教案分享

促進平等學習機會 -
為才華未展的學生製定有效的校本增潤課程計劃

先導計劃 成果示例

What's next?

- Suggest to provide training in development and management of the gifted programmes to teachers and opportunities to practice
- “to promote students’ high-order thinking skills, creativity and personal-social competence so that all students are provided with the opportunities to develop their potential.” (Gifted Education Section EDB, 2015)
- Attention to high ability students with underachievement, not only the achievers



What's Next?

**Enhancing Equality in Learning Opportunity –
Develop effective school-based enrichment
programmes for under-achievers with high
ability in low social economic status
2022-2023**

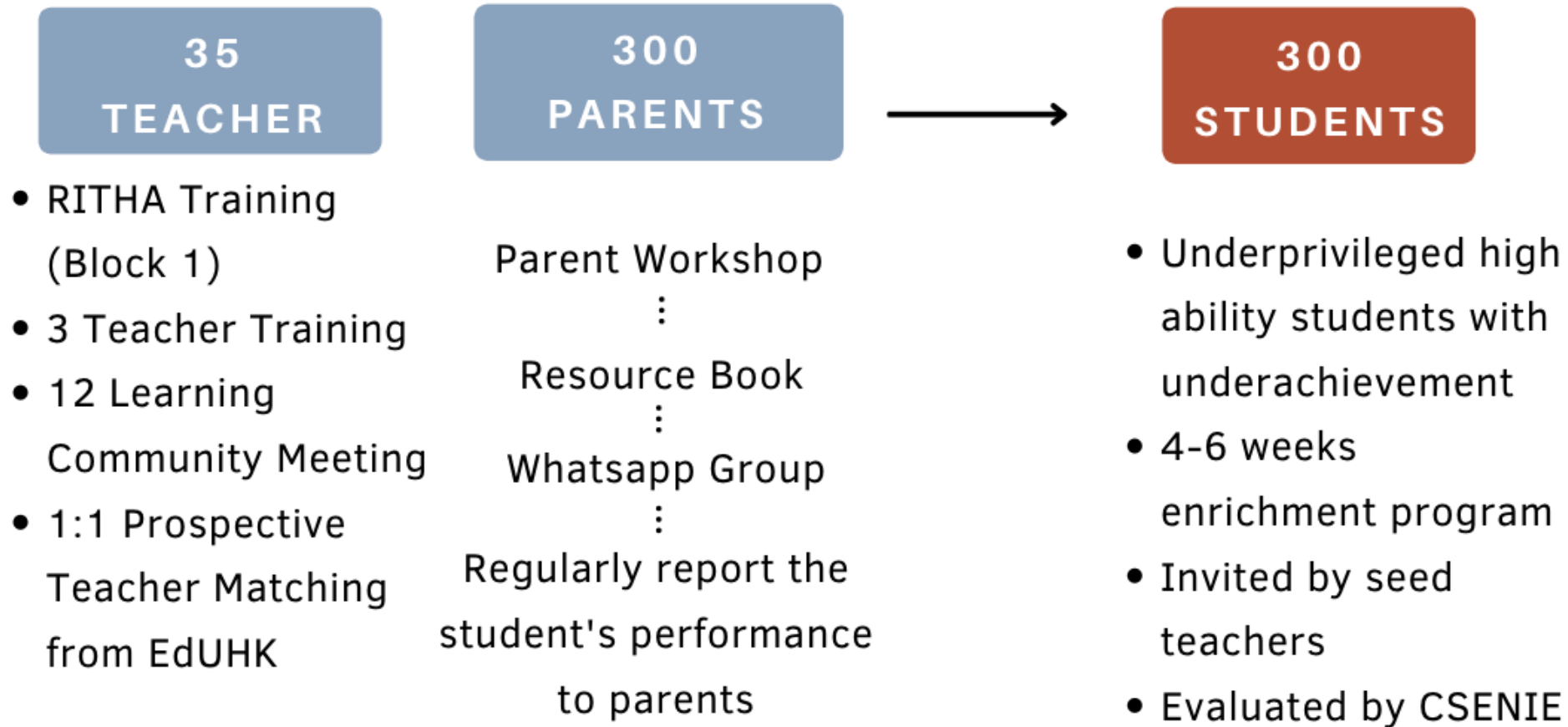
Phase II 2022-2023



- Further support by SIE Fund
- Enlarge the beneficiaries
 - Teachers: 30 → 35
 - Students: 150 → 300
 - Parents (new): 300
 - Total: 185 → 635
- Parent supports



Phase II Logic Model



Phase II Project Activities



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RITHA Specialist
Training (Block 1)

Seed teachers
learning community

School-based
enrichment
program
development

Parents workshop &
WhatsApp group

Individual consultation on
designing the enrichment program

3 Teacher
workshops



Refine the school-
based enrichment
program

After the development, seed teachers conduct the enrichment program at schools with the help of partner teachers to support **150** students.

Re-run the school-
based enrichment
program to support
150 students

Recruiting Network Schools

- Duration: 2022/09 to 2023/12
- Participants: 2 teachers (network teachers)
- Activities
 - 1) Teacher's workshops
 - 2) Parent's talk
 - 3) Project dissemination
- Prioritise to participant in the next project phase



Acknowledgement

Acknowledgement

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- 鳳溪第一小學
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- 保良局莊啟程小學
- 聖公會天水圍靈愛小學
- 大埔舊墟公立學校
- 香港教育大學賽馬會小學
- 東灣莫羅瑞華學校
- 滙基書院
- 青年會書院
- 網絡學校
- 明愛聖若瑟中學
- 棉紡會中學
- 禮賢會彭學高紀念中學
- 新會商會學校
- 東莞工商總會張煌偉小學

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- 郭鎂誼老師
- 鄭振壽老師
- 王文峰老師
- 李夢思副校長
- 梁麗珊老師
- 張雅靜老師
- 陳嘉雯老師
- 何芷君副校長
- 吳慧敏老師