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🖧 Research and Development Highlights

賽馬會「觸境生情」虛擬實境語文教學計劃

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前人說觸景可以生情，今天科技使我們觸「境」也可生情，這「境」指的就是虛擬實境（virtual reality, VR）。賽馬會「觸境生情」虛擬實境語文教學計劃（下稱計劃）便是自此意念而生。計劃得香港賽馬會慈善信託基金捐助2千3百萬港元，由香港中文大學學習科學與科技中心主辦，香港文學研究中心、香港教育研究所、聖公會聖馬利亞堂莫慶堯中學協辦，並獲香港中文大學圖書館支持。

計劃旨在運用虛擬實境科技加強學生中文讀寫能力，培養文學素養及人文關懷精神。傳統寫作教學多由教師提供取材角度，再由學生想像及發揮，較為單向；加上學生欠缺觀察觸覺及生活體驗，缺乏對人、物、社區的理解與關懷，因此大多作品描寫粗疏，亦未能投以真情實感。計劃開發的虛擬實境教學平台EduVenture®VR，運用虛擬實境技術為學生建構觀察平台，使學生從課室瞬間轉移到文學作品描寫的地方，令他們沉浸於具文學元素的虛擬場景，選取自己感興趣的視點，學習仔細觀察箇中人事，體會地景情意，醞釀更深刻的反思。

為期三年半的計劃預期有12所學校參與，受惠學生可達7,000人次。計劃涵蓋教學設計及實踐、校本支援和教學研究。計劃團隊會製作虛擬實境教材套，內容包括虛擬實境相片及影片教件，閱讀、寫作和說話教學建議等。此外，計劃團隊亦會向所有參與學校提供校本支援，協助學校開展虛擬實境語文教學。計劃團隊將製作九套虛擬實境教材，並與參與學校共同調適教材。共27套不同程度的教材會上載至計劃資源庫，供學界使用。全港教師均可參加計劃不同類型的培訓和講座，了解計劃的教學實踐情況、成果及研究結果等。

2019年5月4日，計劃在香港中文大學舉行了啟動禮，向學界簡介計劃理念，得到媒體廣泛報道。計劃開展至今已製作了三套教材，舉辦了四場公開課和一場分享會，並定期舉辦教師培訓，向有意實踐虛擬實境語文教學的教師介紹EduVenture®VR。計劃團隊正訪談參與師生，以分析計劃成效。初步的研究結果已在世界各地的學術論壇中發表。盼望計劃能推廣虛擬實境語文教學，促進電子學習的應用，提升中國語文教與學的效能。

01　賽馬會「觸境生情」虛擬實境語文教學計劃啟動禮
02　賽馬會「觸境生情」虛擬實境語文教學計劃教件拍攝過程
03　賽馬會「觸境生情」虛擬實境語文教學計劃學生上課情況

賽馬會「校本多元」計劃 —— 發揮校本優勢，培育多元才能

香港中文大學香港教育研究所「**優質學校改進計劃**」（**Quality School Improvement Project, QSIP**）獲香港賽馬會慈善信託基金捐助，聯同香港大學教育學院、香港紅卍字會大埔卍慈中學、循道衛理聯合教會亞斯理衛理小學及資訊科技團隊，合辦賽馬會「校本多元」計劃。計劃旨在透過多方協作及學校參與，在不同層面提升學校照顧和發展學習多樣性的能量。

發展校本多元管理模式

計劃於 2018 年正式啟動，為期三年，致力從支援全體學生入手，建立校本多元管理模式（school-based diversity management model）。計劃集多個協作單位的專長，透過「展析多元」、「拓展選擇」、「推進協作」三個項目推行，目標分別是建立以學生為本的校本數據平台、優化課程教學與評估，以及推展有效課堂學習支援。學校可按校情選擇參與一個或多個項目，並按所參與的項目獲得額外資助及專業支援。

QSIP 是計劃的主要協作單位之一，負責由 2019–2020 學年起支援「拓展選擇」項目。QSIP 團隊裏的中、小學課程專家，透過在中、英、數、常／通識各科的協作，協助學校配合校情發展及應用「適異教學」（differentiated instruction）的理念，使不同能力的學生都能學得更好。QSIP 亦着重在協作過程中培育校內課程及教學領導，讓他們在實踐之中掌握推動科組改進的策略。學校可選一至兩個學科與 QSIP 協作，並以其中一級作先導試驗，繼而在學校逐步擴展至其他級別或學科，從而達到推動學校全面改進的長遠目標。

Centre for Learning Sciences and Technologies

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Recent Activities

Prof. Morris Jong has been appointed as the Co-Chair of IEEE Education Society Technical Committee on Learning Sciences, Associate Editor of IEEE Transactions on Learning Technologies, and Section Editor of *International Journal of Serious Games*. He has also been appointed as a member of the Board of Directors of Hong Kong Education City (HKEdCity).

Prof. Morris Jong gave a keynote speech "Leveraging Mobile Technology to Facilitate Outdoor Social Inquiry Learning" in the 12th International Conference on Educational Research (ICER 2019) held in Thailand, held from 25 to 27 September 2019.

New Projects

Pleasr refer to Table 1.

Recent Publications in Journals

Dong, A. M., Jong, M. S. Y., & Shang, J. J. (2019). Achievement pathway of higher-order thinking through classroom interactions in the flipped classroom. *Modern Educational Technology*, *29*(2), 46–51.

Geng, J., Jong, M. S. Y., & Chai, C. S. (2019). Hong Kong teachers' self-efficacy and concerns about STEM education. *The Asia-Pacific Education Researcher*, *28*(1), 35–45.

Gu, X., & Tse, C. S. (2018). Abstractness and desirableness in human value system: Self-transcendence values are construed more abstractly but felt more closely than self-enhancement values. *Asian Journal of Social Psychology*, *21*(4), 282–294.

Huang, Y., Tse, C. S., & Xie, J. (2018). The bidirectional congruency effect of brightness-valence metaphoric association in the Stroop-like and priming paradigms. *Acta Psychologica*, *189*, 76–92.

Jong, M. S. Y. (2019). Sustaining the adoption of gamified outdoor social enquiry learning in high schools through addressing teachers' emerging concerns: A three-year study. *British Journal of Educational Technology*, *50*(3), 1275–1293.

Jong, M. S. Y. (2019). To flip or not to flip: Social science faculty members' concerns about flipping the classroom. *Journal of Computing in Higher Education*, *31*(2), 391–407.

Jong, M. S. Y., Chan, T., Hue, M. T., & Tam, V. (2018). Gamifying and mobilising social enquiry-based learning in authentic outdoor environments. *Educational Technology and Society*, *21*(4), 277–292.

Jong, M. S. Y., Chen, G. W., Tam, V., & Chai, C. S. (2019). Adoption of flipped learning in social humanities education: The FIBER experience in secondary schools. *Interactive Learning Environments*, *27*(8), 1222–1238.

Lan, Y. J., Botha, A., Shang, J. J., & Jong, M. S. Y. (2018). Technology enhanced contextual game-based language learning. *Educational Technology and Society*, *21*(3), 86–89.

Siu, T. S. C., McBride, C., Tse, C. S., Tong, X., & Maurer, U. (2018). Evaluating the effects of metalinguistic and working memory trainings on fluent reading in Chinese and English: A randomized controlled trial. *Frontiers in Psychology*, *9*(2510), 1–13.

Tse, C. S., & Yap, M. J. (2018). The role of lexical variables in the visual recognition of two-character Chinese compound words: A megastudy analysis. *Quarterly Journal of Experimental Psychology*, *71*(9), 2022–2038.

Tse, C. S., Chan, M. H. M., Tse, W. S., & Wong, S. W. H. (2019). Can the testing effect for general knowledge facts be influenced by divided attention or experimentally-induced anxious mood? *Frontiers in Psychology*, *10*(969), 1–17.

Table 1: New Projects

Project Title	Period	Funded by	Principal Investigator
Developing Pedagogic Strategies for Incorporating Interactive Learner-immersed Video-based Virtual Reality in Learning and Teaching of Physical Geography	08/2019–09/2021	Research Grants Council	Prof. Morris Jong
Chinese Lexicon Project Part II: A Database of Normed Naming Performance for Chinese Two-character Compound Words	01/2020–12/2021	Research Grants Council	Prof. Chi-shing Tse
Jockey Club Community Care and STEM in Action	09/2019–12/2022	Hong Kong Jockey Club	Prof. Morris Jong
Jockey Club Enhancing Chinese Language Literacy Through Educational Virtual Reality	09/2018–02/2022	Hong Kong Jockey Club	Prof. Morris Jong
Videos on IT Tips for e-Learning	02/2019–12/2020	Education Bureau	Prof. Morris Jong
Using IT for STEM Learning Activities in Secondary Schools	01/2019–12/2020	Education Bureau	Prof. Morris Jong
Strategic Use of e-Reading Resources, IT Tools and Innovative Pedagogies to Enhance Student e-Reading and Reading Motivation in English Language	01/2019–01/2021	Education Bureau	Prof. Morris Jong
Pedagogical Design and Strategic Use of Mobile Learning to Enhance Student Engagement and Learning Effectiveness in Primary Schools	01/2019–12/2020	Education Bureau	Prof. Morris Jong
Using Mobile GIS, Drones and VR in Geography Fieldwork	01/2019–08/2020	Education Bureau	Prof. Morris Jong
Pedagogical Design and Strategic Use of Virtual Reality to Enhance Learning and Teaching Effectiveness	11/2018–11/2020	Education Bureau	Prof. Morris Jong
Strategic Planning and Implementation of School-based Bring Your Own Device Policy and Acceptable Use Policy	11/2018–11/2020	Education Bureau	Prof. Morris Jong
Effective Use of Mobile Computer Devices for e-Learning	11/2018–11/2020	Education Bureau	Prof. Morris Jong
Strategic Use of e-Reading Resources, IT Tools and Innovative Pedagogies to Enhance Student e-Reading and Reading Motivation in Chinese Language	11/2018–11/2020	Education Bureau	Prof. Morris Jong

A project meeting of Jockey Club Community Care and STEM in Action