| RGC Ref. No.: |
| UGC/FDS15/H11/17 |
| (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

How do students perform and perceive translation tasks in corpus-assisted translation settings? –A quantitative and qualitative study on the potential and problems of using corpus in specialized translation teaching in Hong Kong

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

Research Team	Name / Post	Unit / Department / Institution
Principal Investigator	LIU Jianwen / Assistant Professor	Department of English Language and Literature/Hong Kong Shue Yan University
Co-Investigator	LIU Kanglong / Assistant Professor	Department of Chinese and Bilingual Studies/Hong Kong Polytechnic University
Co-Investigator	LI Dechao / Associate Professor	Department of Chinese and Bilingual Studies/Hong Kong Polytechnic University

3.   Project Duration

	Original	Revised	Date of RGC / Institution Approval *(must be quoted)*
Project Start Date	01/01/2018	N/A	N/A
Project Completion Date	30/06/2020	30/06/2021[#] *30/09/2021**	[#]11/05/2020 *04/06/2021
Duration *(in month)*	30 months	42 months[#] *45 months**	
Deadline for Submission	30/06/2021	30/06/2022[#]	

of Completion Report			

Part B: The Final Report

5.   Project Objectives

5.1   Objectives as per original application

1. to create a Web-based GUI interactive teaching platform
2. to create one multi-genre English monolingual corpus and one Chinese monolingual corpus covering the same genres within the teaching platform
3. to create one parallel bilingual corpus within the teaching platform
4. to allow students to upload their translated works to the platform for marking/grading by translation trainers/teachers and cross-referencing among students
5. to study and evaluate translation students' translation competence before/after using the corpus platform
6. to investigate how the integration of both monolingual and parallel corpora affects students' translation output/competence through translation experiments using a mixed research methods design
7. to examine how students perceive the use of a corpus platform in translation teaching/training by conducting surveys and semi-structured interviews
8. to explore the channels of knowledge transfer on the basis of the research data and outputs.

5.2   Revised objectives

Date of approval from the RGC: N/A

Reasons for the change: N/A

5.3   Realization 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)
1.   to create a Web-based GUI interactive teaching platform
A Web-based GUI interactive teaching platform, TR Corpus, has been created. The web-based platform is accessible through the web address (http://www.tr-corpus.com) with an account verification system.
2.   to create one multi-genre English monolingual corpus and one Chinese monolingual corpus covering the same genres within the teaching platform

The multi-genre corpuses are embedded in the teaching platform (http://www.tr-corpus.com), consisting of seven text types, including news, financial reports, features, company profiles, legal documents, chairman's statements (Hong Kong), and chairman's statements (mainland China).

3.   to create one parallel bilingual corpus within the teaching platform

The parallel bilingual corpus has been embedded in the teaching platform (http://www.tr-corpus.com).

4.   to allow students to upload their translated works to the platform for marking/grading by translation trainers/teachers and cross-referencing among students

Upload of students' translated works can be achieved through the function of "Translator's Workbench" on TR Corpus" (https://www.tr-corpus.com/Upload.jsp).

5.   to study and evaluate translation students' translation competence before/after using the corpus platform

An experimental study has been conducted. Their translation works before/after using the corpus platform were collected and analyzed. Surveys regarding students' translation experiences before/after using the platform and their self-reported translation competence have also been conducted.

6.   to investigate how the integration of both monolingual and parallel corpora affects students' translation output/competence through translation experiments using a mixed research methods design

An experimental study with a mixed research methods design has been conducted. During the study, the translation performances of the experimental group and the control group were compared. Both quantitative data (students' translation results and survey results) and qualitative data (interviews with the focal participants) have been collected and analyzed.

7.   to examine how students perceive the use of a corpus platform in translation teaching/training by conducting surveys and semi-structured interviews

Surveys have been conducted with the participants, and descriptive statistical analysis of the survey results was conducted to understand students' perceptions of using the corpus in translation. Interviews with some focal participants have also been conducted and analyzed qualitatively to dig deeper into how students perceive the use of the corpus in translation. Results of the study have been reported in the article "Empowering novice translation students with a web-based parallel corpus: Evidence from students' performances and perceptions" under review.

8.   to explore the channels of knowledge transfer on the basis of the research data and outputs.

The current research project has contributed to knowledge transfer by collaborating between institutions, attending international conferences, and publications in high-tier journals or publishers. The current research project has greatly enhanced the collaboration between Hong Kong Shue Yan University and Hong Kong Polytechnic University in both teaching and research. In translation courses of both universities, students had benefited from the corpus platform. The Principal Investigator and the Co-Investigators also attended five international academic conferences to promote exchanges of knowledge. Two articles have been published, and two more are under review. One book has been published by Springer to increase the impact of this project.

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 create a Web-based GUI interactive teaching platform	✓	100%
2. to create one multi-genre English monolingual corpus and one Chinese monolingual corpus covering the same genres within the teaching platform	✓	100%
3. to create one parallel bilingual corpus within the teaching platform	✓	100%
4. to allow students to upload their translated works to the platform for marking/grading by translation trainers/teachers and cross-referencing among students	✓	100%
5. to study and evaluate translation students' translation competence before/after using the corpus platform	✓	100%
6. to investigate how the integration of both monolingual and parallel corpora affects students' translation output/competence through translation experiments using a mixed research methods design	✓	100%
7. to examine how students perceive the use of a corpus platform in translation teaching/training by conducting surveys and semi-structured interviews	✓	100%
8. to explore the channels of knowledge transfer on the basis of the research data and outputs	✓	100%

6.   Research Outcome

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

1. Construction of a Web-based GUI corpus platform
In this research project, an interactive translation teaching platform, Translator Training Corpus (TR Corpus), was constructed. TR Corpus has a user-friendly and straightforward interface. The use of big data technologies ensured the corpus to be large-scale and up-to-date. In total, more than 63.42 million words of English texts and 136.49 million words of Chinese texts were collected, including news, financial reports, features, company profiles, legal documents, chairman's statements (Hong Kong), and chairman's statements (mainland China). All the English and Chinese texts are segmented, annotated the part of speech, and aligned at the sentence level to allow users to search for parallel texts more efficiently. The different functions of the platform ensure that the corpus could meet the needs of translation training.

2. Students' translation performances
By analyzing the translation performances of the experimental group and the control group, the current research project verified the hypothesis that in comparison with other reference tools such as online dictionaries, the use of the corpus platform would contribute to better translation quality when student translators are translating from their mother tongue (L1) into a foreign language (L2). However, the hypothesis that in comparison with other reference tools such as online dictionaries, the use of the corpus platform will contribute to better translation quality when student translators are translating from a foreign language (L2) into their mother tongue (L1) was rejected.

3. Students' perceptions
By analyzing the questionnaire and interview surveys, it is found that overall, students held positive attitudes toward using the corpus platform in translation. Specifically, students held positive perceptions of the advantages of using the corpus in translation, such as understanding the meaning of the English and Chinese words, learning the usages of the English and Chinese vocabularies and phrases, learning English grammar, improving English and Chinese reading and writing skills, enhancing confidence in translation, and feeling a sense of professionalism. Students also reported it was moderately difficult to use the corpus platform at the begining, but they quickly understood how to use the different functions of the platform after training. Besides, students regarded the parallel corpus as effective in solving translation problems at the word level, the phrasal level, the sentence level, and even the textual level. The interview results triangulate the questionnaire results and unveil how students use the corpus platform in translation or language learning. In addition, students also reported improved information searching skills and analytical skills by using the corpus platform, which contributed to making wiser translation decisions.

In summary, the current research project constructed a Web-based GUI interactive teaching platform embedded with a large-scale multi-genre corpus. The researchers explored the various affordances of using the corpus platform in translation teaching, and found that students' translation performances and perceptions in using the corpus platform in translation were positive.

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

1. Compilation of the corpus platform

In the future, more different text types and more high-quality parallel texts of the existing text types could be added to the corpus platform. Sentence segmentation and alignment should also be refined in constructing the corpus to reduce students' time and efforts on analyzing the bilingual texts.

2. Future translation pedagogy

It is revealed in the current research project that corpus-assisted translation teaching is beneficial for students. It is therefore suggested that in the future, the corpus should be embedded in the normal translation course. Besides, the findings of this study also indicate that teachers should prepare students with adequate translation knowledge, cultivate their language abilities, and enhance their analytical skills.

3. Future research agenda

With the publication of this corpus platform, students with different language proficiency level or translation competence could be included in the study to explore the factors that influence the potentials and problems of using the corpus platform in specialized translation teaching. Besides, longitudinal studies which track students' adoption of the corpus platform and their changes in translation competencies could be conducted in the future.

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)

The significance of the current research project is multi-faceted. Firstly, the construction of a web-based interactive teaching platform embedded with a large-scale multi-genre corpus would fill the gap between research and pedagogy as well as the translation academia and the industry. Specifically, the corpus platform would benefit translation trainers in developing educational materials, designing classroom activities, and conducting translation research. The platform would also serve the translation trainees as valuable learning aids and reference tools. Translators could find solutions to translation problems from this corpus platform. ESL learners could also utilize this platform to overcome the limitations of constraint language. Secondly, adopting a mixed research methods design, this study conducted an empirical study to investigate students' translation performances and perceptions of using the corpus platform in translation and translation learning. The empirical study filled the research gap that most of the existing empirical research on corpus-assisted translation teaching is based on European language pairs. The potentials and problems of using the corpus platform in teaching specialized translation found in the study could benefit future corpus-assisted translation pedagogy.

Part C: Research Output

8. **Peer-Reviewed Journal Publication(s) Arising Directly 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	N/A	SU Yanfang, LIU Jianwen, LIU Kanglong*	Empowering Novice Translation Students with a Web-based Parallel Corpus: Evidence from Student Performance and Perception in *The Interpreter and Translator Trainer*	No	Yes [Attachment 1]	Yes	No
N/A	N/A	Yes	N/A	LIU Kanglong LI Dechao, LIU Jianwen	Design and Application of a Large-scale English-Chinese Parallel Corpus For Translator Training: Translator Training (TR) Corpus as an Example in *Foreign Language Teaching and Research*	Yes (2021)	Yes [Attachment 2]	Yes	No
2021	N/A	N/A	N/A	LIU Jianwen	Book Review of "Corpus-assisted Translation Teaching:	No	Yes [Attachment 3]	Yes	Yes

					Issues and Challenges ". Kanglong Liu. Singapore: Springer Nature Singapore Private Limited, 2020. 168 pp., EUR85.59 (e-book) in *International al Journal of Applied Linguistics* https://doi.org/10.1111/ijal.12354				
2020	N/A	N/A	N/A	LIU Kanglong	Corpus-Assisted Translation Teaching: Issues and Challenges	Yes (2021)	Yes [Attachment 4]	Yes	Yes
2018	N/A	N/A	N/A	LIU Kanglong LIU Jianwen	Corpus Use in Translation Teaching: A Case Study of "hong huang zhi li" Based on COCA and Ancient Chinese Corpus" in *Journal of University of South China (Social Science Edition).*	Yes (2019)	Yes [Attachment 5]	Yes	Yes

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)*
October 25, 2019, Hong Kong	Discovering the Advantages of Using Corpus in Translation Teaching: An Evidence-based Approach	HKSYU Evidence-Based Practice International Conference 2019	Yes (2021)	Yes [Attachment 6]	Yes	Yes
August 24-25, 2019, Shenzhen, China	Use of Parallel Corpus in Translation Teaching: What do Students Say?	The 2019 International Conference on Translation Education: Computer-Aided Translator Training (CATT): Of Machines and Man	Yes (2021)	Yes [Attachment 7]	Yes	Yes
May 10-12, 2019, Fuzhou, China	Designing and Applying a Large-scale English-Chinese Parallel Corpus For Translator Training in the Age of Big Data: With TR Corpus as an Example	The Conference of Corpus use in Translation and Teaching in the Big Data Era (大數據時代語料庫翻譯與教學研討會)	Yes (2019)	Yes [Attachment 8]	Yes	Yes
June 11-12, 2021, Hong Kong	Data-Driven Learning and Corpus-Assisted Translation Pedagogy: An Exploratory Study	Translation Studies in East Asia: Tradition, Transition and Transcendence	No	Yes [Attachment 9]	Yes	Yes
5-6 January 2022, Hong Kong	Routinizing Corpus Use in Translation Learning: Translation Trainees' Perspectives	Building a Techno-Humanities Culture in Hong Kong	No	Yes [Attachment 10]	Yes	Yes

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

(Please elaborate)

The current research project has contributed to the knowledge transfer and teaching and learning significantly.

1. Contribution to teaching

The current research project has promoted corpus-assisted translation pedagogy. In both Hong Kong Shue Yan University (course: ENG440 Translation and Globalization) and The Hong Kong Polytechnic University (Postgraduate programmes), teachers started to use TR Corpus (the corpus platform constructed in the current project) in teaching.

2. Contribution to learning

The corpus platform has been made public to over two hundred students. The corpus platform could facilitate the registered students' translation learning and language learning.

3. Promoting knowledge transfer

The current research project has sought channels to benefit the non-academic users. Students

from Hong Kong Shue Yan University and Hong Kong Polytechnic University could register for the corpus account.

11. Student(s) Trained
(Please attach a copy of the title page of the thesis)

Name	Degree Registered for	Date of Registration	Date of Thesis Submission / Graduation
N/A	N/A	N/A	N/A

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

The current research project has contributed to the collaboration between institutions, the development of translation education research, and the enhancement of teaching and learning, with joint efforts of the Principal Investigator and the Co-Investigators. The evidence is shown below:

(1) Collaboration between Institutions

The current research project has greatly enhanced the collaboration between Hong Kong Shue Yan University and Hong Kong Polytechnic University in both teaching and research. The two Co-Investigators of the current research project are Dr. Liu Kanglong and Dr. Li Dechao, working at the Department of Chinese and Bilingual Studies, The Hong Kong Polytechnic University. The two translation researchers have provided invaluable feedback and participated actively in designing and compiling the corpus and the teaching platform. Regarding translation teaching and learning, students in both Hong Kong Shue Yan University and The Hong Kong Polytechnic University have benefited from the corpus platform. The two institutions also collaborated in research. For example, the research articles (published or under review) were jointly written by the Principal Investigator and the Co-Investigators. The present research project also promoted the exchanges of knowledge with institutions at home and abroad. The Principal Investigator and Co-Investigators have attended various international conferences.

(2) Impact in Academia

The Principal Investigator and the Co-Investigators have attended different international academic conferences to increase this project's impact. In August 2019, in The 2019 International Conference on Translation Education: Computer-Aided Translator Training (CATT): Of Machines and Man held by The Chinese University of Hong Kong in Shenzhen, Dr. Liu Kanglong and Dr. Liu Jianwen delivered a presentation titled "Use of Parallel Corpus in Translation Teaching: What do Students Say?". In October 2019, at HKSYU Evidence-Based Practice International Conference 2019 held by Hong Kong Shue Yan University, Dr. Liu Jianwen and Dr. Liu Kanglong gave a speech titled "Discovering the Advantage of Using Corpus in Translation Teaching: An Evidence-based Approach". The book *Corpus-Assisted Translation Teaching: Issues and Challenges*, written by Dr. Liu Kanglong and published by Springer, also has received a warm welcome in the academia, as evidenced by the recommendation by some academic WeChat official accounts (e.g. 語言學 通訊). The academic conferences attended by the PI and the Co-I and the various

publications have effectively facilitated the exchanges with other researchers in this field and increased TRCorpus's impact and the current research in the academia.

(3) Impact on Teaching

The impacts of the current research project on translation teaching are three-folded.

a. Changing teachers' roles in translation teaching
The adoption of the corpus platform in translation teaching promoted the shift of teachers' role. In the traditional model, the teachers are responsible for imparting prescriptive translation norms or regulations and thus play a predominant role in translation teaching, while students perform as passive knowledge receivers (Rodríguez-Inés, 2009). With the assistance of the corpus platform in translation teaching, students are put in the central position. The role of teachers has shifted from "knowledge distributor" to "learning facilitator" in translation teaching.

b. Offering authentic translation materials in teaching
The corpus compiled in the current research project could offer large-scale authentic language resources for translation teachers. Therefore, in preparing teaching materials, teachers can decide on what to teach based on the occurrences of language patterns in corpora, rather than on their intuition (Bernardini, 2016). The authentic learning materials could also facilitate teachers in teaching students the complexity of authentic language patterns or translation problems (Frérot, 2016).

c. Meeting the needs of translation markets
Teachers could also teach students how to use the corpus platform to search for information that might require some expert knowledge more effectively, which would be helpful to meet the needs of present translation markets featured by large volume of translation tasks, diversified translation projects, and increasing demand for translation technologies (Rothwell & Svoboda, 2019).

(4) Impact on Learning

a. Facilitating translation learning
The use of the corpus platform in translation learning has facilitated students' translation learning. It is reported in students' questionnaires and interviews that using the corpus platform helped students extracting translation equivalences, terminologies, and syntactic patterns. Students could acquire different translation strategies by observing how professional translations presented in the corpus and deal with different translation problems. Students also reported increased genre awareness in translation by using the corpus to search for parallel texts. Besides, by using the corpus platform in translation learning, students also practiced their information searching skills and analytical skills, which are crucial for making wise translation decisions (Bernardini, 2016).

b. Facilitating other aspects of language learning
The corpus platform constructed in the current research project and the training students received are useful to facilitate different aspects of language learning, as evidenced in the questionnaire results and interviews. For example, TR Corpus could help students understand the authentic language uses in different contexts, which was reported to improve their language decoding skills. Students also reported using the corpus platform in writing. By searching for the meaning and usages of words or phrases in contexts, students could produce more accurate output; by searching for source texts of a certain topic, students could get some inspiration in their writing.

c. Getting the corpus habit

The increasing number of corpus users and searches is also best evidence of the impact of the current research project on translation learning. Now **208** students and teachers have registered the corpus account and used the platform in their translation teaching or learning. From September 2020 to May 2022 (i.e. the time when the current report is written), the accumulated searches have reached **76,956 times**. The data indicated that students keep using the corpus even after they have finished their translation courses or their programs. The students also mentioned that the more they used the corpus, the more useful they found the corpus. All these numerical data and the favorable feedback are strong evidence to indicate the impact of the corpus on teaching and learning.

References

1. Bernardini, S. (2016). Discovery Learning in the Language-For-Translation Classroom: Corpora as Learning Aids. *Cadernos de Tradução*, *36*, 14-35. doi: 10.5007/2175-7968.2016v36nesp1p14
2. Frérot, C. (2016). Corpora and corpus technology for translation purposes in professional and academic environments: Major achievements and new perspectives. *Cadernos de Tradução*, *36*, 36-61.
3. Rodríguez-Inés, P. (2009). Evaluating the process and not just the product when using corpora in translator education. In A. Beepy & P. Rodríguez-Inés (Eds.), *Corpus Use and Translating: Corpus Use for Learning to Translate and Le arning Corpus Use to Translate* (pp. 129-149). Amsterdam: John Benjamins Publishing.
4. Rothwell, A., & Svoboda T. (2019). Tracking Translator Training in Tools and Technologies: Findings of the EMT survey 2017. *The Journal of Specialized Translation*, *32*, 26-60. https://cronfa.swan.ac.uk/Record/cronfa48012

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 arising directly from this research project	4 (2 of them are under review)	5	1 Book	N/A	Type	No.
					A web-based GUI interactive corpus platform for translation teaching and learning purposes	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