

## **A Study in General Education: How a Field Trip for Chinese Tea Tasting Motivates Students' Learning**

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**Abstract:** *One challenge of teaching general education (GE) courses to non-majors is how to motivate their learning. This study aims to demonstrate how active and engaging pedagogy can motivate student in studying GE courses, through a case study of a public university in Hong Kong. As part of a GE course, a field trip, a good bridge between ordinary life and academic environment and well consistent with the course topic, was conducted as an optional activity which to improve students' learning motivation. Learning motivation section of Motivated Strategies of Learning Questionnaire was used to assess students' learning motivation before and after the field trip, all students (n=156) of the GE course were invited as the experimental group, and the students of another related GE course (n=97) were invited as the control group. The results show that the field trip can positively influence students' learning motivation. This study demonstrates that a carefully planned, meaningful field trip can play an important role in sparking student interest and give students personal experience that would confirm their theoretical understanding.*

**Keywords:** *General education; Active learning; Field trip; Teaching approach; Learning motivation.*

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### **1. INTRODUCTION**

General education (GE) represents the core of the undergraduate curriculum for all students, regardless of their majors. It aims to provide students with broad and balanced education, so as to nurture them in becoming a whole person. Through imparting series of comprehensive and interdisciplinary knowledge, students can develop their critical thinking and self-directed learning abilities, as well as an understanding of the role of an individual [1].

However a major challenge in GE lies in engaging and motivating students, since it is quite common that students take GE courses just for fulfilling their graduation requirements. Learning motivation is an important predictor of students' learning competences and outcomes[2]. There are two types of learning motivation. Originating from inherent enjoyment of interest in learning, intrinsic motivation refers to innate desire to acquire new knowledge or experience; Students with higher intrinsic motivation retain what they have learned longer, and that this carries over into other fields, making them lifelong learners, more alert, more engaged in life. The more students are motivated to learn for intrinsic reasons such as they find it a pleasant or valuable, the greater their self-confidence in tackling and solving problems, and the greater their curiosity in pursuing other avenues of learning[3]. Extrinsic motivation refers to impetus outside of students' natural desires, who regard learning only as a means to achieve their other ends (e.g. acquiring rewards, grades or positive evaluation by others). High level of extrinsic motivation is considered lack of self-determination, since students do not see the relevance of the course to their future career or lives. In consequence, they are not motivated to attend or study less diligently [3, 4]. For GE courses, students typically have greater extrinsic than

intrinsic motivation[5]. Innovative adoption of engaging teaching and learning approaches in classroom or authentic environment has been proven effective to motivate student learning and thereby increase their intrinsic motivation[6, 7].

Different teaching approaches lead to different learning outcomes[8]. The traditional role of students in class is simply listening to teacher, taking notes, and memorizing pre-packaged assignments. However research findings show that students learning by this way lack abilities to effectively perform tasks in cognitive, practical and attitudinal domains[9]. An active teaching and learning approach, which enables students to practice and reflect during or after classes[10], can drive them in adopting deep learning approach, rather than surface learning approach[11]. According to Biggs and Tang[11, 12], deep approach means that a student is more likely to be motivated by intrinsic interests and would like to maximize the learning by engaging in a search for meaning, while surface approach indicates that students are more likely to be motivated extrinsically and attempt to accomplish tasks with the minimum possible time and efforts. Indeed, deep approach facilitates students to achieve higher-level learning outcomes (e.g. critical and creative thinking, analytical and problem-solving abilities)[9]. Through active learning, individuals can integrate what they have learned into their lives[10], and they are more likely to view their experience of learning as personally rewarding[8].

This empirical study aims to demonstrate how active and engaging pedagogy can motivate student in studying GE courses, through a case study of a public university in Hong Kong.

## 2. PEDAGOGICAL FRAMEWORK

Amongst the 8 public universities in Hong Kong funded by the University Grants Committee (UGC)<sup>1</sup>, Hong Kong Baptist University (HKBU) is a pioneer in focusing its ethos on Whole Person Education (WPE)[13] that fosters spiritual, intellectual, humane, social and physical development of students<sup>2</sup>. To further strengthen this education ethos and also to support the four-year undergraduate curriculum formally commencing from 2012, HKBU officially commenced its General Education (GE) Programme from the Academic Year 2012-13, occupying 38 among a total of 128 credit units required for an undergraduate programme<sup>3</sup>. At undergraduate level, the Whole Person Education is embodied by the seven Graduate Attributes in which healthy life style is emphasized[13].

Embracing the worldwide trend towards the model of Outcomes-based Education (OBE), HKBU adopted the Outcomes-based Teaching and Learning (OBTL) approach, a form of OBE framework building upon the concept of Constructive Alignment. Constructive Alignment (CA) is indeed a pedagogical approach that is embedded in the constructivist theory[11, 12, 14], emphasizing the alignment between the intended learning outcomes (ILOs), teaching and learning activities (TLAs) and assessment methods (AMs). It is believed that courses designed upon CA will enhance student-centered learning by encouraging students to take an active and independent role in constructing their own knowledge and hence facilitate students' achievement of the ILOs at the course, programme and university level[15, 16].

Moreover, HKBU also represents the first UGC-funded public university to provide higher education in traditional Chinese medicine (TCM) in Hong Kong since 1998; its School of Chinese Medicine (SCM) is committed to providing quality TCM teaching programmes, conducting cutting-edge research and offering TCM first-class services to meet the public health needs. Under such educational environment, a holistic healthy educational course entitled *Health Maintenance and Food Therapy in Chinese Medicine* (HMFTCM), has been developed and delivered, by utilizing the strength of traditional Chinese medicine to educate students about a holistic view of health and

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<sup>1</sup> It is an independent funding agency for higher education established by the Government of Hong Kong Special Administrative Region (HKSAR), China.

<sup>2</sup> For details, please refer to the HKBU website (<http://chtl.hkbu.edu.hk/main/wpe/>).

<sup>3</sup> For details, please refer to the HKBU website (<http://ge.hkbu.edu.hk/ge-programme/programme-structure/>).

lifestyle. It is a GE course for students who come from different disciplines and do not major in Chinese medicine. Knowing the students' attitude and their potential lack of learning motivation, a field trip for Chinese tea tasting (FTCTT) was designed to motivate student learning. Field trip or fieldwork is simply 'learning by doing', which by nature puts students through experience of working in the real work place. It comprises different extensive hands-on activities that provide students with lots of opportunities to learn in the field. As an active teaching and learning method, field trip not only brings students out of the classroom to apply textbook knowledge in the real situations, but also enable them to keep thinking deeply about their actions and plan for the next actions. Field trip also composes of different interactive tasks that interlock tightly with one another; these can be interactions with people such as communication, reflection or reporting; and interactions with the environment including site investigation and data collection and data analysis[10, 17, 18]. Therefore, field trip was used in this course to deepen and broaden students' understanding of Chinese medicine, and to help them relate Chinese medicine to their daily lives.

### 3. STUDY METHOD

#### 3.1. Sample

Participants in this study were students enrolled in the GE course *Health Maintenance and Food Therapy in Chinese Medicine* (HMFTCM) at the Hong Kong Baptist University (n=156). They were the experimental group. Students from another GE course at HKBU, *Diseases and Medicine* (DM) were set as the control group (n = 97). DM is similar to HMFTCM in that both are about medicine; DM focuses on Western medicine while HMFTCM presents traditional Chinese medical concepts and practices. Both experimental group and control group students came from different disciplines.

#### 3.2. Field Trip

A field trip for Chinese tea tasting (FTCTT) was held in a teahouse outside the campus of the university. All HMFTCM students (n=156) were invited to attend, who were divided into four groups. There were four trips, each group took the field trip on a same day, but different hours, and it lasted one to two hours. Within each group, students were divided into sub-groups (about 10 persons per subgroup) randomly. The teachers and the teahouse manager spoke briefly to each group about the different varieties of tea, and how it is prepared, students also showed different types of tea leaves, then each group broke up into four sub-groups for the Chinese tea demonstration and tasting. Students watched a demonstration of how to prepare tea, and tasted various Chinese teas together with some refreshments. The teachers and the teahouse manager transmitted the knowledge about how to use different tea to maintain health which is common in the daily life; students discussed how to select tea based on an individual's constitution or preferences and the tea's special characteristics.

#### 3.3. Instrument

Learning motivation is measured by a section of the Motivated Strategies of Learning Questionnaire (MSLQ)[19], a highly reliable instrument used to evaluate college students' motivation[20]. MSLQ comprises 81 items, which are scored on a 7-point Likert-type scale. The learning motivation section of the MSLQ has six subscales (Table 1) which evaluates both intrinsic and extrinsic motivation, namely, Intrinsic Goal Orientation (IGO), which focuses on the degree to which students perceive themselves to be participating in an educational program for reasons such as mastery, challenge, and/or curiosity[19]; Extrinsic Goal Orientation (EGO), which focuses on the degree to which students perceive themselves to be participating in a course for reasons such as rewards, grades, and evaluation by others[19]; Task Value (TV), which refers to students' attitudes toward and evaluation of a course and reflects students' opinions as to how interesting, important and/or useful the course was [19, 20]; Control of Learning Beliefs (CLB), which measures one's belief that his/her learning outcome was contingent on his/her effort, and that the effort to study makes a difference in his/her learning[19]; Self-Efficacy Learning Performance (SELP), which assesses students' performance expectations related to a specific task and self-appraisal of ability to master a task, including judgments of confidence; and Test Anxiety (TA) evaluates students' negative emotions that disrupt academic performance[19].

**Table1.** *The motivation scales in MSLQ and the items*

Scales	Description of Items	Cronbach alpha
IGO	<p>1. In a class like this, I prefer course material that really challenges me so I can learn new things.</p> <p>16. In a class likes this, I prefer course material that arouses my curiosity, even if it is difficult to learn.</p> <p>22. The most satisfying thing for me in this course is trying to understand the content as thoroughly as possible.</p> <p>24. I have the opportunity in this class, I choose course assignments that I can learn from even if they don't guarantee a good grade.</p>	.73
EGO	<p>7. Getting a good grade in this class is the most satisfying thing for me right now.</p> <p>11. The most important thing for me right now is improving my overall grade point average, so my main concern in this class is getting a good grade.</p> <p>13. If I can, I want to get better grades in this class than most of the other students.</p> <p>30. I want to do well in this class because it is important to show my ability to my family, friends, employer, or others.</p>	.76
TV	<p>4. I think I will be able to use what I learn in this course in other courses.</p> <p>10. It is important for me to learn the course material in this class.</p> <p>17. I am very interested in the content area of this course.</p> <p>23. I think the course material in this class is useful for me to learn.</p> <p>26. I like the subject matter of this course.</p> <p>27. Understanding the subject matter of this course is very important to me.</p>	.84
CLB	<p>2. If I study in appropriate ways, then I will be able to learn the material in this course.</p> <p>9. It is my own fault if I don't learn the material in the course.</p> <p>18. If I try hard enough, then I will understand the course material.</p> <p>24. If I don't understand the course material, it is because I didn't try hard enough.</p>	.66
SELP	<p>25. I believe I will receive an excellent grade in this class.</p> <p>26. I'm certain I can understand the most difficult material presented in the readings for this course.</p> <p>27. I'm confident I can learn the basic concepts taught in this course.</p> <p>28. I'm confident I can understand the most complex material presented by the instructor in this course.</p> <p>29. I'm confident I can do an excellent job on the assignments and tests in this course.</p> <p>30. I expect to do well in this class.</p> <p>31. I'm certain I can master the skills being taught in this class.</p> <p>32. Considering the difficulty of this course, the teacher, and my skills, I think I will do well in this class.</p>	.93
TA	<p>3. When I take a test I think about how poorly I am doing compared with other student..</p> <p>8. When I take a test I think about items on other parts of the test I can't answer..</p> <p>14. When I take tests I think of the consequences of failing.</p> <p>19. I have an uneasy, upset feeling when I take and exam.</p> <p>28. I feel my heart bearing fast when I take an exam..</p>	.88

The reliability of the scales has been confirmed by adoption of Cronbach's alpha (*Table 1*). The Cronbach Alpha value for the IGO scale is .73, which is more than .70, and means the scale has acceptable reliability. EGO scale's internal reliability is also acceptable, as the Cronbach Alpha value for it is .76. The Cronbach Alpha for TV in this study is .84, indicating that the TV scale has high internal consistency. CLB's is .66, which implies that the internal consistency may be questionable. The Cronbach Alpha for this study ( $\alpha = .93$ ) indicates that the SELP items scale has excellent internal consistency, and TA scale also has high internal consistency ( $\alpha = .88$ ).

### **3.4. Data Collection and Analysis**

There were three surveys in this study: two experimental surveys, given to the students of HMFTCM ( $n=156$ ), and one control survey, given to DM students ( $n=97$ ). With regard to the experimental surveys, the first was done in March 2012, one week before FTCTT, and the second was done in April 2012, immediately after FTCTT so that changes in scores could be directly attributed to the effects of the field trip. Another survey was completed in November 2012, by all the students of DM, there was no field trip in DM, therefore the different in student's learning motivation could be evaluated without FTCTT.

Descriptive statistics were used to analyze the score differences of student's learning motivation. Comparison of means (Paired sample T-Tests), Crosstab (Chi-Square), and nonparametric tests (2-independent samples) One-Way ANOVA determined whether these differences were significant or not.

## **4. RESULTS**

The first experimental survey was done during the break time of a lecture in HMFTCM, one week before FTCTT. There were 124 students (79.5% of enrolled students, 156) attending the lecture, and 91 valid questionnaires were received (73.4% response rate). The second experimental survey was done immediately after FTCTT. All enrolled students (156) students attended, after which 137 questionnaires were received (87.8 % response rate). The control survey, the third survey of this study, was also done at the break time of a lecture. For the DM lecture, 79 students (81.4% of enrolled students, 97) attended, from whom 60 valid questionnaires were received (75.9% response rate).

The response rates of the three surveys, namely 75.9% the survey given to DM, 73.4% the survey given to HMFTCM before the field trip, and 87.8% after the field trip, show a marked difference. Two factors may have contributed to this phenomenon. The first experimental survey and the control survey were done during normal lectures which had typical attendance rates for these lectures. Overall, this shows a lack of interest, if not participated, both in the class and its instruments. The second experimental survey was done immediately after the field trip. Compared to normal lectures; FTCTT was more interesting to them. Secondly, relatively more students who attended the field trip completed the questionnaire. This higher rate suggests students' eagerness to share their positive experiences, or both. Apparently, after the field trip, students felt engaged and involved in the course.

### **4.1. Students' Learning Motivation Differences between HMFTCM and DM**

There was no significant difference in the scores of motivation between HMFTCM before FTCTT and DM (*Table 2*), scores of IGO, EGO, TV, CLB, and SELP were almost the same ( $p > .05$ ). Nevertheless, except TA, HMFTCM students' learning motivation was significantly higher than DM's after FTCTT ( $p < .01$ ) (*Table 2*). IGO score of HMFTCM after FTCTT was 20.2 (SD = 2.9) while DM's was 17.5 (SD = 3.0). DM students' rating on EGO (19.8, SD = 3.2) was higher than HMFTCM's (19.5, SD = 3.7). Compared to DM's (27.3, SD = 4.7), HMFTCM student's rating on TV (31.2, SD = 4.1) was higher, so as CLB (20.0, SD=3.0) was higher than DM's (17.1, SD = 3.6), and SELP's rating was 38.0 (SD = 6.2) while DM's was 32.5 (SD = 6.2). Compared with DM, the control group, HMFTCM students' learning motivation improvement was significant. Student's ratings on scales were the same between DM and HMFTCM before FTCTT, but showed significant increase after the field trip (except TA), indicating that the field trip was an appropriate way to improve student's motivation and enhance learning outcomes.

**Table2.** Students' learning motivation scales item score of HMFTCM and DM

Scales	DM	HMFTCM (before)	P (DM & before)	HMFTCM (after)	P (DM & after)
	Mean (SD)	Mean (SD)		Mean (SD)	
IGO	17.5(3.0)	18.4 (3.1)	.062	20.2 (2.9)	.001
EGO	19.8(3.2)	18.7 (3.6)	.133	19.5(3.7)	.001
TV	27.3(4.7)	29.5 (4.7)	.810	31.2 (4.1)	.007
CLB	17.1(3.6)	19.3 (2.9)	.152	20.0 (3.0)	.001
SELP	32.5(6.2)	32.7(5.7)	.118	38.0(6.2)	.001
TA	20.3 (3.1)	19.5 (3.2)	.122	19.2 (3.1)	.131

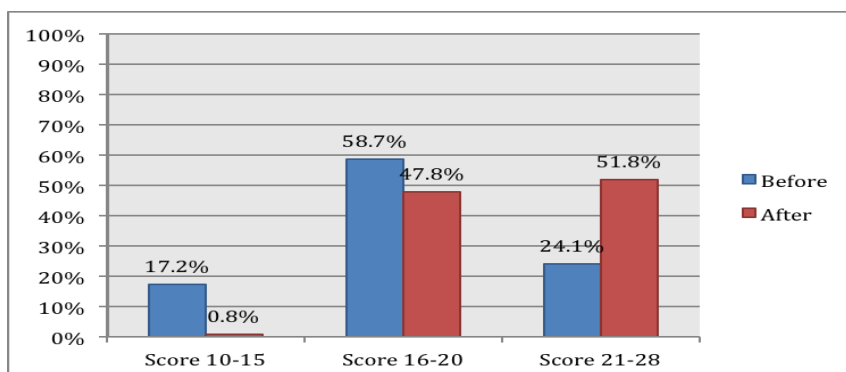
**4.2. HMFTCM Students' Learning Motivation Before and After FTCTT**

*4.2.1. Influences of FTCTT on IGO*

**Table3.** HMFTCM students' learning motivation scales item score before and after FTCTT

Scales	Before	After	P
	Mean (SD)	Mean (SD)	
IGO	18.4 (3.1)	20.2 (2.9)	.001
EGO	18.7 (3.6)	19.5(3.7)	.214
TV	29.5 (4.7)	31.2 (4.1)	.019
CLB	19.3 (2.9)	20.0 (3.0)	.170
SELP	32.7(5.7)	38.0(6.2)	.001
TA	19.5 (3.2)	19.2 (3.1)	.152

IGO (Table 3) showed significant increases (from 18.4 (SD = 3.1) to 20.2 (SD = 2.9) after FTCTT ( $p = .001$ ). After FTCTT, the population distribution of each score range changed in that more students gave a higher mark to HMFTCM on IGO (Figure 1). After FTCTT, the population of students who selected the 10-15 score range decreased from 17.2% to 0.8%, the population who selected the 16-20 score range decreased from 58.7% to 47.8%, and the population selecting the 21-28 score range increased from 24.1% to 51.8% ( $p = .001$ ). Students had more curiosity toward course content and felt they could learn new and valuable things. This is particularly important because many of the students may have come to the course with almost no interest, merely taking it for credit or because it was required.



**Fig1.** Frequency description of IGO score before and after FTCTT

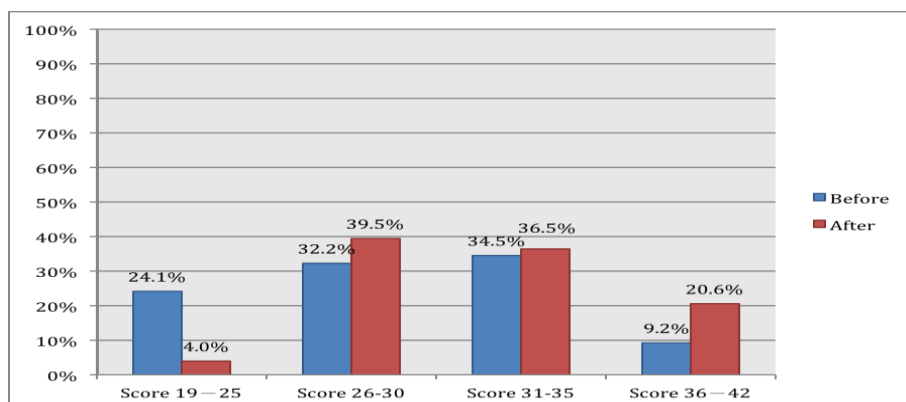
**Note:** The Chi-Square test,  $p=.001$

*4.2.2. Influence of the Field Trip on EGO*

In contrast with the dramatic shift in IGO scores, there was almost no change of EGO before and after FTCTT (Table 3). The mean value of EGO did increase, from 18.7 (SD = 3.6) to 19.5 (SD = 3.7);

however, the increase is statistically insignificant ( $p = .214$ ) (Table 3). FTCTT had little effect on students' attitude toward getting a good grade in the course, or impressing their friends or families with their learning.

**4.2.3. Influences of the Field Trip on TV**



**Fig2.** Frequency description of TV score before and after FTCTT ( $P=0.001$ )

**Note:** The Chi-Square test,  $p=.001$ .

After FTCTT, TV scores increased significantly ( $p=.019$ ) (Table 3) from 29.5 (SD = 4.7) to 31.2 (SD = 4.1). Figure 2 shows the students' distribution of scores ( $p=.001$ ). Compared to the survey taken before FTCTT, on the survey taken after FTCTT, fewer students rated the course at the lowest level. In other words, the percentage of students giving HMFTCM the lowest possible score (19-25) changed most dramatically, dropping from 24.1% to 4%. The population of students who gave the course an intermediate score (26-30) rose (from 32.2% to 39.5%), while the students giving the course a higher score (31-35) also rose (from 34.5% to 36.5%) and the number of students who gave a very high mark (36-42) to HMFTCM increased from 9.2% to 20.6%. Respondents improved their attitude toward the whole course, subsequently feeling more useful and meaningful, especially for the students who had earlier thought the course had very little importance.

**4.2.4. Influence of the Field Trip on CLB**

CLB showed no significant improvement ( $p = .170$ ) after FTCTT (Table 3). However, among the four items of CLB scale, the item, "If I don't understand the course material, it is because I didn't try hard enough." had a significant change, increasing from 4.29 to 4.91 ( $p < .001$ ). Students felt more responsible for their own learning; it implies that they believed the course material and teachers' efforts were adequate, that they could understand if they tried, that they can control their academic performance, and that they are more likely to learn effectively and strategically.

**4.2.5. Influences of the Field Trip on SELP**

SELP scores increased significantly ( $p = .001$ ) from 32.7 (SD = 5.7) to 38.0 (SD = 6.2) (Table 3). Students had more confidence that they will understand the course content and perform well, including doing an excellent job on assignments and receiving a good grade in this course. However, there was no significant change in the population distribution of each score range.

**4.2.6. Influences of the Field Trip on TA**

TA showed no significant improvement after the field trip, students still held same level negative thoughts with this GE course.

**5. DISCUSSION AND CONCLUSION**

The results of this study are consistent with the theory that active learning can enhance students' learning motivation[10, 21]. A new and different experience influences the learning motivation and the learning effectiveness. When students actively participate in the learning process, their engagement plays an important role in improving their achievement[22].

The present results indicate that students' learning motivation improved after the field trip, particularly the rising scores in IGO, TV, CLB and SELP showing the improvement of intrinsic learning motivation. Some students, who had given a low evaluation to the GE course and thought that it was not very interesting or useful, improved their evaluation on the GE course after attending the FTCTT, such that some students had a very positive attitude toward the course and its value after FTCTT. Students strongly felt they could use what they had learned e.g. drinking tea is not only for the taste, but also more importantly, it is also for improving health, they found that this GE course content which they were learning was directly related to their daily life, and their interest was stimulated when they could see the relevance of the material to professional field[7]. Students experienced stronger positive emotions. This is important because such emotions mean students are more likely to adopt a deep approach to learning and achieve higher learning outcomes[9].

However, there was no change on EGO and TA indicated that extrinsic learning motivation still occupies an important position when students attend a GE course. The grades obtained are important to them, and the most common manifestation of avoidance goals in students is fear of failure. The GE curriculum does not appear to be designed to confer terminal vocational awards; thus students, not seeing the relevance of the course to their future career, are demotivated to attend, much less study diligently.

Several key features made the field trip successful. Firstly, the topic itself, tea drinking is a common habit of Chinese people, yet it is done without thinking its health impact or benefits which are definable and significant[23], particularly in the context of Chinese medicine theories. Thus, FTCTT was a good bridge between students' daily lives and the academic environment, between what they know from their life experiences and what they are learning in class, bringing conscious awareness to a practice that is, or had been for them, essentially unconscious. The activity gave them more information about tea, gave them experience drinking it, and then linked this knowledge to what they had heard in the lecture (e.g. choose a proper tea for their family based on their health condition). Secondly, in this activity, 156 enrolled students attended the field trip in groups of about 40 students, and were further subdivided into smaller groups (around 10 students/sub-group) at the teahouse, so that the teacher could understand and attend to individual student needs and interests. Through sub-grouping strategy, both students and teachers had greater interaction and learning outcomes are better[24, 25]. Many teachers, especially general education teachers, see major difficulties in maintaining academic standards in today's larger and more diversified classes[5, 26, 27], but the FTCTT might avoid this problem. Third, this field trip was a student-centred learning activity that engaged student in a meaningful and dynamic way. As student-centred learning environment is portrayed as more adequate than teacher-centred learning environment[28]. It provided students with opportunities to construct meanings from their social interactions and direct experience[22]. Last but not the least, FTCTT brought students to an environment very different from an academic lecture room. It was casual and, in some sense, more "real". The relationship between learning outcomes and environment has been confirmed in some studies[29, 30]. The learning environment is important and active learning contributes to student engagement, the atmosphere in which the active learning approach used is also of central importance[31].

Students develop greater and more long-lasting understanding when they can apply what they have learned directly in their daily lives. University students themselves agree that active learning is more challenging, enjoyable and motivating than more passive forms of learning[32]. They develop deeper understanding if teachers focus on creating opportunities for students to become involved in learning instead of on transmitting concepts. However, how long the improvements of learning motivation last, the long-term effects of FTCTT, and the use of qualitative research approaches (e.g. in-depth interview) are still topics of future research.

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#### **REFERENCES**

- [1] Curry J. M., Cultural challenges in Hong Kong to the implementation of effective general education, *Teaching in Higher Education*. 17(2), 223-230 (2012).
- [2] Busato V. V., Prins F. J., Elshout J. J. and Hamaker C., Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher education, *Personality and Individual Differences*. 29(6), 1057-1068 (2000).
- [3] Kyndt E., Dochy F., Struyven K. and Cascallar E., The direct and indirect effect of motivation for learning on students' approaches to learning through the perceptions of workload and task complexity, *Higher Education Research & Development*. 30(2),135-150 (2011).
- [4] S. A. Ambrose, M. W. Bridges, M. DiPietro, M. C. Lovett, M. K. Norman and R. E. Mayer, *How Learning Works: Seven Research-Based Principles for Smart Teaching*, San Francisco: Jossey-Bass., 2010.
- [5] Glynn S. M., Aultman L. P. and Owens A. M., Motivation to learn in General Education programs, *Journal of General Education*. 54,150-170 (2005).
- [6] Trigwell K., Ellis R. A. and Han F., Relations between students' approaches to learning, experienced emotions and outcomes of learning, *Studies in Higher Education*, 37(7), 811-824 (2012).
- [7] Campbell A., Enhancing student engagement through practice experience in social work education: the social work studio, *Higher Education Research & Development*. 31(6), 773-784 (2012).
- [8] Braxton J. M., Milem J. F. and Sullivan A. S., The influence of active learning on the college student departure process: toward a revision of tinto's theory, *The Journal of Higher Education*. 71,569-590 (2000).
- [9] Trigwell K., Prosser M. and Waterhouse F., Relations between teachers' approaches to teaching and students' approaches to learning, *Higher Education*. 37(1), 57-70 (1999).
- [10] Bonwell C. C. and Eison J. A., *Active learning: creating excitement in the classroom*. Washington, DC: The George Washington University, ASHE-ERIC Higher Education Reports. 1991.
- [11] J. Biggs and C. Tang, *Teaching for Quality Learning at University*, 3rd ed. Buckingham: SRHE and Open University Press, 2007.
- [12] J. Biggs and C. Tang, *Teaching for Quality Learning at University*, 4th ed. Buckingham: SRHE and Open University Press, 2011.
- [13] Chong K., Thadani D. R., Wong W. L., Kwong T. and Wong E., A conceptual framework of evidence collection for outcomes assessment: a case study in Hong Kong, *International Journal of Humanities Social Sciences and Education (IJHSSE)*. 2(3), 31-44 (2015).
- [14] J. Biggs and C. Tang, *Teaching for Quality Learning at University*, 2nd ed. Buckingham: SRHE & Open University Press, 2003.
- [15] Wang X., Su Y., Cheung S., Wong E., Kwong T. and Tan K. T., Does outcomes based teaching and learning make a difference in students' learning approach?, *Lecture Notes of Computer Science*. 6837, 83-94 (2011).
- [16] Thadani D. R., Kwong T., Chong K. and Wong E., The impacts of aligned teaching on students' perceived engagement in independent learning and satisfaction: an empirical investigation in Hong Kong, *Global Journal of HUMAN SOCIAL SCIENCE Linguistics & Education*. 13(9), 41-48 (2013).

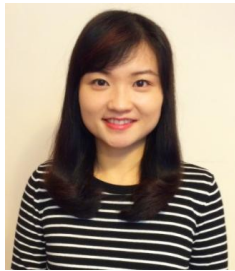
- [17] Chen S., Hsu I. C. and Wu C.-M., Evaluation of undergraduate curriculum reform for interdisciplinary learning, *Teaching in Higher Education*. 14(2), 161-173 (2009).
- [18] Goh E., The value and benefits of fieldtrips in tourism and hospitality education, *Higher Learning Research Communications*. 1(1), 60-70 (2011).
- [19] Pintrich P. R., Smith D. A. R., Garcia T. and McKeachie W., A manual for the use of the motivated strategies for learning questionnaire (MSLQ). Ann Arbor Michigan: National Center for Research to Improve Postsecondary Teaching and Learning, University of Michigan, (1991).
- [20] Duncan T. G. and McKeachie W. J., The making of the motivated strategies for learning questionnaire, *Educational Psychologist*. 40(2), 117-128 (2005).
- [21] Prince M., Does active learning work? A review of the research, *Journal of Engineering Education*. 93(3), 223-231 (2004).
- [22] Baron P. and Corbin L., Student engagement: rhetoric and reality, *Higher Education Research & Development*. 31(6), 759-772 (2012).
- [23] Cabrera C., Artacho R. and Giménez R., Beneficial effects of green tea—a review, *Journal of the American College of Nutrition*. 25(2), 79-99 (2006).
- [24] Cruickshank K., Chen H., and Warren S., Increasing international and domestic student interaction through group work: a case study from the humanities, *Higher Education Research & Development*. 31(6), 797-810 (2012).
- [25] Biggs J., Approaches to the enhancement of tertiary teaching, *Higher Education Research & Development*. 8(1), 7-25 (1989).
- [26] Biggs J., What the student does: teaching for enhanced learning, *Higher Education Research & Development*. 31(1), 39-55 (2012).
- [27] Exeter D. J., Ameratunga S., Ratima M., Morton S., Dickson M., Hsu D. and Jackson R., Student engagement in very large classes: the teachers' perspective, *Studies in Higher Education*. 35(7), 761-775 (2010).
- [28] Elena J., Clarebout G., Léonard R. and Lowyck J., Student-centred and teacher-centred learning environments: what students think, *Teaching in Higher Education*. 12(1), 105-117 (2007).
- [29] Ellis R. A., Goodyear P., Hara A. O. and Prosser M., The university student experience of face-to-face and online discussions: coherence, reflection and meaning, *ALT-J Research in Learning Technology*. 15(1), 83-97 (2007).
- [30] Prosser M., Trigwell K., Hazel E. and Waterhouse F., Students' experiences of studying physics concepts: the effects of disintegrated perceptions and approaches, *European Journal of Psychology of Education*. 15(1), 61-74 (2000).
- [31] Raghallaigh M. N. and Cunniffa R., Creating a safe climate for active learning and student engagement: an example from an introductory social work module, *Teaching in Higher Education*. 18(1), 93-105 (2013).
- [32] Colliver J.A., Effectiveness of problem-based learning curricula research and theory, *Academic Medicine*. 75(3), 259-266 (2000).

#### Appendix 1- List of Abbreviations

Abbreviations		Full Name
1	AMs	Assessment methods
2	CA	Constructive Alignment
3	CLB	Control of Learning Beliefs
4	DM	<i>Diseases and Medicine</i>
5	EGO	Extrinsic Goal Orientation
6	FTCTT	Field trip for Chinese tea tasting

7	GE	General education
8	HMFTCM	Health Maintenance and Food Therapy in Chinese Medicine
9	HKBU	Hong Kong Baptist University
10	ILOs	Intended learning outcomes
11	IGO	Intrinsic Goal Orientation
12	MSLQ	Motivated Strategies of Learning Questionnaire
13	OBE	Outcomes-based Education
14	OBTL	Outcomes-based Teaching and Learning
15	SCM	School of Chinese Medicine
16	SELP	Self-Efficacy Learning Performance
17	TV	Task Value
18	TLAs	Teaching and learning activities
19	TA	Test Anxiety
20	TCM	Traditional Chinese medicine
21	UGC	University Grants Committee
22	WPE	Whole Person Education

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