RGC Ref. No.:
UGC/FDS15(17)/H18/21
(please insert ref. above)

RESEARCH GRANTS COUNCIL
COMPETITIVE RESEARCH FUNDING SCHEMES FOR
THE LOCAL SELF-FINANCING DEGREE SECTOR

FACULTY DEVELOPMENT SCHEME (FDS)

Completion Report
(for completed projects only)

Submission Deadlines:	1. *Auditor's report with unspent balance, if any: within **six** months of the approved project completion date.*
	2. *Completion report: within **12** months of the approved project completion date.*

Part A: The Project and Investigator(s)

1. **Project Title**

    Investigating the Dynamic Relations of the Six Self-Compassion Components with

    Academic Stress Across Chinese Primary, Secondary, and University Students in Hong

    Kong: A Longitudinal Study

2. **Investigator(s) and Academic Department(s) / Unit(s) Involved**

Research Team	Name / Post	Unit / Department / Institution
Principal Investigator	Prof CHAN Chi-keung / Dean and Professor	School of Arts and Humanities / Tung Wah College
Co-Investigator(s)	Dr LAW Wilbert / Assistant Professor	Department of Psychology / The Education University of Hong Kong
	Dr MICHALSKA Kalina J. / Associate Professor	Department of Psychology / University of California, Riverside
Others	N.A.	N.A.

3. **Project Duration**

	Original	Revised	Date of RGC / Institution Approval *(must be quoted)*
Project Start Date	01/01/2022	N.A.	N.A.

Project Completion Date	30/06/2024	N.A.	N.A.
Duration *(in month)*	30 months	N.A.	N.A.
Deadline for Submission of Completion Report	30/06/2025	N.A.	N.A.

4.4 Please attach photo(s) of acknowledgement of RGC-funded facilities / equipment.

N.A.

Part B: The Final Report

5. Project Objectives

5.1 Objectives as per original application

1. To examine the longitudinal dynamic relations of changes in positive self-compassion components and changes in negative self-compassion components with changes in academic stress over an academic year. This examination will discern whether positive and negative self-compassion components serve as protective or risk indicators for academic stress.

2. To investigate the mechanisms of how each of six self-compassion components mediates the relationship between performance-goal orientation and academic stress. This investigation will provide a deeper understanding on the mediating role of each of the six self-compassion components in buffering or intensifying academic stress over time.

3. To explore the mediating roles of the six self-compassion components on the relationship between performance-goal orientation and academic stress across primary, secondary, and tertiary Chinese students with a developmental perspective. This exploration will provide important baseline information for developing developmentally-appropriate and culturally-sensitive SC-based intervention to alleviate academic stress of students.

5.2 Revised objectives

Date of approval from the RGC: N.A.

Reasons for the change: N.A.

1.

2.

3. ..

5.3   Realisation of the objectives
(Maximum 1 page; please state how and to what extent the project objectives have been achieved; give reasons for under-achievements and outline attempts to overcome problems, if any)

All three objectives were 100% achieved through 1) conducting a small-scale pilot study to ensure the linguistic, conceptual and construct equivalence as well as to finalise the instruments for the main study, 2) conducting a main study with four times points to gather longitudinal data, and 3) conducting data analyses aligned with the three objectives.

Pilot Study:
During this reporting period (1 January 2022 to 30 September 2022), a pilot study was conducted to try out the survey questionnaire and to examine the psychometric properties of the scales. The pilot data collected non-duplicated data from 306 respondents (83 students from 3 elementary schools, 123 students from 3 secondary schools, and 110 postsecondary students. After some slight modifications of the survey questionnaire, the research team began the recruitment for the main study and began the first wave of data collection in late September 2022. A conference poster titled "Investigating the Relations of the Six Self-Compassion Components with Academic Stress Across Chinese Primary, Secondary, and University Students in Hong Kong" was present to the 8th International Positive Psychology Association (IPPA) World Congress at Vancouver on 20-23 July 2023 (Appendix 1).

Data collection for the main study:
In academic year 2022-23, the research team successfully collected valid data from 194 primary students (4th graders) across five schools, 383 secondary students (10h graders) across five schools, and 143 tertiary students. Given that the research team proposed to recruit about 300 subjects per educational level after considering the power of data analysis, attrition rates, and model fit, the research team further collected data from 87 primary students (4th graders) across 2 additional primary schools and 179 tertiary students in academic year 2023-24. In total, the research team collected valid data from 281 primary students, 383 secondary students (52.1% males; 47.9% females), 383 secondary students (44.9% males; 55.1% females), and 322 tertiary students (27.1% males; 72.9% females).

Data Analysis:

First, five sets of preliminary analyses were conducted (using Mplus) to identify the unconditional growth/change model that best captures the shape of the growth/change trend (e.g., linear or quadratic) as well as the variability of the intercept and growth parameter estimates for the performance goals, SC components and academic stress variables. Then all these intercept and growth parameter estimates

To address Objective 1, the change estimates of the three positive self-compassion components and the change estimates of the three negative self-compassion components were used to predict the change estimates of the academic stress.

To address <u>Objective 2</u>: the intercept estimates of the two performance goal variables (performance-achievement and performance-avoidance) were used to predict change estimates of the academic stress. Then, the change scores of the six components were added to the secondary structural equation model (SEM) model to investigate the mediating roles of each of the six self-compassion components on the relationship between performance goal orientation and changes in academic stress.

To address <u>Objective 3</u>: The same data analyses above (for Objective 2) were separately conducted for primary, secondary, and tertiary samples so as to explore the mediating roles of each of the six self-compassion components on the relationship between performance goal orientation and changes in academic stress from a developmental perspective.

5.4   Summary of objectives addressed to date

Objectives *(as per 5.1/5.2 above)*	Addressed *(please tick)*	Percentage Achieved *(please estimate)*
1. To examine the longitudinal dynamic relations of changes in positive self-compassion components and changes in negative self-compassion components with changes in academic stress over an academic year. This examination will discern whether positive and negative self-compassion components serve as protective or risk indicators for academic stress.	✓	100%
2. To investigate the mechanisms of how each of six self-compassion components mediates the relationship between performance-goal orientation and academic stress. This investigation will provide a deeper understanding on the mediating role of each of the six self-compassion components in buffering or intensifying academic stress over time.	✓	100%
3. To explore the mediating roles of the six self-compassion components on the	✓	100%

relationship between performance-goal orientation and academic stress across primary, secondary, and tertiary Chinese students with a developmental perspective. This exploration will provide important baseline information for developing developmentally-appropriate and culturally-sensitive SC-based intervention to alleviate academic stress of students.		

6. Research Outcome

6.1 Major findings and research outcomes
(Maximum 1 page; please make reference to Part C where necessary)

Pilot Study (Static Model):
Overall, when the entire sample was considered, self judgement and isolation were both partial mediators for the observed association between performance-avoidance and academic stress and performance-approach goals and academic stress. While over-identification was also a partial mediator for performance-avoidance goals to academic stress but not for performance-approach goals to academic stress. When we separate the dataset according to level of education, self-judgement was a partial mediator between performance-avoidance and academic stress as well as performance-approach goals and academic stress for primary (4th graders) school and secondary (10th graders) school students. However, the results did not support any of the self-compassion subfactors to be the mediator for tertiary students.

Main Study (Dynamic Model):
Objective 1: The results showed that for the overall sample, only the change in self-judgment ($\beta = .277$, se $= .024$, $p < .001$) and change in isolation ($\beta = .129$, se $= .027$, $p = .002$) significantly and positively predicted the change in academic stress. In other words, over an academic year, both increase in self-judgement and increase in isolation were positively related to the increase in academic stress.

Objective 2: The findings indicated that for the overall sample, the intercept of performance-avoidance goal significantly predicted the change in academic stress ($\beta = .185$, se $= .009$, $p < .001$) whereas the intercept of performance-approach goal did not significantly predict the change in academic stress ($\beta = .075$, se $= .021$, $p = .031$). the change in self-judgement and change in isolation partially mediated the relationship between the intercept of performance-avoidance goal and change in academic stress ($\beta = .144$, se $= .009$, $p < .001$).

Objective 3:
For primary students, the results found that change in self-judgment ($\beta = .353$, se $= .036$, $p < .001$) and change in isolation ($\beta = .220$, se $= .043$, $p = .002$) significantly and positively predicted the change in academic stress. On the contrary, change in self-kindness ($\beta = -.162$, se $= .051$, $p = .020$) significantly and negatively predicted the change in academic stress. Only the intercept of performance-avoidance goal significantly predicted the increase in academic stress ($\beta = .191$, se $= .018$, $p = .011$). Changes in self-kindness,

self-judgement, and isolation partially mediated the relationship between performance-avoidance goal and increase in academic stress.

For <u>secondary students</u>, the results found that change in self-judgment ($\beta = .301$, se $= .036$, p $< .001$) and change in over-identification ($\beta = .165$, se $= .054$, p $= .014$) significantly and positively predicted the change in academic stress. Again, only performance-avoidance goal significantly predicted the increase in academic stress ($\beta = .213$, se $= .030$, p $< .001$). Changes in self-judgement, and over-identification partially mediated the relationship between performance-avoidance goal and increase in academic stress.

For <u>tertiary students</u>, the findings showed that over an academic year, only change in self-judgment ($\beta = .307$, se $= .035$, p $< .001$) significantly and positively predicted the change in academic stress. On the contrary, common humanity significantly and negatively predicted the change in academic stress ($\beta = -.224$, se $= .017$, p $= .015$). Both performance goal variables did not significantly predict the change in academic stress.

6.2 Potential for further development of the research and the proposed course of action *(Maximum half a page)*

The research team has already submitted two manuscripts (see Appendix 2 and Appendix 3) and delivered one poster presentation (see Appendix 1) using the data of the trial and pilot study. The research team is planning to submit at least two more manuscripts, submit one book chapter and deliver one academic presentation using the data of the main study. Apart from using the latent growth curve and secondary level SEM analyses, the research team will further conduct the cross-lagged analyses and mediation-moderation analyses to identify and validate the mediating roles of the six self-compassion components on the relationship between performance goal orientation and academic stress across educational levels.

Based on the research findings, the research team will continue to expand the existing research collaboration to develop one locally funded longitudinal interventional research project and one oversea funded cross-cultural study to examine the effectiveness, sustainability, and external validity of using the SC six-component approach in alleviate students' academic stress and enhance students' well-being across different educational levels. The research team expects to submit one local research grant application (e.g. FDS or IDSC) within 3 years and one oversea grant application (e.g. Spencer Foundation or Templeton Foundation) in 5 years.

Furthermore, the research team is going to establish collaboration with at least one to two local non-profit organizations to design and develop handbooks, resources, and training materials (based on the findings of the study) for parents and teachers to learn and apply SC-focused parenting and teaching practices to support their children and students to cope with academic stress within 3 years. This collaboration can further develop into evidence-based interventions and practices with rigorous evaluation studies in 4-10 years.

7. **Layman's Summary**
   (Describe <u>in layman's language</u> the nature, significance and value of the research project, in no more than 200 words)

This study aims to investigates the mediating roles of the six components of self-compassion on the relationship between performance goal and academic stress among Chinese students at different educational levels (primary, secondary, and tertiary). The results consistently found performance-avoidance goal (afraid of failure and losing) was a key predictor for the increasing level and upward change in academic stress, except for tertiary students. Furthermore, over an

academic year, the increase in self-judgment intensified the increase in academic stress for students at all educational levels. For secondary students, the increase in rumination of negative emotions also intensified the increase in academic stress but the increase in self-kindness buffered the increase in academic stress. For tertiary students, performance goal orientation was not a significant predictor for explaining the increase in academic stress, but cultivating and understanding common humanity can lower postsecondary students' academic stress. This study also has practical significance for policymakers, practitioners and local society by identifying possible psychological mechanism to counter the negative effects of academic stress on the well-being of Chinese students in Hong Kong. The findings have provided some empirical evidence for designing and developing developmentally-appropriate SC-focused intervention programmes to reduce academic stress of local Chinese students.

Part C: Research Output

8. **Peer-Reviewed Journal Publication(s) Arising <u>Directly</u> From This Research Project**
   (Please attach a copy of the publication and/or the letter of acceptance if not yet submitted in the previous progress report(s). All listed publications must acknowledge RGC's funding support by quoting the specific grant reference.)

The Latest Status of Publications				Author(s) *(denote the corresponding author with an asterisk*)*	Title and Journal / Book *(with the volume, pages and other necessary publishing details specified)*	Submitted to RGC *(indicate the year ending of the relevant progress report)*	Attached to this Report *(Yes or No)*	Acknowledged the Support of RGC *(Yes or No)*	Accessible from the Institutional Repository *(Yes or No)*
Year of Publication	Year of Acceptance *(For paper accepted but not yet published)*	Under Review	Under Preparation *(optional)*						
N.A.	N.A.	Yes	No	**Chi-Keung Chan,** Wai-Kin Lui, Samuel Cheuk-Yin Law, Yee-Wan Kwan, Chui-Shan Yung, Wilbert Law, & Kalina J. Michalska	The Mediation Roles of Self-Compassion and Self-Coldness on the Association between Performance Goals and Academic Stress among Chinese College Students / Frontiers in Psychology (Manuscript ID 1569359)	No	Yes [Appendix 2]	Yes	No
N.A.	N.A.	Yes	No	**Chi-Keung Chan,** Wai-Kin Lui, Wilbert Law, Kalina J. Michalska, Yee-Wan Kwan, Chui-Shan Yung, & Floria Chio	Investigating the Mediating Roles of Self-Compassion on the Relationship between Performance-Oriented Goals and Academic Stress Across Primary, Secondary, and College Students in Hong Kong / Journal of Youth and Adolescence (Manuscript ID:	No	Yes [Appendix 3]	Yes	No

				JOYO-D-25-01385)		

9. Recognized International Conference(s) In Which Paper(s) Related To This Research Project Was / Were Delivered
(Please attach a copy of each conference abstract)

Month / Year / Place	Title	Conference Name	Submitted to RGC *(indicate the year ending of the relevant progress report)*	Attached to this Report *(Yes or No)*	Acknowledged the Support of RGC *(Yes or No)*	Accessible from the Institutional Repository *(Yes or No)*
20-23 July / 2025	Investigating the Relations of the Six Self-Compassion Components with Academic Stress Across Chinese Primary, Secondary, and University Students in Hong Kon	International Positive Psychology Association 8th IPPA World Congress 2023	No	Yes [Appendix 6]	Yes	No

10. Whether Research Experience And New Knowledge Has Been Transferred / Has Contributed To Teaching And Learning
(Please elaborate)

1) The PI was invited to deliver a parent workshop titled "Learning Self-Compassion and Cultivating Growth Mindset" at St. Joseph's Primary School (Wan Chai) on 26 November 2022. The PI shared some pilot study's results to the workshop's participants.

2) The PI was invited to deliver a teacher workshop titled "Learning and Practicing Positive Education" at the Christian Alliance College (Tuen Mun) on 29 September 2023. The PI

shared some pilot study's results to the workshop's participants.

3) The PI was invited to deliver a talk titled "自我關懷與本港大中小學生

學習壓力的縱向研究" at the 醫教社精神健康課程啟動禮暨跨專業到校支援分享研討會

on 15 March 2025 (Appendix 4). The PI shared some main study's results to the participants.

4) Part of the conceptual framework of the project inspired another project titled

"Transformative and Resilient Youth (TRY) Gym: A School-based Co-creative Mental

Health Training Programme" to support student-centered mental health promotion.

11. Student(s) Trained
(Please attach a copy of the title page of the thesis) – Please refer to Appendix 5

Name	Degree Registered for	Date of Registration	Date of Thesis Submission / Graduation
	Bachelor of Social Sciences (Honours) in Applied Psychology	September 2024	April 2025

12. Other Impact
(e.g. award of patents or prizes, collaboration with other research institutions, technology transfer, teaching enhancement, etc.)

1) The findings of the main study had been shared with the principal of the participating

schools. In the future, the overall results and individual school's results will be presented

to the corresponding school's teachers, parents and students.

2) The findings of this study can provide solid empirical evidence for designing and

developing developmentally-appropriate and culturally sensitive SC-focused (school-based,

family-based, and individual-based) intervention programmes to reduce academic stress and

support the well-being of local Chinese students.

13. Statistics on Research Outputs

	Peer-reviewed Journal Publications	Conference Papers	Scholarly Books, Monographs and Chapters	Patents Awarded	Other Research Outputs (please specify)	
No. of outputs	2	0	0	0	Type	No.

arising directly from this research project					Conference poster presentation	1

14. Public Access Of Completion Report
(Please specify the information, if any, that cannot be provided for public access and give the reasons.)

Information that Cannot Be Provided for Public Access	**Reasons**
N.A.	N.A.