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<b>Author(s)</b>	<b>Chan, Ka-yan; 陳嘉欣</b>
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Dissertation

*The effectiveness of collaborative  
learning on enhancing students' multi-  
perspectives thinking in Liberal Studies*

Students Name: Chan Ka Yan

University id: 2010099877

Dissertation supervisor: Mr. Wong Ka Lok

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## **Abstract**

Under the New Senior Secondary curriculum, Liberal Studies is made one of the four core subjects. It emphasizes on enabling students to develop multi-perspective thinking. However, reports and studies showed that students failed in demonstrating their multi-perspective thinking. The use of collaborative learning is proven and argued to be effective in promoting interactivity among learners in exchanging ideas in multiple directions and to be beneficial in cognitive development. Therefore, this study is an action research emphasizes on examining the effectiveness of collaborative learning on enhancing student's multi-perspective thinking.

The objectives of the research include (1) To address the problem of lacking holistic thinking among students such as giving one-dimension ideas without considering multiple perspectives; (2) To examine the effectiveness of collaborative learning on students' holistic thinking; (3) To foster the learning of students in Liberal Studies; (4) To draw up conclusion of the research, listing the points to note in adopting collaborative learning in promoting multi-perspective thinking of students in Liberal Studies lessons; and (5) To develop the habit of learning in a dynamic process for teachers in school.

The results of the research show that collaborative learning is effective on enhancing students' multi-perspective thinking under certain conditions, however, is not solely dependent on the teaching method adopted but also other variables contributed.

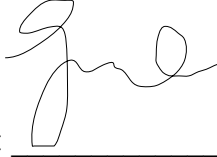
## **Acknowledgment**

Advice given by my supervisor, Mr. Wong Ka Lok has been a great help in the completion of this research. This research cannot be completed without the supports from him. I would like to express my sincerest gratitude to my supervisor for his inspiring advice, patience and support.

The help from my practicum school, principal, teachers and students are very much appreciated.

## Declaration

I hereby declare that this dissertation represents my own work and that it has not been previously submitted to this University or other institution in application for admission to a degree, diploma or other qualifications.

Signature: \_\_\_\_\_

Name: Chan Ka Yan

HKU Student Number: 2010099877

Date: 26<sup>th</sup> May 2014

# Chapter 1 Introduction

## 1.1 Background of the research

One of the aims of Liberal Studies is “to enable students to develop multiple perspectives on perennial and contemporary issues in different contexts”<sup>1</sup> (C.D.C. and H.K.E.A.A. , 2007) in the belief that it would be beneficial to students in pursue of further studies in tertiary education or in promotion of life-long learning. Liberal studies stresses on the learners’ ability to think from multi-perspective and make informed choices.

However, there are comments that students failed in achieving the aim of thinking from multi-perspective that they lack the consciousness to think from multiple perspectives. As suggested by Hui<sup>2</sup> (2007) that students did not provide balancing-evidence to support their views and they lacked the ability to think from different perspectives in order to provide a balancing and holistic argument. Students who were raising one-dimensional answers would be achieving a relatively lower score in the public examination. Hui’s comments on students’ performance coincided with the description of students’ performance in the examination report of Liberal Studies in Hong Kong Diploma of Secondary Examination (HKDSE) in 2012<sup>3</sup> stated “many answers were one-dimensional”. Students are inclined to answer questions in a single perspective that does not align with the aims of Liberal Studies.

A learning model provides students with the opportunity to explore an issue from multiple perspectives can effectively improve the problem of students fail in thinking from multi-perspective. Collaborative learning has been supported by dozens of academic research on its effectiveness in promoting learning in a dynamic process that allows students to see issues from different perspectives.

Collaborative learning is also defined as “an umbrella term for a variety of

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<sup>1</sup> C.D.C. and H.K.E.A.A. (2007). *Liberal Studies Curriculum and Assessment Guide (Secondary 4-6)*. Hong Kong: Government Printing Department.

<sup>2</sup> Hui, P.K. (2007). *Learning experience in public-exam-oriented "Liberal Studies" – an analysis of AS Liberal Studies examination reports (1994-2005)*. Hong Kong Teachers’ Centre Journal, 6, 30-40.

<sup>3</sup>H.K.E.A.A. (2012). Examination Report 2012. Hong Kong: Hong Kong Examinations and Assessments Authority.

*educational approaches involving joint intellectual efforts by students, or students and teachers together”* (Smith & MacGregor, 1992)<sup>4</sup>. Based on this definition and the idea suggested by Gerlach<sup>5</sup> (1994) that collaborative learning allows students to discuss their thoughts and ideas with peers and listen to different perspectives on issues. Collaborative learning is effective in allowing students to engage in learning and discuss issues from multiple perspectives.

Besides, the interacting nature of collaborative learning provided students with opportunities to think from multi-perspectives and enhancing the faculty. *“Collaborative learning knowledge is constructed in a multidirectional sense”* that the information is shared and flew dynamically (Iborra, Garcia, Margalef & Perez, 2010.)<sup>6</sup>.

Peer approval is a motivation for thinking differently from the conformity (Nelson, 1994)<sup>7</sup> that promotes thinking from a different angle as students usually do so as to encourage multi-perspective thinking.

This research will be focused on the effectiveness of collaborative learning in promoting multi-perspective thinking in order to address the problem identified as students fail in thinking from multi-perspective in Liberal Studies.

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<sup>4</sup> Smith, B.L., & MacGregor, J.T. (1992). What is collaborative learning? In A.S., Goodsell., M., Maher., V., Tinto., B.L., Smith., & J., MacGregor. (Eds.). *Collaborative learning: A sourcebook for higher education* (pp. 585-586). University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment.

<sup>5</sup> Gerlach, J.M. (1994). *Is This Collaboration?*. In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.5-13). San Francisco: Jossey-Bass Publishers.

<sup>6</sup> Iborra, A., Garcia, D., Margalef. L., & Perez, V. (2010). General collaborative contexts to promote learning and development. In Luzzatto, E., & Dimarco, G. (Eds.). *Collaborative learning methodology, types of interactions and techniques* (pp.47-80). New York.: Nova Science Publishers. Press.

<sup>7</sup> Nelson, C.E. (1994). Critical Thinking and Collaborative Learning. In K., Bosworth., & S.F., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.45-58). San Francisco: Jossey-Bass Publishers.

## 1.2 Significance of the research

The significance of this research includes that unlike the previous researches on the area of collaborative learning that were mostly in the contexts outside Hong Kong, this research focuses the research of effectiveness of collaborative learning in enhancing students' multi-perspective thinking in Hong Kong context. This research may reveal the attributes that a functioning Liberal Studies lesson that develop students' multi-perspective thinking contains and lead to an effective teaching and learning in a Liberal Studies lesson.

This research implemented as an action research may inspire the professional development of teaching. Cohen, Manion & Morrison<sup>8</sup> (1985) define action research as interventions in the reality and a close investigation of the effects of the interventions carried and the goal of action research is to improve. The implementation of this research is to serve the purpose of teaching and learning in a dynamic manner that to address the existing problem of the insufficiency of learning opportunities in Liberal Studies lessons in promoting multi-perspective thinking of students with the interventions and to seek spiral improvements through on-going reflections and amendments in the planning of teaching and learning activities. There are standing problems in promoting multi-perspective thinking in Liberal Studies lesson and those problems have to be dealt with in order to enhance the teaching and learning effectiveness of Liberal Studies lessons.

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<sup>8</sup> Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education*. New York: Routledge.

### **1.3 Objectives of the research**

There are five objectives of the research:

1. To address the problem of lacking holistic thinking among students such as giving one-dimension ideas without considering multiple perspectives;
2. To examine the effectiveness of collaborative learning on students' holistic thinking;
3. To foster the learning of students in Liberal Studies;
4. To draw up conclusion of the research, listing the points to note in adopting collaborative learning in promoting multi-perspective thinking of students in Liberal Studies lessons; and
5. To develop the habit of learning in a dynamic process for teachers in school.

## 1.4 Research Questions

According to the objectives of the research, here are the research questions to be investigated in this research:

1. What are the causes for the one-dimensional thinking of students in Hong Kong?
2. How does collaborative learning effectively promote multi-perspective thinking?
  - a. What are the characteristics of collaborative learning?
  - b. How does it differ from the traditional learning context in Hong Kong?
  - c. What are the roles of students?
  - d. What are the roles of teachers?
  - e. What are the results of using collaborative learning in Liberal Studies lessons?
3. What are the things to note for implementing collaborative learning successfully in Liberal Studies lessons?



## Chapter 2 Literature Review

### 2.1 Traditional learning contexts in Hong Kong

Hui (2007)<sup>9</sup> suggested that public examinations and school mostly depend on using written assessments as the main assessment tool, which is unable to reflect students' learning experiences and processes. Therefore, the reliance on written assessment narrowed scope of students' learning and that little emphasis has been put on learning outcomes other than examination results.

Patterson (2010)<sup>10</sup> believed that traditional learning context is mostly in instruction paradigm and that students are passive recipients in a traditional classroom. Gerlach (1994)<sup>11</sup> further added on that in traditional classrooms, individualized learning is emphasized.

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<sup>9</sup> Hui, P.K. (2007). *Learning experience in public-exam-oriented "Liberal Studies" – an analysis of AS Liberal Studies examination reports (1994-2005)*. Hong Kong Teachers' Centre Journal, 6, 30-40.

<sup>10</sup> Patterson, H.S. (2010). *Learning communities a structural overview*. In T., Peckshamp., & C., McLaughlin. (Eds.). *Building community stories and strategies for future learning community faculty and professionals* (pp.18-25). New York: The Graduate School Press.

<sup>11</sup> Gerlach, J.M. (1994). *Is This Collaboration?*. In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.5-13). San Francisco: Jossey-Bass Publishers.

## 2.2 Concept of multi-perspective thinking

According to Hui (2007),<sup>12</sup> multi-perspective thinking is about how to balance the arguments in showing both positive and negative evidence and arguments, also consider different factors from multiple perspectives. He believed that lacking of multi-perspective thinking would lead to a shallow discussion of any issue or question.

Haertel & Terkowsky (2012)<sup>13</sup> suggested that multi-perspective thinking is about learners breaking through the limits of their disciplines or pre-assumption in thinking. Learners can look from different points of view on an issue spontaneously. Learners that possess multi-perspective thinking skills avoid their brain from being “structurally lazy”. According to Spitzer (2000),<sup>14</sup> brains have stored mental patterns that they are used to. The strongly remembered patterns are more successful and brains will be more likely to use it again. Learners that are structurally lazy are less creative in a sense that they will not invent or try new ways to think.

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<sup>12</sup> Hui, P.K. (2007). *Learning experience in public-exam-oriented "Liberal Studies" – an analysis of AS Liberal Studies examination reports (1994-2005)*. Hong Kong Teachers' Centre Journal, 6, 30-40.

<sup>13</sup> Haertel, T., & Terkowsky, C. (2012). *Where have all the inventors gone? The lack of spirit of research in engineering education*. Germany: TU Dortmund University.

<sup>14</sup> Spitzer, M. (2000). *The Mind within the Net: Models of Learning, Thinking, and Acting*. Heidelberg: Spektrum.

### 2.3 Concept of collaborative learning

Patterson (2010)<sup>15</sup> believed collaborative Learning illustrates the shift to the learning paradigm from the instruction paradigm. He had similar thoughts with Gerlach and Abercrombie that collaborative learning takes place through social interactions and continual communication among learners. In his model, activities are designed and facilitated by teachers while students are to take up the learning in working groups to explore the learning materials. He emphasized on the role of teacher as a course designer and facilitator while students are learning through working in groups with peers. He argued that students regard themselves as active owners of knowledge rather than passive recipients of learning materials prepared by teachers.

Gerlach (1994)<sup>16</sup> believed collaborative learning is a social act in which learning occurs through the talk among learners. The social interactions among learners make learning happens. Abercrombie (1979)<sup>17</sup> held similar thoughts tin believing students learn collaboratively through interacting with peers but not only from authorities. Both Gerlach and Abercrombie stressed on the importance of interactivity among learners.

Although Roschelle & Teasley (1995)<sup>18</sup> written from a different context regarding computer supported collaborative learning, they also recognized a significant impact of collaborative learning and shared the belief in attributes of mutual learning with peers in the presence of collaborative learning with Gerlach, Abercrombie and Patterson. Roschelle & Teasley recognized learners' attempt to conceive a problem with peers collaboratively in coordination and synchronous results in collaborative learning.

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<sup>15</sup> Patterson, H.S. (2010). *Learning communities a structural overview*. In T., Peckshamp., & C., McLaughlin. (Eds.). Building community stories and strategies for future learning community faculty and professionals (pp.18-25). New York: The Graduate School Press.

<sup>16</sup> Gerlach, J.M. (1994). *Is This Collaboration?*. In K., Bosworth., & S.J., Hamilton. (Eds.). Collaborative Learning: Underlying Processes and Effective Techniques (pp.5-13). San Francisco: Jossey-Bass Publishers.

<sup>17</sup> Abercrombie, M.L.J. (1979). Aims and techniques of group teaching. England: Direct Design Ltd.

<sup>18</sup> Roschelle, J., & Teasley, S. (1995). *The construction of shared knowledge in collaborative problem solving*. In O'Malley, C.E., (Ed.), Computer Supported Collaborative Learning. (pp. 69-97. Heidelberg: Springer-Verlag,.

## 2.4 Relationship between collaborative learning and multi-perspective thinking

Britton (1972)<sup>19</sup> indicated the “rapid exchanges of conversation allow many things to go on at once – exploration, clarification, shared interpretation, insight into differences of opinion, illustration and anecdote, explanation by gesture expression of doubt.” Dillenbourg (1999)<sup>20</sup> shared similar views with him in believing interactive or knowledge is fluid in a sense that the interactions influence the peers’ cognitive process.

Vygotsky (1962)<sup>21</sup> argued that changing the world and learner’ thinking requires learner to be active organizers that use language in continual interaction with the social world. He suggested that learners’ growing awareness and understanding of the issue are expressed verbally through social interchange. Social interchange also interacts with cognitive development of learners.

Gerlach (1994)<sup>22</sup> believed that in adopting collaborative learning, learners’ intellectual and social developments are benefited when compared with traditional classrooms learning which emphasizes individualized learning. Iborra, Garcia, Margalef & Perez (2010)<sup>23</sup> further added on that “knowledge is constructed in a multidirectional sense” in collaborative learning. All interactions during social interchanges flow dynamically as learners are working towards the same goal, the same task.

Kuhn (2005)<sup>24</sup> pointed out that learners make more and quicker progress in thinking collaboratively than thinking individually. Learners who initially do not have the right approach can figure out collaboratively in collaboration. It is because “it provides the

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<sup>19</sup> Britton, J. *Language and Learning*. Harmondsworth: Penguin.

<sup>20</sup> Dillenbourg, P. (1999). *Introduction: What do you mean by “ collaborative learning?”* In Dillenbourg, P. (Ed.). *Collaborative Learning: Cognitive and computational approaches*. (pp.1-19). Oxford: Elsevier.

<sup>21</sup> Vygotsky, L. (1962). *Thought and Language*. Cambridge: MIT Press.

<sup>22</sup> Gerlach, J.M. (1994). *Is This Collaboration?*. In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.5-13). San Francisco: Jossey-Bass Publishers.

<sup>23</sup> Iborra, A., Garcia, D., Margalef, L., & Perez, V. (2010). *General collaborative contexts to promote learning and development*. In E., Luzzatto., & G., Dimarco. (Eds.). *Collaborative learning methodology, types of interactions and techniques* (pp.47-80). New York.: Nova Science Publishers. Press.

<sup>24</sup> Kuhn, D. (2005). *Education for thinking*. Cambridge: Harvard University Press.

individual with exposure to others' ideas and perspectives." During collaboration, the expression and development of learners' ideas are aided through continual communications and interactions with others.

## 2.5 Attributes of collaborative learning

### Structure

According to Reid, Forrestal & Cook (1989),<sup>25</sup> there are five phases in the organization of instructions in collaborative learning, namely engagement, exploration, transformation, presentation, and reflection. To engage learners in the topic of that lesson and allow them to explore on the topic collaboratively and to transform their thoughts into texts, graphics, cartoons, audio or any other forms which requires them to communicate their ideas among group members collaboratively. Followed by presentations of ideas that learners collaboratively worked out. Reflection is essential that can be done during or after class in written or verbal form.

On the other hand, Nelson (1994)<sup>26</sup> suggested that lessons structured in collaborative learning are “structured by teachers and executed by students”. Teachers need to be cautious in preparation, cognitive structuring and role structuring when structuring a collaborative learning lesson. Preparation means that all students can safely presumed to have some relevant knowledge on the topic of the lesson. Cognitive structuring is referring to the provision of “analytical frameworks that are more sophisticated than those that most would have used spontaneously by learners”. In role structuring, teachers need to structure the lessons in a way that all learners in groups can participate meaningfully and “to minimize behaviors that inhibit group progress.”

Dillenbourg (1999)<sup>27</sup> suggested the desirable group size is 2-5 learners collaborating in around an hour.

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<sup>25</sup> Reid, J., Forrestal, P., & Cook, J. (1989). *Small Group learning in the classroom*. Scarborough: Chalkface.

<sup>26</sup> Nelson, C.E. (1994). *Critical Thinking and Collaborative Learning*. In K., Bosworth., & S.F., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.45-58). San Francisco: Jossey-Bass Publishers.

<sup>27</sup> Dillenbourg, P. (1999). *Introduction: What do you mean by “ collaborative learning?”* In Dillenbourg, P. (Ed.). *Collaborative Learning: Cognitive and computational approaches*. (pp.1-19). Oxford: Elsevier.

## **Implementation**

Dillenbourg (1999)<sup>28</sup> suggested few attributes that collaborative learning holds during implementation:

- Allow the members of groups to negotiate individual role
- Respect diversity but reach group consensus / negotiable
- One partner will not impose his view on the sole basis of his authority, but will argue for his standpoint
- Allow time for group consensus within a limited time

Gerlach (1994)<sup>29</sup> shared similar thoughts with Dillenbourg on social interdependence and synchronous communication. They both stressed on the demanding nature of social and emotion interactions that require learners to articulate their own points of view meanwhile listening to the views of others. They both believed that learning is “dependent to the actions of each member of the group” rather than individuals only.

According to Flannery (1994),<sup>30</sup> collaborative learning does not only take place among students but also between students and teachers. She also believed that the competitive nature learning creates obstacles to successful collaboration, hence, competition should be avoided when designed the lesson in collaborative learning.

### **Teachers’ role**

According to Flannery (1994)<sup>31</sup>, one of the teachers’ roles is to give appropriate and sufficient instructions before the implementation of collaborative learning. She pointed out “one cannot simply throw students together with their peers with no guidance or preparation and expect a successful collaborative learning experience to result”. Teachers’ guidance is needed as a basis for posing investigatory or generative questions and that facilitates collaborative learning.

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<sup>28</sup> Dillenbourg, P. (1999). *Introduction: What do you mean by “ collaborative learning?”* In Dillenbourg, P. (Ed.). *Collaborative Learning: Cognitive and computational approaches.* (pp.1-19). Oxford: Elsevier.

<sup>29</sup> Gerlach, J.M. (1994). *Is This Collaboration?.* In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.5-13). San Francisco: Jossey-Bass Publishers.

<sup>30</sup> Flannery, J.L. (1994). *Teacher as co-conspirator: knowledge and authority in collaborative learning.* In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.15-23). San Francisco: Jossey-Bass Publishers.

<sup>31</sup> Flannery, J.L. (1994). *Teacher as co-conspirator: knowledge and authority in collaborative learning.* In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.15-23). San Francisco: Jossey-Bass Publishers.

Gerlach (1994)<sup>32</sup> pointed out further more roles of teachers:

- Setting tasks and synthesizing
- Creating conditions for collaborative learning to take place
- Helping students to attack the tasks by providing guidance before it starts
- Carrying out managerial tasks e.g. help students to adhere time limits
- Analyzing and summarizing at the end

Hamm & Adams (1992)<sup>33</sup> believed teachers hold responsibilities include:

- Specify the instructional objectives
- Arrange the classroom to maximize social interaction
- Explain the task and the goal structure
- Provide the appropriate materials
- Observe the student interactions
- Help student solve some of the more difficult problems.
- Pay attentions to the learning process, social relationships within groups, and the evaluation or the group products.

### **Students' role**

Dillenbourg (1999)<sup>34</sup> suggested that students do not only share during group collaboration but also listening to others. During collaboration, learners help peers to reach deeper understanding of the topic by engaging in discussion and providing instant feedbacks.

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<sup>32</sup> Gerlach, J.M. (1994). Is This Collaboration?. In K., Bosworth., & S.J., Hamilton. (Eds.). Collaborative Learning: Underlying Processes and Effective Techniques (pp.5-13). San Francisco: Jossey-Bass Publishers.

<sup>33</sup> Hamm, M., & Adams, D. (1992). *The collaborative dimensions of learning*. New Jersey: Ablex Publishing Corporation.

<sup>34</sup> Dillenbourg, P. (1999). *Introduction: What do you mean by "collaborative learning?"* In Dillenbourg, P. (Ed.). Collaborative Learning: Cognitive and computational approaches. (pp.1-19). Oxford: Elsevier.



## 2.6 Assessment

Hewit & Whittier (1997)<sup>35</sup> suggested that teachers who use written assignments or examinations should “clearly explain grading standards” to learners before the start of assessment. He pointed out that if an area of students’ performances is being assessed, a separate grade should be given for another area. Therefore, in order to have effective assessments on students’ performance, the rubrics of the assessments should be made clear to students beforehand. The design of the assessments should also make separate rubrics for different area of performance.

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<sup>35</sup> Hewit, J.S., & Whittier, K.S. (1997). Teaching methods for today’s schools collaboration and inclusion. U.S.A.: Allyn and Bacon.

## Chapter 3 Methodology

### 3.1 Research design

This research is implemented in action research.

“Reflection is a key element for pre-service teachers.” (Collay, Bilics & Lerch, 2012)<sup>36</sup> The synergy between reflection and teaching echoes with the dynamic nature of education that reflection plays an important role in the pursuits of excellence in education. The spiral nature of action research (Mertler, 2012)<sup>37</sup> depicts the importance of reflection in education.

Action research is often seen as a tool for professional development (Ferrance, 2000)<sup>38</sup> that emphasizes the involvement of teachers in problems of their own classrooms and that the goal is to develop and improve professionally. (Borg, 1981)<sup>39</sup> It is strongly believed by Corey<sup>40</sup> (1953) that the consequences of teachers’ own teaching is more influential in improving and changing teachers’ practice than reading someone else’s findings. The repeated emphasis of the persistent involvement of teachers in the discovering, intervening and reflecting on the practice of teaching, again, echoes with the dynamic nature of education.

According to Ferrance (2000),<sup>41</sup> routines are structured for continuous confrontation with data in conducting action research that each cycle of action research consists of five phases of inquiry: identification of problem area, collection and organization of data, interpretation of data, action based on data and reflection. A cycle will be completed in the completion of five phases. In an education research, the cyclical process continues. However, due to the time limit of the 8-week teaching practicum, the research will conduct 2 cycles only.

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<sup>36</sup> Collay, B.M., Bilics, A.R., & Lerch, C.M. (2012). *Reflection: A Key Component to Thinking Critically*. The Canadian Journal for the scholarship of teaching and learning, 3(1), 1-19.

<sup>37</sup> Mertler, C.A. (2012). *Action Research: Improving Schools and Empowering Educators*. U.S.A.: SAGE

<sup>38</sup> Ferrance, E. (2000). *Action Research*. U.S.A.: Brown University

<sup>39</sup> Borg, W. (1981). *Applying educational research: A practical guide for teachers*. New York: Longman.

<sup>40</sup> Corey, S.M. (1953). *Action research to improve school practices*. New York: Teachers College Press.

<sup>41</sup> Ferrance, E. (2000). *Action Research*. U.S.A.: Brown University

This research constructed the theoretical basis of the relationship between collaborative learning and multi-perspective thinking based on the collection and interpretation of data. Two teaching interventions will be conducted throughout the two action research cycles that the first teaching intervention conducted will be reflected and reviewed in order to perform further adjustments in the second teaching intervention.

This action research is designed to engage teacher in the professional development of practice of teaching. Conclusions and suggestions will be drawn after the completion of the two-cycle action research for further interventions and researches in the future.

### **3.2 Sampling**

All the data collected from students were ethically approved by the research office of The University of Hong Kong, consensus were granted from the principal of the participating school, parents of the participating students and the participating students.

The data of this research were collected from a class of 25 students local school with Christian background that using Cantonese as the medium of instructions. Characteristics of the class are passive, attentive and used to direct teaching. 25 students were participated in this research.

Students have engaged in group-work before but never experienced in collaborative learning.

### 3.3 Data Collection

This research collects data through three questionnaires, two teaching interventions, three essay assessments and two audiotaped interviews.

#### 3.3.1 Questionnaires

There were three questionnaires (*appendix 1*) conducted before the first teaching intervention (Questionnaires I), after the first teaching intervention (Questionnaires II) and after the second teaching intervention (Questionnaires III).

The statements stated on questionnaires are:

1. I tend to think from limited perspectives that result in failing in getting a holistic and comprehensive picture of events.
2. Collaborative learning is effective in stimulating thinking.
3. Collaborative learning provides me with exposures to arguments from multi-perspective.
4. Collaborative Learning promotes justified arguments among peers.
5. Collaborative learning promotes justified arguments among peers and that stimulates me to think from multi-perspective.
6. Collaborative Learning facilitates the learning in Liberal Studies.
7. I prefer collaborative learning to traditional teaching methods, e.g. direct teaching.

Questionnaire I was distributed to students to evaluate their level of multi-perspectives skills, perception and aspiration on collaborative learning before the first teaching intervention as to facilitate the implementation of the action plan in the later stage. Questionnaire II was distributed to students to evaluate their enhancement (if any) of the level of multi-perspectives skills, changes in perception and aspiration on collaborative learning after the first intervention. Questionnaire III was distributed to students to compare their responses to collaborative learning after the two teaching interventions.

There are seven statements listed identically in Questionnaire I, Questionnaire II and Questionnaire III. Students could choose from “0 to 4” as scores to indicate their degree of agreement on the statements, the higher the score indicated the more they

agree on the statement. All seven statements are set to evaluate students' perception on their level of multi-perspective thinking, how does collaborative learning promote multi-perspective thinking and the results of using collaborative learning in Liberal Studies lessons.

**Table 1: Analysis of statements on Questionnaire I, II & III**

Statements	Level of multi-perspective thinking	How does collaborative learning promote multi-perspective thinking	The results of using collaborative learning in Liberal Studies lessons
1. I tend to think from limited perspectives that result in failing in getting a holistic and comprehensive picture of events.	✓		
2. Collaborative learning is effective in stimulating thinking.		✓	
3. Collaborative learning provides me with exposures to arguments from multi-perspective.		✓	
4. Collaborative Learning promotes justified arguments among peers.		✓	
5. Collaborative learning promotes justified arguments among peers and that stimulates me to think from multi-perspective.		✓	
6. Collaborative Learning facilitates the learning in Liberal Studies.			✓
7. I prefer collaborative learning to traditional teaching methods, e.g. direct teaching.			✓

According to table 1, students' responses to statement 1 reflect the perception on their level of multi-perspective thinking; responses to statement 2-5 show how do they think on how does collaborative learning promote multi-perspective thinking;

responses to statement 6-7 reveal their perception on the results of using collaborative learning in Liberal Studies lessons.



### 3.3.2 Teaching interventions

There were two teaching interventions designed to investigate on the effectiveness of collaborative learning on students' multi-perspective thinking. First teaching intervention was designed upon the data and literature collected, reviewed and interpreted in the second and third phase of inquiry; second teaching intervention was adjusted based on the first intervention upon the reflections from students' responses (questionnaires and interview) and teacher's observation (*appendix 2*) during the first teaching intervention. Both interventions were videotaped for the reflections.

First teaching intervention (*appendix 3*) was carried out in a lesson within 85 minutes and designed on the topic of the sweat factory in China that students were arranged to learn through collaborative learning. The lesson was designed to enable students to develop multi-perspective thinking through collaborative learning, acquire a comprehensive understanding towards the sweat factor in China, and enable students to develop the ability to analyze the possible impacts brought by a social issue to different stakeholders. The lesson was structured in the way that a video and three articles of different perspectives were shown to students as the foundation for their basis in collaboration. Students were divided in groups to collaborate on the questions "*What are the impacts brought by the sweat factory in China to different stakeholders in different perspectives?*" and presentations of different groups as the class collaboration were conducted. After the lesson, students were asked to complete Questionnaire II, an essay assessment (I) and an audiotaped interview (I), together with teacher's in-class observation, adjustments were made in the design of second teaching intervention according to the feedbacks and reflections.

Second teaching intervention (*appendix 4*) was carried out in a lesson within 95 minutes and designed on the topic of sustainable development in China. The lesson was designed to enable students to develop multi-perspective thinking through collaborative learning, help students in acquiring a comprehensive understanding towards the current problems faced by Chinese citizens and its relations to the living quality of them and enable students to develop the ability to analyze the effects of promoting sustainable development in improving living standard of Chinese citizens. Photos were shown to raise students' learning motives and multiple reading articles were provided for collaboration on "What are the relationship between those

problems and quality of living of Chinese citizens?” with three guiding questions subdivided by teachers to assist students in collaborating. There was a presentation session that students from each group had to collaborate in the classroom. Students were asked to complete Questionnaire III, an essay assessment (II) and an audiotaped interview (II), together with my in-class observation after the second teaching intervention were used to evaluate the completion of the two-cycle action research that conclusions and suggestions were drawn for further researches and interventions.

### **3.3.3 Essay assessments**

Students were invited to participate in three essay assessments that were completed before the first teaching intervention, after the first teaching intervention and after the second teaching intervention.

Students completed the first essay assessment (appendix 5) on *“Is it a blessing or a curse to China to reform and open up?”* so the initial level of multi-perspective thinking of students was collected as the basis for evaluation of the effectiveness of the two teaching interventions.

The second essay assessment (appendix 6) was about *“To what extent do you agree with the statement that ‘it is more harm than good for China in becoming the world factory after reform and opening up’? Explain your answer with justified reasons from different perspectives.”* The second assessment was designed to assess on students’ improvement (if any) in answering question from multiple perspectives to evaluate their level of multi-perspective thinking after the first teaching intervention.

The third essay assessment (appendix 7) was completed after the second teaching intervention on *“In light of the current development of China, Economic development should come before environmental protection.’ Do you agree with this statement? Explain your answer.”* It was designed to evaluate students’ enhancement (if any) in multi-perspective skill after two teaching interventions.

All the three essay assessments were assessed with rubrics (appendix 8, 9 & 10) in the highest score of 8. There are four categories identified in the rubrics with the score attained: “Excellent” (score of 7-8), “Good” (score of 5-6), “Fair” (score of 2-4) and

“Poor” (score of 0-1). The rubrics mainly assessed students’ ability to address the question from multiple perspectives that less emphasis was put on other marking criteria, e.g. the richness of elaboration. It was designed to focus on examining the effectiveness of collaborative learning on enhancing students’ multi-perspective thinking and to minimize the potential effects brought by other variables that could affect the accuracy of the research. The assessments were also used for the reflection of students after collaboration.

### 3.3.4 Interviews

There were two semi-structure audiotaped interviews (appendix 11) conducted after the first and second teaching interventions. Five students were drawn randomly at each interview to participate in the two interviews. Two interviews were conducted in collecting direct responses from students regarding the two teaching interventions and to receive opinions from them concerning the two teaching interventions.

The interview questions are:

1. From what you have learnt in the lessons, do you think collaborative learning enhances your ability in thinking from multi-perspective? Why or why not? How?
2. Do you think collaborative learning has its own limitations or drawbacks to your learning? If yes, what are the limitations and drawbacks?
3. Have you encountered any difficulties in learning with collaborative learning? If yes, what assistances do you need to help you overcome them, e.g. classroom settings, teachers guidance, etc.
4. Evaluate my teaching performances in conducting collaborative learning in the classroom. What are the things that I can improve?
5. Do you prefer collaborative learning to other traditional teaching methods, e.g. direct teaching, in the future study?

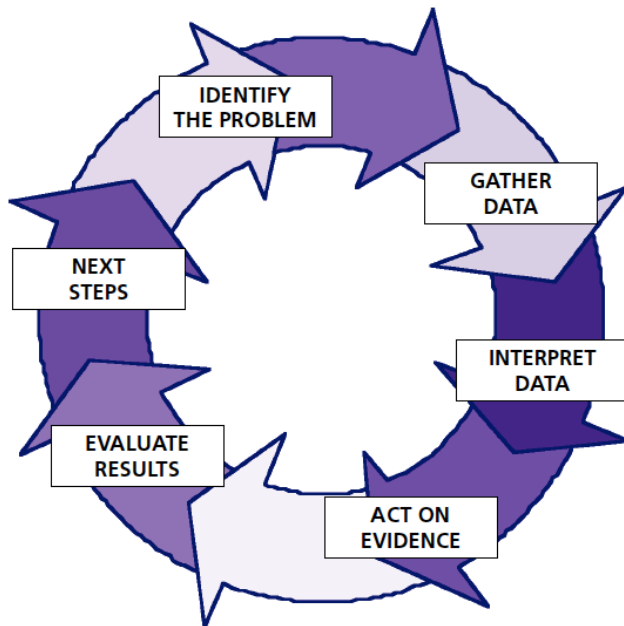
### 3.4 Schedule of Research

Date	Phases of inquiry	Cycle
1 Sept 2013 – 10 Mar 2014	<u>Identification of problem area</u> Identify the topic <u>Collection and organization of information &amp; interpretation of information</u> Gather Information Review related literature	
11 Mar 2014 – 25 Mar 2014	<u>Action based on researched information</u> Develop a research Plan – <i>design the questionnaires, interview questions and assessment tasks, together with the action (collaborative learning) plan;</i> Collect data – <i>distribute Questionnaire I and assessment task I to students;</i> Analyze data – <i>Analyze the results of Questionnaire I and the assessment task I to select the targeted students of investigation;</i> Revise the action (collaborative learning) plan	<b>1</b>
26 Mar 2014	<u>Action based on researched information</u> Implement the action plan – first teaching intervention	
27 Mar 2014 – 2 Apr 2014	<u>Reflection</u> Self-reflecting on design and effectiveness; Collect data – <i>distribute assessment task II to evaluate the progress of students learning through collaborative learning in enhancing multi-perspective thinking;</i> Analyze data – <i>Analyze the results of assessment task II for the reflection of the cycle I;</i> Collecting students’ responses – <i>conduct semi-structured interviews with targeted students on their ideas on learning through the action plan;</i> Distribute Questionnaire II to students	
3 Apr 2014 – 8 Apr 2014	<u>Identification of problem area</u> Identify the problem after the first intervention	<b>2</b>

	<p><u>Collection and organization of information &amp; interpretation of information</u></p> <p>Gather Information</p> <p>Review related literature;</p> <p>Revise the research Plan</p> <p><u>Action based on researched information</u></p> <p>Redesign the action plan for Cycle 2</p>	
9 Apr 2014	<p><u>Action based on researched information</u></p> <p>Implement the action plan – second teaching intervention</p>	
10 Apr 2014 – 11 Apr 2014	<p><u>Reflection</u></p> <p>Self-reflecting on design and effectiveness;</p> <p>Collecting students’ responses – <i>conduct semi-structured interviews with targeted students on their ideas on learning through the action plan and also distribute Questionnaire III and assessment task III to the targeted students in evaluating the effectiveness of collaborative learning on enhancing their multi-perspective thinking</i></p>	

### 3.5 Phases of action research

Figure 1: cycle of an action research<sup>42</sup>



#### Identify the problem

In this phase, teacher has to identify a problem that he/she wishes to investigate, set research objectives and research questions to be investigated on in the later phases.

#### Gather data

This phase is important in deciding the actions to be taken. Information will be collected from multiple sources to understand the scope of problem and search for appropriate actions to be taken.

#### Interpret data

Analyze and identify information collected in the previous phase, review of appropriate literatures to decide on the actions need to be taken. The interventions to be taken will be planned in this stage and to be implemented in the later phase.

#### Act on evidence

Interventions will be implemented in this phase to as to address the problem identified in the first phase. After the actions have been carried out, reflection and evaluation will be carried out to assess the effectiveness of the actions taken.

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<sup>42</sup> Ferrance, E. (2000). *Action Research*. U.S.A.: Brown University

### Evaluate results

This phase is to assess the effectiveness of the interventions implemented to see if any improvement has been made. Reflections, feedbacks and responses will be made and collected to determine if enhancement has occurred. If enhancement occurs, teachers have to decide what can be improved in the interventions. If enhancement does not occur, teachers have to decide on what changes have to make to lead to a better result.

### Next step

After the evaluation, adjustments will be made accordingly and the cycle continues.



## Chapter 4 Results and discussion

This chapter examines the data collected from two teaching cycles. The data collected from the first teaching cycle includes questionnaires, teacher's observation from teaching intervention, essay assessment and interview. After a comprehensive analysis of the above data, adjustments were made regarding second teaching intervention. Data from the same sources as the first cycle were collected in second teaching cycle.

### 4.1 First teaching intervention

#### 4.1.1 Questionnaires

Students completed Questionnaire I and II before and after the first teaching intervention. The questionnaire statements (table 1) can be viewed as: statement 1 reflects the perception on students' level of multi-perspective thinking; statement 2-5 show how do students think on how does collaborative learning promote multi-perspective thinking; statement 6-7 reveal students' perception on the results of using collaborative learning in Liberal Studies lessons.

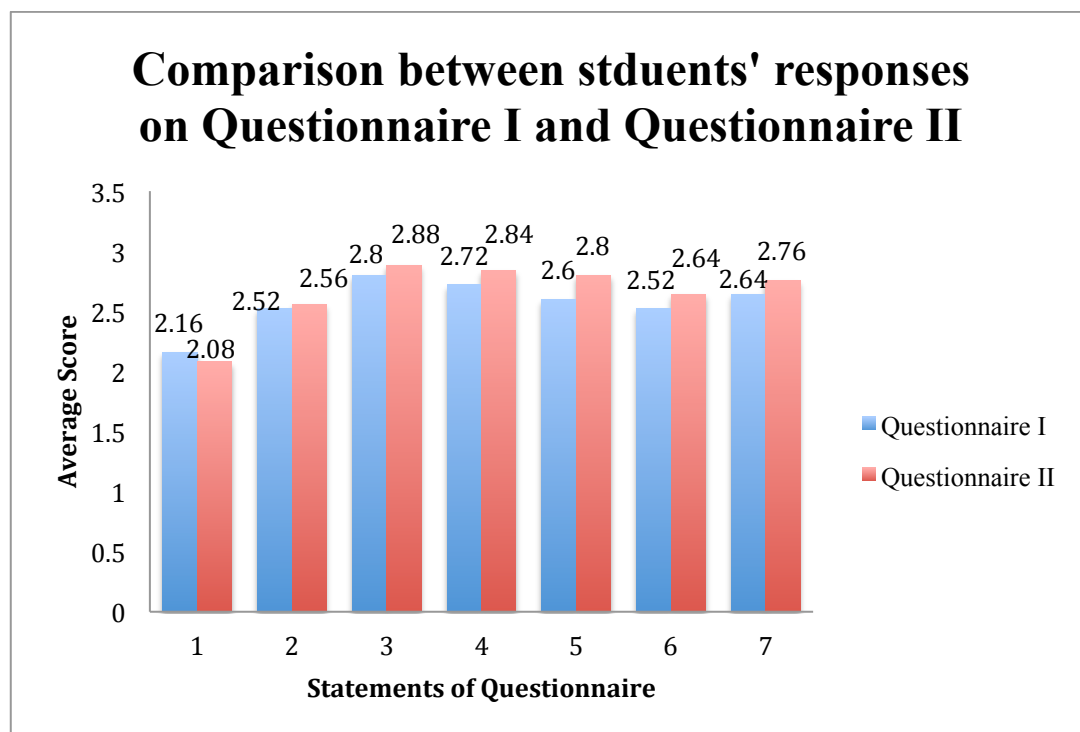


Figure 2

Figure 2 shows the comparison of students' responses to each statement between Questionnaire I and II in mean score.

### **Level of multi-perspective thinking**

After the first cycle, students' responses on statement 1 show the tendency for them to think from limited perspectives dropped. The average score dropped from 2.16 to 2.08. It shows that students believe the first teaching intervention helped them in enhancing their level of multi-perspective thinking.

### **How does collaborative learning promote multi-perspective thinking?**

Figure 2 shows the average scores of statement 2-5 in Questionnaire II rose slightly. It indicates students were more agreed on collaborative learning promotes multi-perspective thinking in stimulating their thinking, providing them with exposures to arguments from multi-perspective, encouraging justified arguments among peers that stimulates them to think from multi-perspective after the first teaching intervention than before the implementation of the first teaching intervention.

### **Collaborative Learning helps in enhancing multi-perspective thinking.**

After the first teaching intervention, students agreed more on collaborative learning facilitates learning in Liberal Studies. The average score rose from 2.52 to 2.64. Students were more prefer collaborative learning to direct teaching after the first teaching cycle.

#### **4.1.2 Observation from the first teaching intervention**

There were things observed in class that worth noting by the teacher and that after a thorough reflection, three insufficiencies were concluded. Besides insufficiencies, positive changes were observed as well.

##### **4.1.2.1 Observation**

###### **Students were confused and lost about the tasks**

During the first teaching intervention, students were asked to collaborate on analyzing the impacts to one of the stakeholders brought by sweat factory. Quite a number of students showed confusions about the stakeholder they were supposed to work on. Teacher observed that students were chatting in the start of the group discussion session. Students explained that they do not understand what were they supposed to work on hence they were not able to start the group collaboration when the teacher approached them and asked for the reasons.

###### **Some students were not willing to participate**

Teacher observed that some of the students were lying on the desks and did not participate in the group collaboration at all while some of the remaining students were engaging in the collaboration but showed difficulties towards the group collaboration in the aid of the reading articles assigned.

###### **Extra time were spent on group arrangement**

Student were not grouped before the lesson, therefore, groups were formed before the start of the collaboration work. Some students refused to work with other students and that caused conflicts between students and teacher. Extra time was spent on dealing with the conflicts and groups formation.

###### **Enhanced learning motivation and engagement**

Students' learning motivation was higher compared with the lessons before the first teaching intervention. Students were excited to learn collaboratively hence their engagement in the whole lesson was higher than before the first teaching intervention. Students were actively engaging in the group and classroom collaboration, which they would normally be a passive receiver in a traditional classroom context.

### **Deeper understanding and personal views**

Students could answer teacher's question in a more thorough and deeper manner showing their understanding towards the lesson as compared to the traditional learning context they had before the first teaching intervention. Students were more willing and capable to share their personal views towards the issue in which they usually found difficulties in the previous lessons.

#### **4.1.2.2 Insufficiencies**

##### **Insufficient guidance, instructions and classroom management**

Students were confused about the tasks and stakeholder they should be working on due to the insufficient guidance and instructions by the teachers. After watching a related video and reading articles, students were not clear about what they should be collaborating on and whether the collaboration should be based on the video, the reading articles or both. Students could start the collaboration after the clarification of instructions by the teacher.

Students showed confusions towards the direction of collaboration that teachers needed to guide their discussion direction group by group in order for the continuation of the group collaboration.

Some of the students were not cooperating in the engagement of the discussion and they refused to participate in the group collaboration. Some were working on assignments of other subjects that hindered the effective group collaboration to take place while the group mates of those students who were reluctant to participate in the group collaboration were deprived of the rights to be benefited from the collaboration. Teacher's role in managing the class ensuring every student is engaging and participating is important.

Presenting groups were asked to present their group collaboration outcome in front of the whole class, some of the students were not paying attention while the presenting group was presenting.

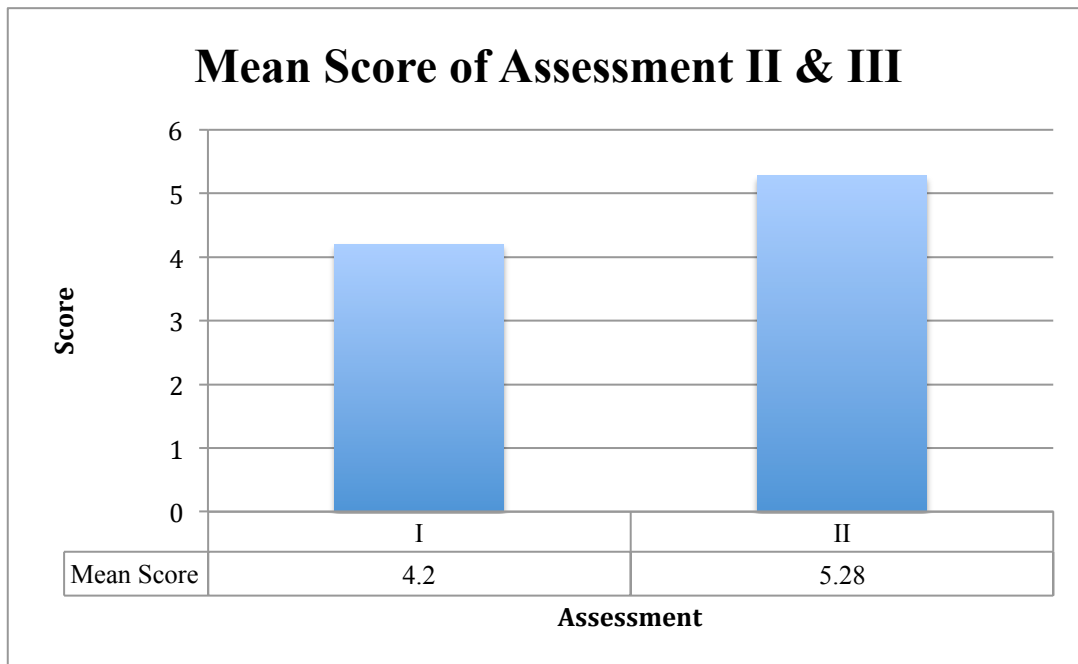
**Undesirable grouping arrangement**

The undesirable grouping arrangement cost extra time on arranging students in groups, assigning seats to students and dealing with the conflicts arose from the arrangements. Therefore, the schedule of the lesson is tightened hence the teaching and learning effectiveness is deteriorated.

**Inappropriate selection of reading articles**

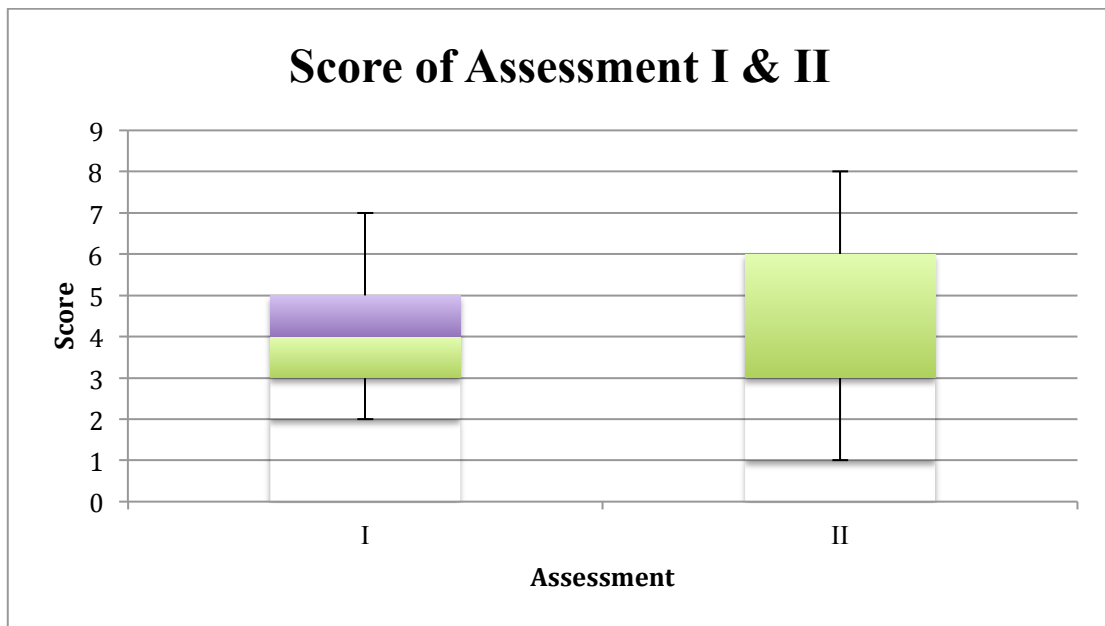
Only three unmodified reading articles were prepared for the facilitation of group collaboration. Students showed difficulties during collaboration since they found the information was not enough to support a fruitful collaboration.

### 4.1.3 Essay assessment



**Figure 3**

After the first teaching intervention, students were asked to complete Assessment II as to compare with Assessment I to see if any enhancement was shown. From the results shown in figure 3, the mean score of Assessment II increased to 5.28 from 4.2 of Assessment I. It shows that students' multi-perspective thinking were enhanced. The rubrics of the Assessment I and II can be found in appendix 8, 9 and 10.



**Figure 4**

The boxplot above showed the upper quartile, median, lower quartile, minimum and maximum of the score of Assessment I and II. The range of score of Assessment II is larger than that of Assessment I. The median (6) and upper quartile of score (6) of Assessment II are higher than that of Assessment I (4 and 5), showing quite an improvement. The fact that the median and upper quartile of score of Assessment II is both 6 indicates that more students' performances were cluttered in the "Good" (appendix 8, 9 and 10) category.

#### **4.1.4 Interview**

Five students were drawn randomly to conduct the interview after the first research cycle, the results of the interview are as follow:

##### **Collaborative learning helps improving in multi-perspective thinking**

*“Everybody has different points of views, stances, understandings and interpretations towards an issue, through collaborative learning, more arguments can be thought of and can inspire further thinking.” (4B01)*

*“Collaborative learning is different from direct teaching, in collaborative learning not only teachers are the one who talks but we can see things and do things ourselves through group discussions. Therefore, more points can be raised from different perspectives.” (4B16)*

*“Through collaborative learning, students with different views on different perspectives can think of something that I cannot think of, through collaboration we can think of more arguments.” (4B28)*

The interview showed that students agreed on the effectiveness of collaborative learning in enhancing multi-perspective thinking in Liberal Studies. They believed collaborative learning could facilitate their thinking in lessons.

##### **Conflicts may arise during collaboration**

*“Everybody has different views towards an issue, sometimes we would get into conflicts arguing for the stance and we might even forgot about our own arguments and stance after the intense conflicts.” (4B28)*

*“The group collaboration might involve conflicts among students, some might use impolite or foul languages during the collaboration, time was wasted in the meaningless conflicts hence lead to the slow learning progress.” (4C32)*

Students expressed their worries in the potential conflicts led by the collaboration might waste lessons' time and hinder the learning progress.



### **Teachers were unable to monitor the class effectively**

*“Some students were off-task throughout the whole lesson that made us very difficult to collaborate on the question assigned since I am the only one who was working.” (4C32)*

*“It would be helpful if the teacher could provide more instructions and guidance before the group collaboration and to provide more information regarding the topic so as to facilitate the whole group collaboration.” (4B19)*

*“It would be great if the teacher could use some games or activities to intrigue us to know more about the topic, we would be more interested in engaging in the lesson.” (4B16)*

Students suggested ways for the teacher to improve in the teaching in the area of classroom management, the introductory of the lesson and also teaching materials provided for students.

### **Time for collaboration was not enough**

*“Not enough time was allowed for the group collaboration” (4B28)*

Students expressed that more time should be allowed for the group consensus to be reached.

### **Prefer collaborative learning to direct teaching**

*“I prefer collaborative learning since we do all the things by ourselves, we find the information and discuss by ourselves. It would be more interesting and we could absorb more than direct teaching.” (4B28)*

*“Collaborative learning enables us to learn more about others’ thinking, more about the issue and also we remember things more vividly.” (4C32)*

Students preferred collaborative learning to direct teaching since collaborative teaching allows them to work on their own and it makes learning more interested and more profound.

#### **4.1.5 Adjustments on second teaching intervention**

After revising all the collected data, it shows that students have a slight improvement in thinking from multiple perspectives and also intrigued them to engage in learning. Students expressed their willingness to accept collaborative learning to be adopted in the Liberal Studies lessons. Teacher adjusted the second teaching intervention with the analysis of the above data:

##### **Extend group collaboration time**

Students expressed that the collaboration time was not enough for the group collaboration hence the group collaboration time was extended from 15 minutes to 20 minutes in the second teaching intervention.

##### **Arrange groups' formation before lesson**

Regarding the time consuming process for formation of groups, students were asked to form their groups before the lesson and the group lists were required before the lesson. Teacher assigned students who were unable to form groups before the lesson in groups.

##### **Arrange presentations in a circle**

Presentations were conducted in front of the whole class that students sitting at the back of the classroom were not paying attention to the presenting groups. Regarding this situation, the presentations of the second teaching intervention were done in a circle formed by students. This arrangement was adjusted to foster the class collaboration and also to engage every student in the presentations. Students were able to see each other throughout the whole presentation session.

##### **Provide guiding questions for group collaboration**

The lacking of guidance and instructions from teacher is one of the insufficiencies that were hindering the effectiveness of the first teaching intervention. Therefore, instead of asking students to discuss on a question (“analyzing the impacts to one of the stakeholders brought by sweat factory.”) students were asked to collaborate in the three guiding questions suggested by teacher: a) “What are the economic/social/environmental problems faced by the Chinese citizens?” b) “How do

all the problems affect their quality of living?” c) “How does promotion of sustainable development in China help to improve the quality of living of Chinese citizens?”

Teacher needed to ensure students understood the task of the collaboration before the start of it.

### **Showing photos regarding the topic to arouse students**

Some of the students were not participating in the lesson and the teacher tried to arouse students. In the second teaching intervention, photos showing different social problems in China were shown to students in the hope that they would find it intriguing and to draw their attentions to the topic and engage them in the learning and collaboration.

### **Selection of shorter in length reading articles and provision of articles from different perspectives**

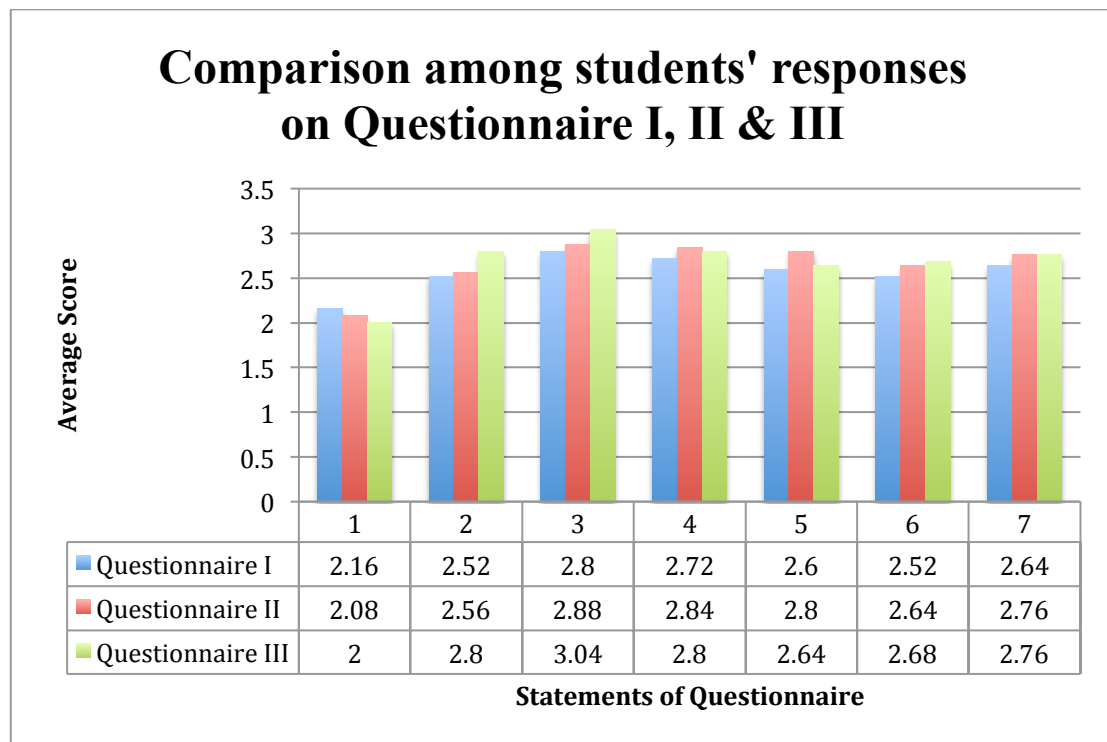
In the first intervention only three lengthy articles were provided to students. Since there were five groups, some of the groups shared similar results in collaboration because of using the same reading article as source. In the second teaching intervention, twelve shorter in length articles A to L were prepared with 3 to 4 articles combining as a set, different combinations forming different sets to be read by different groups.

## 4.2 Second teaching intervention

### 4.2.1 Questionnaires

Students completed questionnaire I, II and III before and after the first teaching intervention and after the second teaching intervention. The questionnaire statements (table 1) can be viewed as: statement 1 reflects the perception on students' level of multi-perspective thinking; statement 2-5 show how do students think on how does collaborative learning promote multi-perspective thinking; statement 6-7 reveal students' perception on the results of using collaborative learning in Liberal Studies lessons.

Figure 5 shows the comparison of students' responses to each statement among Questionnaire I, II and III in mean score.



**Figure 5**

#### **Level of multi-perspective thinking**

After the second cycle, the mean score (Figure 5) of students to think they think from “single-perspective” or “limited perspectives” dropped gently from 2.16 to 2.08 then further dropped to 2. Since the lower the mean score for this statement indicates students believed they tend not to think from single-perspective or limited perspective. After two teaching cycle, students perceive themselves enhanced in multi-perspective thinking.

### **How does collaborative learning promote multi-perspective thinking?**

Figure 5 shows the average scores of statement 2 and 3 in Questionnaire III raised slightly from 2.56 to 2.8 and 2.88 to 3.04 from Questionnaire II respectively while statement 4 and 5 dropped from 2.84 to 2.8 and 2.8 to 2.64 respectively from Questionnaire II. It indicates students were more agree on collaborative learning promotes multi-perspective thinking in stimulating their thinking and providing them with exposures to arguments from multi-perspective. However, they were less likely to think collaborative learning promote multi-perspective thinking through encouraging justified arguments among peers that stimulates them to think from multi-perspective as comparing with their perception after the first teaching intervention.

Both the mean score of statement 4 and 5 are higher than the one before the implementation of first teaching intervention.

### **Collaborative Learning helps in enhancing multi-perspective thinking.**

After the second teaching intervention, the mean score for statement 6 raised from 2.52 to 2.64 then 2.68 from Questionnaire I, II and III. It shows students agreed more that collaborative learning is effective in promoting learning in Liberal Students. However, the mean score for statement 7 stand at 2.76 in both Questionnaire II and III shows that students' perception on using collaborative learning over direct teaching did not changed generally in the teaching cycle 2.

#### **4.2.2 Observation from the second teaching intervention**

The adjustments made in the second teaching intervention after the review and reflection of all the data in the first teaching cycle improved the insufficiencies spotted in the first cycle. However, the teacher observed other insufficiencies. Yet, there were things observed in the second teaching intervention as the positive changes.

##### **4.2.2.1 Observation**

###### **Students were not as excited as the first collaborative learning**

During the first teaching intervention, students were excited about collaborating with their peers. However students were not as excited as the first teaching intervention on collaborative learning.

###### **Students complained about the sudden increase in essays**

Students were complaining the high frequency in written assessments that they were tired in writing essays since Assessment III was already the third assessment they were required to do in the two-teaching-cycle design within two-week time.

###### **The collaboration results were fruitful**

Compared to the first teaching intervention, the group collaboration outcome was richer. Students could provide arguments with justified reasons from different perspectives during the presentation and also the group collaboration.

###### **The enhancement in students' willingness to engage**

Fewer students were not willing to participate in the group collaboration even those who had low learning incentives were willing to engage in the group and class collaboration.

###### **The presentation session was more interactive**

Since students were arranged to sit in a circle during the presentation session, more interactions among students were observed. Students were more attentive to the presentations as compared to the first intervention.

#### **4.2.2.2 Insufficiencies**

##### **Packed lessons designed in collaborative learning**

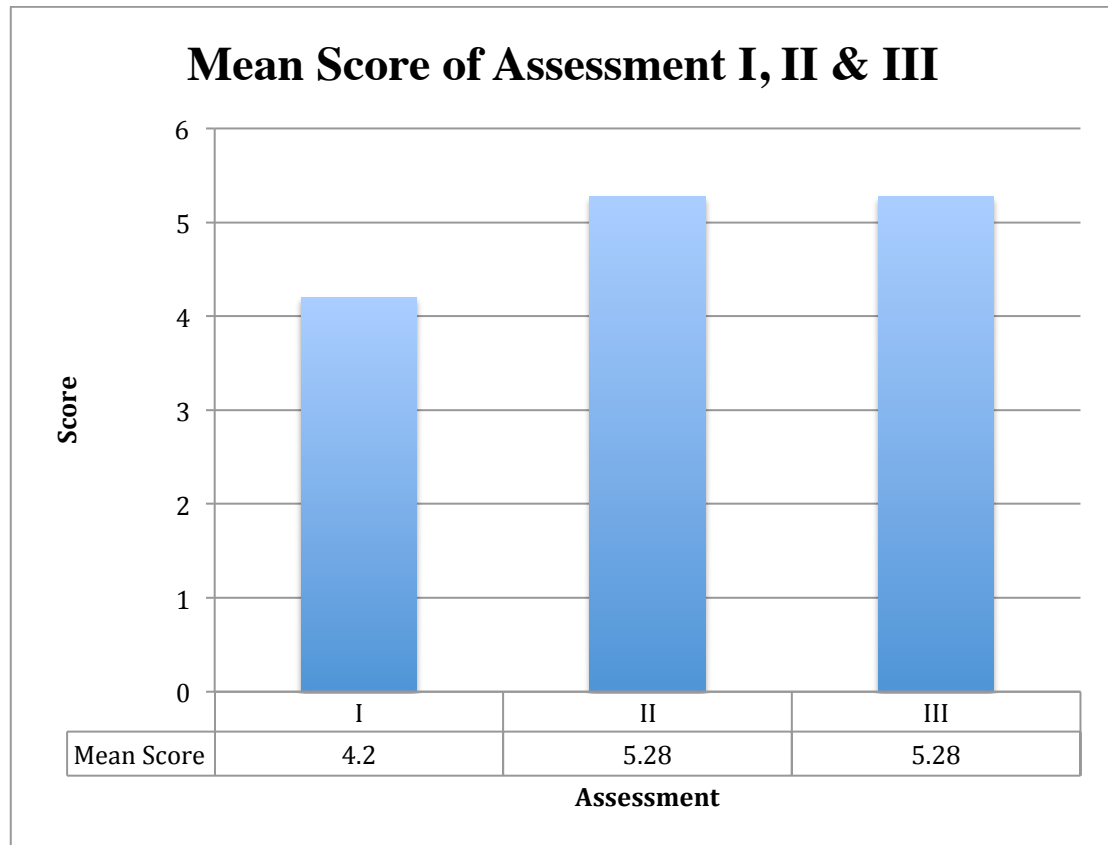
Throughout the two teaching cycles, students were bored about using collaborative learning too often. They were participating in the collaboration but they showed their dissatisfaction in the beginning of the lesson. Teacher should adopt multiple teaching strategies in order attract students to be interested in the topics and also to increase the learning motives.

##### **Overwhelming workload in written assessments**

Students were stressed about the overwhelming workload in written assessments and it had adverse impacts on their learning incentives and learning outcome. Instead of using mere written assessments, teacher should adopt diversified assessment methods to assess students to avoid the adverse effects of using too many written assessment on students' learning.

### 4.2.3 Essay assessment

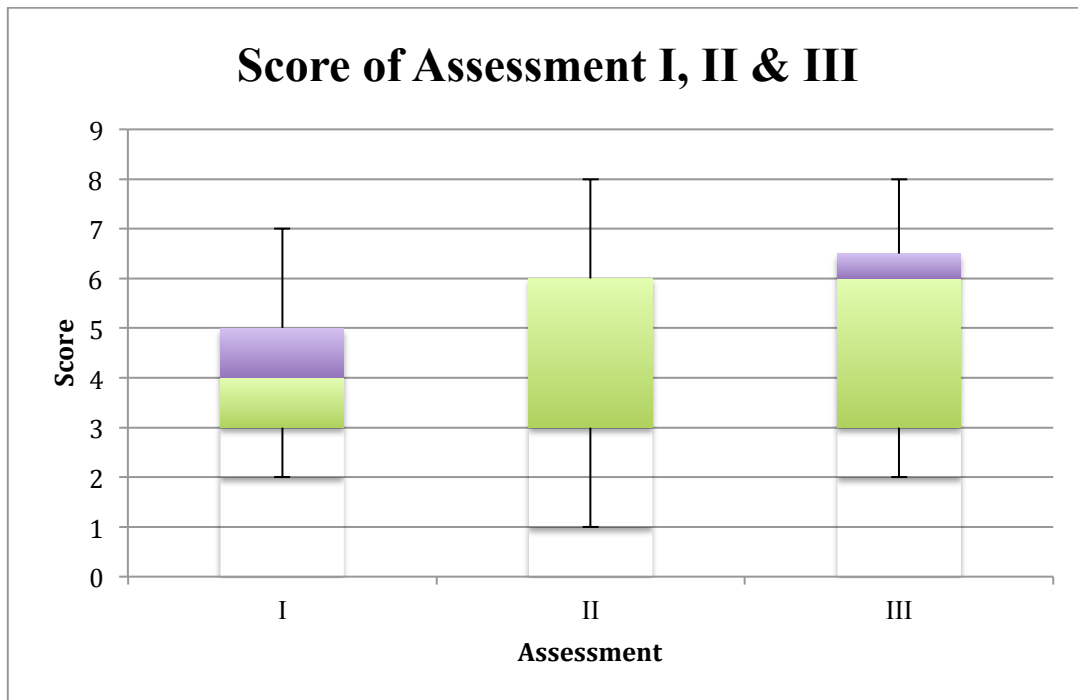
After the second teaching intervention, students were asked to complete Assessment III as to compare with Assessment I and II, to see if there is any enhancement. The rubrics of the Assessment I and II can be found in appendix 8, 9 and 10.



**Figure 6**

From the results shown in figure 6, the mean score of Assessment III is the same as Assessment II – 5.28. Although it was improved from 4.2 of Assessment I to 5.28, the ceased of score in improving might seemed that students stopped improving after the first teaching intervention. The same set of data was analyzed in a boxplot below in greater details.





**Figure 7**

Figure 7 shows the upper quartile, median, lower quartile, minimum and maximum of the scores of Assessment I, II and III. The range of scores from Assessment III is 2 to 8 while the Assessment I is 2-7, general improvements can be seen. The median of Assessment III, score of 6, is higher than the one of Assessment I, score of 4. It shows half of the student scored 6 or higher in Assessment III which is a great improvement compared with Assessment I that only 25% of students scored 5 or higher.

The range of scores of Assessment III is smaller than that of Assessment II implying students' performances improved as a whole. The median score of Assessment II and III are both 6, while the upper quartile of score of Assessment II and III are 6 and 6.5 respectively. It shows more students scored 6.5 or above in Assessment III. More students' performances were assessed as "Excellent" (appendix 8, 9 and 10) in Assessment III.

#### **4.2.4 Interview**

##### **Collaborative Learning enhancing multi-perspective thinking**

*“Different people holds different thoughts, through continual interactions we can know about how people think differently from us and it promotes multi-perspective thinking.” (4B32)*

*“People have different thinking style that may think of things that I can never think of, because of that, it inspires my thinking and makes me to improve.” (4C14)*

Students believed that the use of collaborative learning enhances their multi-perspective thinking.

##### **Credits to the use of photos**

*“The use of photos provide me with vivid images that caused profound memories.” (4B24)*

*“I agree with them (4B24)” (4C14)*

Students thought the adjustments made to second teaching intervention to use photos as the introduction of the lesson was a success.

##### **Need more time for collaboration**

*“We need more time to collaborate, 20 minutes is far from enough.” (4B24)*

Students expressed that there was still not enough time for group collaboration even it had increase to 20 minutes from 15 minutes in the first teaching intervention.

##### **Need visual aids during presentation session**

*“I like the way that we formed a circle so that we could see the presentations group clearly, therefore, we were more concentrated.” (4B24)*

*“I prefer using visualizer during presentation since some of us were not really good at presentations that we couldn't follow their presentation entirely. It would be easier*

*for us to follow the presentation if there was a visualizer to visualize the presentation content.” (4C14)*

*“I prefer using visualizer since we could see.” (4B03)*

Students like the idea of forming circle to increase the interactivities, however, some suggested that the presentation contents should be visualized during presentation session.

**Prefer collaborative learning to direct teaching under certain circumstances**

*“I prefer collaborative learning to direct teaching if the group mates are all willing to learn and engage, I would like to discuss with them.” (4C02)*

*“I would prefer collaborative learning if we could ask teacher questions immediately when we encounter any difficulties even during the presentation of other groups.” (4B03)*

*“I would prefer collaborative learning only if the students were engaging in the lesson and were willing to participate.” (4B32)*

Students prefer collaborative learning under the condition that all students are willing to participate and engage in the learning.

### **4.3 Completion of two cycles**

#### **4.3.1 Teacher's reflection**

There were two teaching cycles in this action research. Adjustments regarding the second teaching cycle were based on the review and reflection of all the data and from teacher's observation. During the two teaching cycles, teacher had professionally developed the skills in using collaborative learning in lessons as well as cultivating students' multi-perspective thinking with the use of that.

However, since the tight schedule of the two-cycle research, teacher was not able to collect comprehensive data and see remarkable improvements of students. Hence, teacher was not able to reflect thoroughly with the data collected. The absence of experienced teachers to observe the lesson giving valuable feedbacks also caused the teacher unable to reflect the teaching interventions better so as to make adjustments accordingly.

Teacher observed that some of the students believed that collaborative learning was a waste of time since they want to get everything from the teacher to deal with the public examinations.

Teacher observed that students were reluctant to work on written assessment again when it was third written assessment in two weeks. The teacher should adopt diversified assessment methods to improve the effectiveness of assessment. Assessment can be made through observation, presentation, drama, role –play, discussion, etc. so that the learning can be more interesting to students. Teacher can also use online forum or online social network for assessment so that students would be less stressed towards the assessment. Bransford, Brown & Cocking (1999)<sup>43</sup> suggested that using technologies gives “students and teachers more opportunities for feedback, reflection, and revision”

#### **4.3.2 Students enhancement in multi-perspective thinking**

Students improved in thinking from multiple perspectives as shown in the assessments, questionnaires, interviews and teacher's observation. Students believed

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<sup>43</sup> Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (1999). *How people learn: brain, mind, experience, and school*. Washington, D.C.: National Academy Press.

that collaborative learning could enhance their multi-perspective thinking and that teacher also see the effectiveness of realization of theory into practice. Students demonstrated limited-perspective thinking in Assessment I while showing improvements in Assessment II and Assessment III that most of them exhibited abilities or attempts in thinking from multiple perspectives.

#### **4.3.3 Conditions to be met in the use of collaborative learning**

According to students' feedback, collaborative learning is effective only if students are willing to engage and participate in the collaboration. The effectiveness of a lesson design stresses on the introductory phase, whether it can arouse students' interests in learning and investigating on the topic determined the success or failure of the lesson.

## **Chapter 5: Conclusion and suggestions**

### **5.1 Conclusions**

Teaching contents and strategies were revised through reflection on data collected in order to implement collaborative learning in Liberal Studies lesson effectively. Teacher acquired and developed the skills, knowledge and attitude needed in implementing collaborative learning.

This research shown that using collaborative enhances students' multi-perspective thinking under certain conditions those conditions should be met in order to have an effective collaborative learning. Otherwise, the use of collaborative learning will not only be ineffective but also harmful to the learning incentives of students.

Moreover, students learning and the cultivation of multi-perspective thinking do not only depend on the teaching method adopted but subjected to different variables. For example, the topic of the lessons, students' learning motivation, time of the lessons, during of the lessons, classroom settings, etc. All these factors need to be taken into consideration when evaluating the effectiveness of promoting multi-perspective thinking.

## **5.2 Research limitations**

### **Tight research schedule, not enough time for revising the design of teaching interventions**

There were two teaching cycles in this research, the first teaching intervention was implemented on 26 May and the second intervention was implemented on 3 April. Taking the time allowed for students to work on Assessment II and the time needed for marking, there were only few days for the review and reflection of the first teaching cycle, due to the tight schedule, the time available for reflection and make adjustments on the second teaching cycle was limited, the reflections and adjustments on the second teaching cycle was not comprehensive.

Limited time was allowed for students to get used to the new mode of learning, as mentioned above, students' preparedness is very important in the effectiveness of implementation of collaborative learning.

### **Insufficient data collected**

In this research, data were collected only through questionnaires, teacher's observation, written assessments and interviews. The absence of invitation of experienced to observe two teaching interventions to provide in-time and valuable feedbacks and suggestions for the professional development of the teacher in the next teaching cycle.

Moreover, only five students were invited to the interviews after the first and second teaching intervention each. Valuable feedbacks from other students were not collected under the design of this research.

### **Other uncontrollable factors**

Flannery (1994)<sup>44</sup> mentioned "many of the variables that influence group dynamics are beyond teacher's control" that teachers have little power to affect, including class scheduling, social calendar, grading system, the physical space available in the classroom movability of furniture, etc. In this research, both teaching interventions

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<sup>44</sup> Flannery, J.L. (1994). *Teacher as co-conspirator: knowledge and authority in collaborative learning*. In K., Bosworth., & S.J., Hamilton. (Eds.). *Collaborative Learning: Underlying Processes and Effective Techniques* (pp.15-23). San Francisco: Jossey-Bass Publishers.

took place in the same classroom. The classroom is in a rectangular shape where students sitting at the back were having difficulties in following the activities in the front of the classroom. The adjustment in the second teaching intervention that requiring students to sit in a circle for presentation was made because of this. However, the space available for a round circle was limited hence the circle was in elliptical that the interactivity among students was not maximized. The topic of the lesson also affects students' engagements in the lesson, students with different backgrounds and prior knowledge may respond differently towards different topics.

### **Improvements take time to show**

Due to the limited research time for the implementation of the two teaching cycles, no remarkable improvement was observed since students do not immediately improve with experience on the one or two tasks or interventions.



## 5.3 Suggestions

### 5.3.1 Third teaching intervention

Due to the time constraint of this research, only 2 teaching cycles could be implemented. Regarding the insufficiencies identified in the second teaching cycle, suggestions for the third teaching intervention are as follow as the reference of the future teaching:

1. Collaboration time

Student expressed the insufficient time for collaboration in both of the interviews even after the extension of collaboration time in the second teaching intervention. Teacher may consider to extend the collaboration time in the third teaching intervention or if the lesson

2. Presentation Session

Students should be sitting the arrangement that allows interactivities among students at the same time visual aids should be available for the presenting groups to show the remaining students the product of collaboration to facilitate the effectiveness of collaboration among students.

3. Assessment methods

Students were tired about written assessments, essay assessment can be replaced by other assessment methods according to the characteristics of the class in the third teaching intervention, e.g. presentations, drama, role-play, etc.

4. Lesson design

The lesson should be designed in a way that students' interests are aroused to encourage them to engage in the collaboration to ensure the effectiveness of collaborative learning. Games or role-play can be used in the introductory phase of the lesson.

### **5.3.2 Further research**

#### **Design a questionnaire to collect students' feedbacks on the lesson design**

Teachers' reflection emphasizes on the design of lesson, preparation of teaching materials and the research cycle. An effective reflection involves feedbacks not only from teachers but also students. Interview is effective in providing feedbacks as the basis for teacher's reflection, however due to the limited time it is not possible to interview every student after each teaching cycle. Therefore, including a questionnaire to collect students' responses and suggestions after each teaching cycle so that the reflection of the teaching cycle can be done in a comprehensive manner.

#### **Enough time should be allowed in between teaching cycles**

There were only few days for the teachers to review all the data collected from teaching cycle 1 hence teacher's reflection on the first teaching cycle was not profound and comprehensive. One to two weeks should be allowed in between teaching cycles to ensure sufficient time for teacher to reflect on the previous teaching cycle so that effective adjustments can be made accordingly.

#### **Invite experienced teachers to observe the lessons**

Collaboration on the reflections of the teaching interventions helps the professional development of the researcher. Therefore, experienced teachers should be invited to observe the lesson so that professional and valuable feedbacks can be obtained for further reflection on the teaching cycle.

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Appendix 1: Questionnaire I, II & III

The effectiveness of collaborative learning on enhancing students' multi-perspective thinking in Liberal Studies

**Questionnaire I**

Date: \_\_\_\_\_

**Personal Information of the Respondent:**

School: \_\_\_\_\_

Name: \_\_\_\_\_ Class: \_\_\_\_\_

Please circle the appropriate ratings to describe the statements. The higher the score indicates the more you agree with the statement.

1. I tend to think from limited perspectives that result in failing in getting a holistic and comprehensive picture of events. 我經常從狹隘的角度思考，因此未能從一個全面的角度去看事件的全部。	4	3	2	1	0
2. Collaborative learning is effective in stimulating thinking. 合作學習能有效地刺激我的思維。	4	3	2	1	0
3. Collaborative learning provides me with exposures to arguments from multi-perspective. 合作學習讓我有機會接觸不同角度的論點。	4	3	2	1	0
4. Collaborative Learning promotes justified arguments among peers. 合作學習促進同輩間有理的辯論。	4	3	2	1	0
5. Collaborative learning promotes justified arguments among peers and that stimulates me to think from multi-perspective. 合作學習促進同輩間有理的辯論而且能有效地刺激我從多角度思考。	4	3	2	1	0
6. Collaborative Learning facilitates the learning in Liberal Studies. 合作學習促成我在通識科的學習。	4	3	2	1	0
7. I prefer collaborative learning to traditional teaching methods, e.g. direct teaching. 比起傳統的教學方法例如直接教學法，我更喜歡合作學習。	4	3	2	1	0

The End

Appendix 1: Questionnaire I, II & III

The effectiveness of collaborative learning on enhancing students' multi-perspective thinking in Liberal Studies

**Questionnaire II**

Date: \_\_\_\_\_

**Personal Information of the Respondent:**

School: \_\_\_\_\_

Name: \_\_\_\_\_ Class: \_\_\_\_\_

Please circle the appropriate ratings to describe the statements. The higher the score indicates the more you agree with the statement.

1. I tend to think from limited perspectives that result in failing in getting a holistic and comprehensive picture of events. 我經常從狹隘的角度思考，因此未能從一個全面的角度去看到事件的全部。	4	3	2	1	0
2. Collaborative learning is effective in stimulating thinking. 合作學習能有效地刺激我的思維。	4	3	2	1	0
3. Collaborative learning provides me with exposures to arguments from multi-perspective. 合作學習讓我有機會接觸不同角度的論點。	4	3	2	1	0
4. Collaborative Learning promotes justified arguments among peers. 合作學習促進同輩間有理的辯論。	4	3	2	1	0
5. Collaborative learning promotes justified arguments among peers and that stimulates me to think from multi-perspective. 合作學習促進同輩間有理的辯論而且能有效地刺激我從多角度思考。	4	3	2	1	0
6. Collaborative Learning facilitates the learning in Liberal Studies. 合作學習促成我在通識科的學習。	4	3	2	1	0
7. I prefer collaborative learning to traditional teaching methods, e.g. direct teaching. 比起傳統的教學方法例如直接教學法，我更喜歡合作學習。	4	3	2	1	0

The End



Appendix 1: Questionnaire I, II & III

The effectiveness of collaborative learning on enhancing students' multi-perspective thinking in Liberal Studies

**Questionnaire III**

Date: \_\_\_\_\_

<p><b>Personal Information of the Respondent:</b></p> <p>School: _____</p> <p>Name: _____ Class: _____</p>
--

Please circle the appropriate ratings to describe the statements. The higher the score indicates the more you agree with the statement.

1. I tend to think from limited perspectives that result in failing in getting a holistic and comprehensive picture of events. 我經常從狹隘的角度思考，因此未能從一個全面的角度去看到事件的全部。	4	3	2	1	0
2. Collaborative learning is effective in stimulating thinking. 合作學習能有效地刺激我的思維。	4	3	2	1	0
3. Collaborative learning provides me with exposures to arguments from multi-perspective. 合作學習讓我有機會接觸不同角度的論點。	4	3	2	1	0
4. Collaborative Learning promotes justified arguments among peers. 合作學習促進同輩間有理的辯論。	4	3	2	1	0
5. Collaborative learning promotes justified arguments among peers and that stimulates me to think from multi-perspective. 合作學習促進同輩間有理的辯論而且能有效地刺激我從多角度思考。	4	3	2	1	0
6. Collaborative Learning facilitates the learning in Liberal Studies. 合作學習促成我在通識科的學習。	4	3	2	1	0
7. I prefer collaborative learning to traditional teaching methods, e.g. direct teaching. 比起傳統的教學方法例如直接教學法，我更喜歡合作學習。	4	3	2	1	0

The End

## Appendix 2: List of lesson observations

### Things to observe during teaching interventions

#### **During the whole lesson**

1. To see whether students understand the structure of the lesson structured in collaborative learning.
2. To see students' responses of the arrangement of the lesson.
3. To see whether students are willing to participate in the learning environment that requires them to learn collaboratively.

#### **During Discussion**

1. To see whether students understand the instructions given by the teacher regarding the discussion.
2. To see whether the teaching materials, e.g. video and reading articles, could provide a basis to guide students to think and analyze the impacts of sweat factory in China to different stakeholders from multiple perspectives.
3. To see the ways of students interacting with others in groups.
4. To see whether students attempt to analyze the impacts of sweat factory in China to different stakeholders from different perspectives.
5. To see whether the time allowed to students to discuss is sufficient to reach a consensus in groups.
6. To see whether students can have a balanced analysis of the impacts of sweat factory in China to different stakeholders from different perspectives, both positive and negative impacts.

#### **During presentation**

1. To see whether the classroom setting, e.g. sitting arrangement, number of presenters, etc. facilitates the collaboration among students during presentation.
2. To see whether the audiences attempt to raise questions concerning the presentations with different perspectives with the presenting groups.

### Appendix 3: First teaching intervention: lesson plan and teaching materials

#### **F.4 Lesson Plan**

#### **Liberal Studies – Modern China: sustainable development in China**

Class:	F.4BC
Module:	Modern China (Sustainable development in China)
Date:	26 March 2014 (first teaching intervention)
Lessons required:	85 minutes
Number of students	25

**Focus:** The Sweat factory in China

**Overall aims:**

1. To enable students to develop multi-perspective thinking through collaborative learning.
2. To acquire a comprehensive understanding towards the sweat factor in China.
3. To enable students to develop the ability to analyze the possible impacts brought by a social issue to different stakeholders.

**Key questions for inquiry:**

1. What is a “sweat factory”?
2. What are the impacts brought by the sweat factory in China to different stakeholders in different perspectives?

**Students’ prior knowledge:**

1. The concept of sustainable development
2. The situations of peasant worker in major cities.

**Lesson objectives:**Knowledge:

1. To develop a comprehensive understanding on the sweat factory in China.
2. To understand both the positive and negative impacts brought by the sweat factory in China to different stakeholders in different perspectives

Skills:

1. To develop students' analytical and organization skills from reading passages and video to identify impacts brought by the sweat factory.
2. To enable students to develop multi-perspective thinking through collaborative learning.

Values:

1. To cultivate their awareness towards the recent development of China and become a responsible global citizen.
2. To respect the diversified views

**Key concepts:**

1. Sustainable development
2. Human Rights

**Assessment task:**

Students will be asked to complete a question on “To what extent do you agree with the statement that ‘it is more harm than good for China in becoming the world factory after reform and opening up’? Explain your answer with justified reasons from different perspectives.”

## Teaching flow

Learning Activities	Question for inquiry	Duration	Learning and teaching materials
<p><b>Introductory:</b> Teacher will ask questions to guide them to think of the concept of “world factory” and “sweat factory”.</p>		5 min	
<p><b>TLA 1: Warm-up activity</b> A brief introduction on “world factory” and “sweat factory” will be provided for students’ understanding. And prepare them for the coming group discussion.</p>	<p><b>What is a “sweat factory”?</b></p>	5 min	
<p><b>TLA 2a: Video watching</b> A video on “sweat factory in China” will be provided for students as the knowledge base for the collaborative discussion. Meanwhile, a worksheet for students to jot down the important notes from the video will be distributed to students for the sake of later discussion.</p>		20 min	<p><a href="http://evideo.lib.hku.hk/play.php?vid=4291248">http://evideo.lib.hku.hk/play.php?vid=4291248</a></p> <p><b>Worksheet I</b></p>
<p><b>TLA 2b: Group discussion</b> Students will be asked to discuss with peers on the points they have jotted down during the showing of the video.</p>		5 min	
<p><b>TLA 3a: Group Discussion</b></p> <p>a) Instructions and guidance on the group discussion activity will be given. Students will be divided into 5 groups of 5, each group will be responsible for analyzing the impacts to one of the stakeholders brought by sweat factory with the aid of video shown previously and the articles distributed to them.</p> <p>b) Students will be asked to decide on their individual role by themselves. The roles include: one group leader, two recorders and two presenters.</p>	<p><b>What are the impacts brought by the sweat factory in China to different stakeholders in different perspectives ?</b></p>	15 min	<p><b>Articles</b></p> <p><b>Worksheet II</b></p>

<p>c) The details of the discussion will be jotted on a paper provided to them.</p>			
<p><b>TLA 3b: Class Collaboration</b>  Each group will be asked to share their discussion outcome to the whole class in around 3 minutes. Groups other than the presenting groups have to come up with at least one question concerning the contents presented as to foster their learning collaboratively. Meanwhile, students will be given a piece of worksheet for jotting down the main points of the presentations of other groups.</p>		<p><b>25 min</b></p>	
<p><b>TLA 4: consolidation</b>  Teacher will summarize the whole lesson with students collaboratively. Students will be asked to complete an assessment task as the assessment of the first teaching intervention.</p>		<p><b>10 min</b></p>	

Appendix 3: First teaching intervention: lesson plan and teaching materials

一. 根據影片「血汗工廠」，在空間內填上血汗工廠對不同持分者的影響。



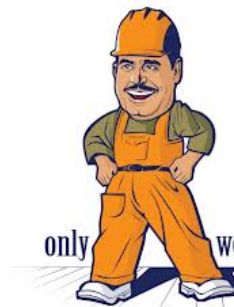
消費者



跨國企業



政府



工廠工人



工廠老闆

Appendix 3: First teaching intervention: lesson plan and teaching materials

姓名：\_\_\_\_\_ 班別：\_\_\_\_\_ ( ) 日期：\_\_\_\_\_

二. 分組討論

根據影片，資料一、二及已有知識，與組員合作寫出血汗工廠對不同持分者的影響。

持分者	影響	
	正面	負面
工廠工人		
廠商／生產商		
消費者		
跨國企業		
政府		



### Appendix 3: First teaching intervention: lesson plan and teaching materials 資料一

在中國設工廠主要為手機代工的富士康於 2010 年有多名員工從高樓墜下自殺死亡，有人稱之為“十連跳”。面對這些連續自殺事件，有人把矛頭直指富士康，譴責其為“血汗工廠”。

在對富士康的調查中發現工人在生產線上工作強度相當大，有許多工人工作幾周後仍無法適應超負荷工作，精神壓力很大。而且由於基本工資 900 元，不足以承擔富士康工人在深圳的生活工資，工人們不得不依靠加班來獲得更多的工資以維持生計，贍養家庭。比如，在電腦生產組裝部的工人表示他們“非常累，壓力很大。”他們平均每 7 秒完成一道工序，需要集中所有精力手腳不停的做事。他們需要在每班 10 小時的工作時間內站著完成規定量為 4000 台戴爾品牌電腦。這些工人們稱“我們每天的工作比機器都要更快”。在這種超負荷的工作壓力之下，人的正常生理需求都被破壞，何談其他更高層次的精神需求呢？可見，在富士康，為了追求企業的效益，工人的個人價值被無情踐踏，忽視工人價值的管理方式和理念。即使中國早已訂立《勞動法》等相關法則來保障勞工權益，但由於不少地方政府主要是以企業的經濟成果來支撐政績，使一些地方政府為了政績而放鬆監管，甚至為了保護企業而犧牲勞工的利益，而違反法律法規的企業和當地政府，卻很少受到相應的懲處。

沒有人是為工作而生，工作是為了讓人實現自己的價值，享有充裕的物質生活和豐富的精神世界；而在中國經濟發展的模式下，姑且先不討論精神世界，很多時候經濟的高速增長甚至不能保證工人的基本生活需要。造成這種現象的原因有二。第一是單一強調經濟增長和利潤而不顧工人的基本生活需要。成千上萬的工人用他們超負荷的勞動和過低的工資支撐著中國經濟的發展。第二是不公平的分配制度。製造業的利潤間接流向金融業、房地產業等熱門產業或者外資公司，而我們的工人卻在溫飽線上拼命掙紮。試問，用大多數工人的貧窮換來少數人的大量奢侈品消費，這樣的分配方式的合理性何在？

參考資料來源：<http://www.chinalaborwatch.org/cn/tw/news/new-214.html>

## 資料二

血汗工廠是發展中國家工人的「必要之惡」，血汗工廠的物質狀況並非如大眾想像中的差。以國際傳媒大幅報道的富士康為例，據《紐約時報》報道富士康員工每周工作六天，日薪不足 20 美元，月薪約 500 美元，折合約 3,000 元（人民幣，下同）左右。這薪酬待遇略好於城市打工的中下階層（收入 2,000 元左右）。此外，富士康免費提供住宿等等福利，亦是一般城市上班族中少見。有富士康員工亦表示，「外面的工資還沒有富士康多，而且工作更累，根本沒有休假的，這裏一周還能休息一天，還有年假和帶薪假」。

而且農民工待在農村更沒有出路，從農村跑來血汗工廠工作的工人佔了大多數，驅使多數農村人放棄務農、走向城市的原因並不難明白，因為城市的工廠再累再苦，收入也比在農村來得更高。如果所有血汗工廠消失，意味着農民將失去一份相對待遇較好的工作，其時，農民的生存狀況只會更差。

再者，血汗工廠是發展中國家沒選擇下的選擇，即使撇開外資的因素，血汗工廠亦是發展中國家政府惟一能考慮的發展方向。發展中國家自身也存在營運血汗工廠的比較優勢，比較優勢這經濟概念獲不同參與經濟活動的團體所考慮。發展中國家由於在工業及其他發展方面太遲起步，企業在產品的技術和設計上面往往與發達國家的企業有顯著的差距，與已發展國家硬碰，在市場上並沒有得到優勢。不過，發展中國家往往有較廉價的勞動力，可以在技術含量低的產品上，利用較低的成本，取得低價格的優勢，從而在國際貿易中保持進出口的均衡。市場上不同的產品每日不停地生產，而產品的生產工作分配，往往是取決於由誰掌握着最大的比較優勢，因為一個地方所擁有的比較優勢越大，代表着她能用更少的資源製造更多的產品，於是各地只專注生產自己擁有比較優勢的產品後，與其他地方進行貿易。雖然不少在這些血汗工廠製作的製成品因工人連夜趕工、加上產品質素檢定隨便，質素參差。但因為生產成本下降，產品價格亦會因此而調低，令消費者可以買到便宜的產品。

參考資料來源：<http://hk.apple.nextmedia.com/news/art/20130730/18356169>

### 資料三

跨國企業業務遍及世界各地，其產品或服務行銷全球，成為「國際品牌」、「全球品牌」，例如 Nike、麥當勞、蘋果電腦等。跨國企業採用全球分工、廉價的生產模式。由於已發展國家的工資和研發成本高，相反發展中國家相對上勞動力充足、工資低、勞工保障低、法制不完善等。跨國企業看準這點，將工廠遷往發展中國家，如中國、印度及一些東南亞國家，減低生產成本，並增加生產彈性。國際生產分工不斷擴展，造成發展中國家的「廉價生產模式」。跨國企業是國際生產分工的主要推動者，藉着在發展中國家生產和加工，將生產成本大幅降低，再以大幅高出成本的價錢銷售到全球，獲得巨大利潤。

發展中國家藉着廉價生產模式，增加其出口和改善對外貿易。例如中國在改革開放後，漸漸成為世界的加工中心，即所謂的「世界工廠」，其出口比重曾佔中國每年 GDP 約 30%至 40%，大量的製成品輸出國外，令中國賺取數以億計的外匯。同時，理論上，外資的湧入，也為發展中國家帶來資金、就業機會、技術、管理知識等。

跨國企業也不願多花成本在工作環境保障和環境保護上。工作環境方面，如中國這種發展中的大國，即使法律規定，但由於政治落後，法制不健全，跨國企業在中國的代工廠運作時往往漠視法規，例如刻意將機器的安全裝置移除以加快工序、不依勞動法賠償工傷、超時工作不補水等，即使員工向政府投訴，因為貪腐問題嚴重，也難以得到公正的裁決。

發展中國家大多出現嚴重污染問題，大量廢物和化學品得不到適當處理便被隨便棄置，工廠排放大量有毒氣體、溫室氣體和污水，為發展中國家帶來嚴重的土地、空氣和水源污染。亞洲開發銀行和清華大學剛發表報告，世界十大空氣污染城市當中，中國獨佔七席，而中國 500 個大型城市中，符合世衛空氣質素標準的竟不到 1%。除空氣污染，污水也導致農作物含有毒重金屬，危害人民生命。跨國企業財雄勢大，如麥當勞、星巴克等跨國連鎖店進駐發展中國家時，當地的本土產業往往無法與之競爭，大大影響本土經濟甚至本土文化發展。

但發展中國家的廉價產品大量銷往歐美等地，跨國企業的確從中賺取巨額利潤。

參考資料來源 <http://hk.apple.nextmedia.com/news/art/20130124/18145032>

## Appendix 4: Second teaching intervention: lesson plan and teaching materials

### F.4 Lesson Plan

#### Liberal Studies – Modern China: sustainable development in China

Class:	F.4BC
Module:	Modern China (Sustainable development in China)
Date:	9 April 2014 (second teaching intervention)
Lessons required:	95 minutes
Number of students	25

#### Overall aims:

4. To enable students to develop multi-perspective thinking through collaborative learning.
5. To acquire a comprehensive understanding towards the current problems faced by Chinese citizens and its relations to the living quality of them.
6. To enable students to develop the ability to analyze the effects of promoting sustainable development in improving living standard of Chinese citizens.

#### Key questions for inquiry:

3. What are the economic, social and environmental problems faced by Chinese citizens?
4. What are the relationship between those problems and quality of living of Chinese citizens?
5. How can promotions of sustainable development in improving living standard of Chinese citizens?

#### Students' prior knowledge:

3. The concept of sustainable development
4. The general problems faced by China citizens

**Lesson objectives:**Knowledge:

3. To develop a comprehensive understanding on the current situation of economic, social and environmental problems of China in relation to living standard.
4. To understand how the promotion of sustainable development in China can improve the living standard of Chinese citizens.

Skills:

3. To develop students' analytical and organization skills from reading passages and photos to identify economic, social and environmental problems in China.
4. To enable students to develop multi-perspective thinking through collaborative learning.

Values:

3. To cultivate their awareness towards the recent development of China and become a responsible global citizen.
4. To respect the diversified views

**Key concepts:**

3. Sustainable development
4. Quality of living

**Assessment task:**

Students will be asked to complete a question on: “In light of the current development of China, Economic development should come before environmental protection.’ Do you agree with this statement? Explain your answer.”

## Teaching flow

Learning Activities	Question for inquiry	Duration	Learning and teaching materials
<p><b>Introductory:</b> Photos of the current housing, medical services, air quality, water quality and education in Chins will be shown to students to guide them to inquire on the impacts of those problems on Chinese citizens' quality of living.</p>	<p><b>What are the economic, social and environmental problems faced by Chinese citizens?</b></p>	<p><b>15 min</b></p>	<p><b>PowerPoint Slides</b></p>
<p><b>TLA 1: Warm-up activity</b> Students will be asked to generate a list of criteria when considering “quality of living” of a place.</p>	<p><b>What are the relationship between those problems and quality of living of Chinese citizens?</b></p>	<p><b>10 min</b></p>	
<p><b>TLA 2a: Preparation for group discussion</b> Student will be asked to:</p> <ol style="list-style-type: none"> <li>Divide into 5 groups and sit according to the instructions given by teacher</li> <li>Claim their role in the group: a group leader, two recorders and two presenters</li> <li>Each group will get a set of reading materials that the combination of reading materials is different for each group. Each group will have 5 reading articles out of the 12 reading articles.</li> </ol>		<p><b>10 min</b></p>	<p><b>Sets of reading articles</b>  <b>A3 sheet</b></p>
<p><b>TLA 2b: Group discussion</b> Students will be asked to discuss in group three questions with the aid of the reading articles and photos:</p> <ol style="list-style-type: none"> <li>What are the economic/social/environmental problems faced by the Chinese citizens?</li> <li>How do all the problems affect their quality of</li> </ol>	<p><b>What are the relationship between those problems and quality of living of Chinese citizens?</b></p> <p><b>How can promotions of sustainable development in improving living standard of Chinese</b></p>	<p><b>20 min</b></p>	

<p>living? c) How does promotion of sustainable development in China help to improve the quality of living of Chinese citizens? The details of the discussion will be jotted on a paper provided to them.</p>	<p><b>citizens?</b></p>		
<p><b>TLA 2c: Class Collaboration</b> Each group will be asked to share their discussion outcome to the whole class in around 3 minutes. Groups other than the presenting groups have to come up with at least one question concerning the contents presented as to foster their learning collaboratively.</p>		<p><b>25 min</b></p>	
<p><b>TLA 4: consolidation</b> Teacher will summarize the whole lesson with students collaboratively. Students will be asked to complete an assessment task as the assessment of the second teaching intervention.</p>		<p><b>15 min</b></p>	

資料 A

### 發展綠色經濟，中國大有可為

綠色產業、綠色經濟、低碳環保目前正在日漸成為人們耳熟能詳的詞彙。面對能源和環境的雙重威脅，發展綠色產業和綠色經濟已經成為全球的共識，受到各國政府的普遍重視。甚至許多學者將綠色產業和綠色經濟稱為新一輪“綠色革命”、“第五次全球產業浪潮”。

我國目前處於加快轉變經濟發展方式的歷史關鍵點，正在積極建設資源節約型和環境友好型社會，綠色產業和綠色經濟無疑將在此次加快轉變發展方式的變革中大有所為。而目前，中國綠色產業和綠色經濟則剛剛方興未艾，是一個蘊藏著極大潛力的新興產業。

在保定，有一座將建築外牆與太陽能電池組件融為一體的五星級酒店——電谷錦江國際酒店。它是保定打造綠色經濟和綠色產業的一個標誌性建築，是充分體現保定將新能源產品製造和新能源產品應用相結合的一個典型。

電谷錦江國際酒店的投資方就是因贊助2010年南非世界盃而聞名的英利公司。英利公司是全球第二、國內唯一的具有完整產業鏈的多晶硅太陽能光伏電池生產企業。目前英利公司通過自主創新，在硅料提煉和提純工藝中擁有了一系列核心技術。

英利公司目前生產的大部分光伏產品都暢銷海外，西班牙等國的太陽能發電廠都採用英利公司的光伏產品，可以說，中國的綠色產業正在為全世界的綠色經濟做出突出貢獻。

在唐山市南部沿海的曹妃甸工業區，綠色經濟、綠色產業正在大力發展。除了太陽能產業外，曹妃甸工業園還將著力發展鐳射顯示技術等節能高新技術產業。同時，唐山市加大對鋼鐵製造等傳統產業的綠色化、生態化改造，這一點對於當前正處在工業化快速發展階段的曹妃甸工業區來說顯得尤為重要。

這次中央媒體走進河北保定“中國電谷”、天津濱海新區、唐山曹妃甸，我們看到了我國自主研發的低碳技術正在廣泛投入使用，我們看到了促進低碳技術應用和發展的制度正在日漸完善，我們看到了正在蓬勃發展的中國綠色產業和綠色經濟。

資料來源：[http://big5.ce.cn/gate/big5/views.ce.cn/main/yc/201009/08/t20100908\\_21798273.shtml](http://big5.ce.cn/gate/big5/views.ce.cn/main/yc/201009/08/t20100908_21798273.shtml)



## 資料B

### 中國：打擊濫伐森林、氣候變化及惡劣空氣質素

中國近年高速的經濟發展帶來了很多好處，但卻代價不菲——其中一項是要賠上美麗的自然環境及資源，特別是國內的森林。中國砍伐樹木的情況嚴重，導致出現水源污染、空氣污染及棲息地數量減少的問題，影響當地居民及野生生態。事實上，中國濫伐問題影響廣泛，可至全世界每個地方，因為砍伐樹木導致氣候變化，而氣候變化所帶來的影響，包括海水水位上升及帶來破壞力更強的風暴，我們身處香港亦感受得到。

過去，中國的工廠及家庭一般都砍伐樹木，破成木柴作燃料發電。但是，大量砍伐樹木的結果，不單破壞水源、污染空氣，更令原本翠綠的郊野變成不毛之地，一些具代表性的物種如大熊貓也大受影響。單單是為了收集木柴，就令雲南省每年喪失超過12萬公頃的樹林——差不多整個香港般大。

砍伐樹木會導致碳排放，而過度砍伐樹木為中國帶來世界最大溫室排放者的惡名。中國政府亦注意到伐木為國家帶來的種種問題，因此制定了2020年前重建4千萬公頃林木的目標。不過，與此同時，政府亦需為當地人提供伐木以外的維生方法。

資料來源：<http://www.tnc.org.hk/zh-HK/our-work/by-country/china/fighting-deforestation-climate-change-and-bad-air-quality-in-china/>

## 資料C

中國的河流正受工業水污染影響，現有三億多人喝不到安全的飲用水，即每四個中國人，就有一個在喝不乾淨的水！中國的水資源總量雖然排名世界第六，卻是全球最缺水的二十個國家之一。中國包括長江、黃河、珠江在內的七大水系，約四分之一的水質是連灌溉都不合格的「最劣質水」。中國約三成河流和兩成五近岸海域嚴重污染。

若將潔淨的水平平均分給全中國人，每人手中那杯的份量將少得可憐。

水污染主要來自工廠產生的污水。不但排放量大，影響的面積廣闊，而且成分複雜、毒性高，卻難以淨化和處理。就 2007 年的數據，工業污水排放量就有 246.6 億噸，佔污水排放總量約一半。

工業水污染問題不僅造成巨大的經濟損失，更直接危害中國人的飲水安全。據世界衛生組織調查顯示：全世界八成的疾病是由飲用受污染的水造成的。中國三億多農村人口食水水質不達標，其中水污染造成高達九千多萬人飲用水不安全。

資料來源：[http://water.greenpeace.org.cn/china\\_water\\_crisis.php](http://water.greenpeace.org.cn/china_water_crisis.php)

## 資料D

河流、湖泊及地下水所遭受的污染直接影響到飲用水源，來自國家環保總局的一組最新數據顯示，我們的飲用水，50%以上是不安全的。目前中污國農村約有 1.9 億人的飲用水有害物質含量超標，城市中污水的集中排放，嚴重超出水體自淨能力，許多城市存在水質型缺水問題。2008 年全國因包括水污染在內的環境污染造成的經濟損失為 5000 多億元，約佔當年 GDP 的 4%。據監察部統計，近幾年全國每年水污染事故都在 1700 起以上。農村環境問題日益突出，生活污染加劇，面源污染加重，工礦污染突顯，飲水安全存在隱患，呈現出污染從城市向農村轉移的態勢……

眾多城市的城郊接合部因為交通便利和勞力便宜而成為了工業區或者工業園，導入了化工、製造等污染企業，製造了大氣污染、水污染、土壤污染等問題。長年的污染積累後，傷害終於爆發，2002 年以來，“癌症村”、“怪病村”現象在中國各地頻頻出現，尤其高發於廣東、浙江、江蘇等經濟發展較快的省份，GDP 增長和“癌症村”增加之間呈現伴生關係。近幾年來，更增添了向內地資源省份蔓延的趨勢。

醫學界認為，目前已知 80% 的癌症發病與環境有關，尤其是與環境中的化學物質密切相關。水是致命中樞。美國紐約史蒂文癌症中心研究員雷蒙對 106 名死於各種癌症的人的細胞研究發現：圍繞在癌細胞的 DNA 周圍的水與健康人細胞周圍的水的結構是不同的。

## 資料 E

21日以來，中國中東部地區大部分省份出現灰霾，重霾面積約為81萬平方公里。環境保護部有關負責人23日說，該部啟動應急預案，組織12個督察組赴京津冀及周邊地區，就重污染天氣應對工作進行專項督查。國外多家媒體對中國治霾舉措表示關注。

美聯社報道稱，中國將空氣污染視為“有損國家形象”，政府制定多項措施，以求在治污方面取得明顯改善。

路透社23日消息說，灰霾天氣“席卷”中國領土面積的15%，環保部的督察組將走訪建築工地和鋼鐵、水泥、煤炭行業工廠，若發現違反生產標準的行為，將予以公示。

消息評論說，中國官方針對霧霾天氣已經發布了很多命令和政策。為抗擊空氣污染，中國已進行了大量工程投資，並通過法律手段懲罰那些違規企業。

加拿大電視台23日說，中國的空氣污染問題已經引發公眾憤怒，中國政府針對空氣污染下達了多項緊急措施，如河北石家莊近日根據車牌號碼進行限行，北京一些拆遷、燒烤和放煙花活動都將被禁止。

新加坡《聯合早報》早前報道稱，中國的空氣污染如果再不引起高度警惕，不真正下大決心、大力度去治理，恐將造成慘痛損失。也有媒體擔心，空氣污染問題或危及中國的社會穩定。

彭博新聞社消息說，中國環境監測部門在網站對大氣污染物發布實時監測，監管機構也發出緊急通知，要求地方政府及時、準確地預測和發布空氣質量信息，保證公眾的信息暢通。

《印度時報》23日報道稱，在國家及時發布預警的同時，中國也對部分城市進行汽車限行和暫停污染源工廠的生產。官方數據顯示，北京已有36家企業已經暫停生產，75家企業減少了產量。河北有數家鋼鐵生產商和相關企業當天上午被關閉。

報道說，中國的空氣污染問題由來已久，除粗放式經濟增長帶來的污染外，地形、天氣等原因也是不容忽視的影響因素。此前的治霾多“北風吹”，制定的一些措施也很難在地方得到徹底落實，但霧霾在中國大面積肆虐的現狀已經給政府敲響警鐘。

《華盛頓郵報》此前評論稱，一般而言，治理空氣污染將花費數年時間，中國政府目前採取的措施表明中國加速治霾的決心，新舉措至少可以代表變革的開始。

## 資料 F

北京環境保護監測中心預報，21日至23日，北京空氣質量將交替出現“5級重度污染”和“6級嚴重污染”。北京市環保局副局長姚輝通報，根據《北京市空氣重污染應急預案》相關規定，經市空氣重污染應急指揮部總指揮批准，自21日12時起，將空氣重污染的“黃色預警”升級至“橙色預警”。

根據《北京市空氣重污染應急預案》，“橙色預警”應急措施包括：施工工地停止土石方和建築拆除施工，停止渣土車、砂石車等易揚塵車輛運輸；按空氣重污染期間工業企業停、限產分預案確定的名單，對有關企業分別實施停產或限產減排30%污染物的措施；在現有“禁放”“禁燒”範圍的基礎上，全市範圍禁止煙花爆竹燃放、露天燒烤。

北京市的此輪霧霾，肇始於19日晚間。“一向空氣質量良好的北部遠郊區縣的密雲水庫監測站點，都未能倖免。這是由於‘偏南風’使得污染物在山前堆積，北京三面環山，此次沒有冷空氣在平原區域‘扛著’，污染物大量迅速積累。”北京市環境保護監測中心高級工程師孫峰說。

另據中國氣象局京津冀環境氣象中心發布的氣象資料分析，預計未來一周京津冀及周邊地區空氣污染氣象條件差，將出現持續霧、霾天氣。

為何此輪霧霾持續時間如此之久、預計程度如此之嚴重？專家認為，一是地面回暖緩慢，靜穩氣象條件不利於污染物擴散，短期難以顯著改善。二是北京市污染物快速積累，與偏南風導致的跨省市區域輸送有很大關聯。

### 污染物來自城市活動

對霧霾而言，短期看，是氣象條件製約空氣質量；長期而言，則是污染物超承載力排放。

“每一次霧霾，都是城市生活的多方污染因素綜合導致。在北京，污染物主要來自燃煤、機動車、工業、揚塵等。就全年而言，污染物構成比例變化不大。”張大偉說。

從組分上分析，張大偉介紹，正常大多數情況下，PM<sub>2.5</sub>的組分有4大類，有機物、硫酸鹽、硝酸鹽、銨鹽，這4類占PM<sub>2.5</sub>質量的百分比都會超過10%。“北京積累型的污染過程中，是硝酸鹽比較多，城區機動車排放的氮氧化物會轉化硝酸鹽。區域傳輸型的污染中，有機物和硫酸鹽會高一些。”他說。

此外，不同時期的污染呈現的特色略有差異，但全年總體變化不大。“比如，燃放煙花爆竹，可以測出鉀離子、鎂離子等金屬離子偏高，這是染色劑、燃放劑造成。6日俗早社趕林燒香節，能測出鉀離子非常高。”張大偉說。

資料來源：[http://news.xinhuanet.com/energy/2014-02/22/c\\_126174668.htm](http://news.xinhuanet.com/energy/2014-02/22/c_126174668.htm)

## 資料G

聯合國開發計劃署（UNDP）發表的一份報告說，世界各國的貧富懸殊問題正在加劇，對全球經濟和政治穩定構成新的威脅。

報告特別提到中國和印度這樣的主要發展中國家，形容這些國家的經濟增長強勁，國家整體財富增加。但是，這些財富並沒有均勻分配，而是造成了社會的嚴重不平等。

聯合國開發計劃署署長海倫·克拉克在接受媒體採訪時特別提到了中國的貧富懸殊問題。

她說，不均衡的增長會造成社會緊張，因為人們會看到別人比自己過得好。

她還說，中國的例子告訴人們，高速發展和消除貧困的同時會出現更嚴重的不平等。這也是中國領導人關切的問題。

聯合國開發計劃署的報告表示，過去20年貧富差距擴大的主要原因是貿易和金融全球化的影響，使得勞動者失去了討價還價的能力。

海倫·克拉克說，解決問題的關鍵是努力創造平等的就業機會，政府應當把注意力集中在改善勞動者技能方面。

資料來源：[http://www.bbc.co.uk/zhongwen/trad/world/2014/01/140129\\_undp\\_income\\_disparities.shtml](http://www.bbc.co.uk/zhongwen/trad/world/2014/01/140129_undp_income_disparities.shtml)

## 資料H

中國經濟發展了，人民生活改善了，舊的矛盾解決了，但新的問題和矛盾又產生了。具體到現實生活中就直接反映在中國老百姓目前最關切的“看病難、住房難、上學難”這三大民生問題，被稱作“新三座大山”。

在計劃經濟時期，中國老百姓的看病、住房、上學都由政府統一通過建立保障制度予以維護，大家享受的是社會主義的平等保障，這在當時被視作社會主義制度特有的優越性。改革開放以後，尤其在市場經濟的沖擊下，中國的醫療、住房、教育等先後實行了“市場化改制”，並且不分領域、行業統統採取“一刀切”的模式實施改革，從而與中國的基本國情產生巨大的衝突和矛盾，僅僅幾年運作其弊端便暴露無遺，使百姓苦不堪言。中國走過25年的改革路，老百姓卻普遍抱怨“看病難、住房難、上學難”。連續數年，每年3月在北京召開“兩會”，這“三難”成為改革不能惠及民生的老大難問題，一直是“人大”“政協”的代表和委員們關注的焦點。

資料來源：<http://book.people.com.cn/BIG5/69399/107424/180913/10879229.html>



## 資料I

### 中國經濟顯露五大危機問題

2007年的全球經濟危機到底有沒有過去？如果沒有過去現在正處於哪個階段？這場危機對中國的實體經濟和金融領域會產生哪些影響？中國社會科學院副院長李揚針對上述問題進行了深度解讀。經濟危機沒有過去僅是步入新的階段“經濟危機並沒有過去，雖然從去年開始，很多國內外的專家認為：經濟危機已經過去，並且經濟已經開始恢復。國外的政治家是因為選民的需要，會不斷地強調經濟形勢不錯。但我們不能如此樂觀，人云亦云。必須對經濟危機有一個比較正確地判斷，我們認為危機確實是在好轉，但是並沒有過去，只是進入了一個新的階段。”李揚認為經濟危機進入新階段原因有三方面：第一個原因是發達經濟體的發展方式和經濟結構扭曲。發展方式的扭曲問題表現為過度的依賴消費，對比中國是過度的依賴投資和出口。在收入的範圍內消費還無可厚非，但發達經濟體已經超出了收入的能力進行消費，於是就要借債。這次危機是債務危機，這個債務危機的實體經濟根源是人們的過度消費。企業、居民、政府都過度消費，都預支了自己的未來。發達經濟體由於其在全球經濟中的特殊地位，才使得過度消費對全球都產生了影響。所以才會因為美元出現問題，我國的儲備就出現了問題。以上是發展方式問題，它的經濟結構是高端服務業，在全球的分工體系之中，發達經濟體用他們高端的服務業，特別是金融產品和我們這些中等收入國家來交換實體產品。但這種情況不能長期持續，我國也需要發展高端製造業，也需要發展高端服務業。當我們有這種訴求，並取得一定的進展之後，一定會對發達經濟體產生衝擊。所以危機出現的時候，美國總統奧巴馬說要讓製造業重新回歸，這也印證了危機還沒有過去。

資料來源：<http://tw.aboluowang.com/2014/0221/374076.html#sthash.U8W9EZqK.dpbs>

### 中國經濟危機或由長三角開始 引爆點此起彼伏

長江三角洲地區是中國最大的經濟圈，其經濟總量相當於中國國內生產總值20%，然而其近來卻明顯問題多多。製造業萎縮、鋼貿系統危機爆發、房地產市場漸疲、民間借貸崩盤等，都成為經濟危機的引爆點。

被定為製造業中心的長三角發展到現在卻每況愈下，一項衡量中國製造業活動的關鍵指標在2月份出現下滑，延續了1月份的下降勢頭並創下七個月新低，這預示中國經濟將進一步疲軟。

### 地方政府熱衷土地經濟產生惡性循環

長三角的製造業萎靡不振，吸引力相對於其他地區的優勢在不斷縮小，不少投資者將目光投向用工成本更低的東南亞甚至非洲國家。中國製造業的外移雖有多種成本上漲的因素，但也有一些地方政府的推動因素在裡面。

在傳統製造業集中的長三角地區，由於經濟發展和財富的積累，當地的土地和房產價格節節高昇，成為吸引地方政府的「造富」來源。當「土地經濟」模式在各地蔓延後，地方政府都會來算一筆賬，那就是有限的土地能為地方財政貢獻多少財政收入，也成了大肆開發商業地產的原動力。

例如有數據顯示，目前蘇州高新區有登記的人口在 70 萬左右。按照國際標準，人均佔有商業面積在 1.2 平方米是一個比較合理的參照值，而現在按照目前已建、在建計算，人均商業面積將達到 3~4 平方米/人，顯然已經過剩。一些已經建成的購物中心人流量稀少，空置率甚至接近 100%。

資料來源：<http://www.epochtimes.com/b5/14/2/21/n4088821.htm?photo=2>



## 資料K

綠白相間的車身、無需燃油、沒有噪音，50輛新型的電動出租車在今年“兩會”召開前夕，駛上了北京延慶縣城的街頭。它們的出現向人們提示，綠色經濟正在悄悄進入中國人的生活。而在未來，這些電動車所代表的綠色經濟也許會影響我們每個人的生活，甚至是決定中國在國際上的地位。

比亞迪總裁王傳福說：「中國面臨的一個很大的壓力就是石油危機。中國去年汽車(業)高速成長以後，在未來十到二十年，每個家庭有一部車這是不過分的。那我們中國有4億個家庭，如果每個家庭一部車的話就變成4億部汽車，一部車一年用2噸油，2乘4等於8，8億噸油，中國要買8億噸油，中國是買不到這麼多油的。因此，石油的安全已經影響到國家的安全。」

石油被稱為工業的血液，但是石油總有一天要枯竭，而我們所生活的地球，也不可能永無止境地承受石油等化石燃料釋放出的滾滾黑塵。改變人類的經濟發展方式，用新的綠色能源，給工業經濟換血，在當今時代成為全球經濟發展的潮流。近年來，中國邁著大步，加入了這一潮流。今年兩會審議的“十二五”規劃，就被專家稱為中國第一個“綠色五年計劃”。中國總理溫家寶5號在作政府工作報告時，宣布了中國未來五年降低碳排放和能源消耗的總目標。

溫家寶說：「(未來五年)非化石能源佔一次能源消費比重提高到11.4%，單位國內生產總值能耗和二氧化碳排放分別降低16%和17%，主要污染物排放總量減少8%至10%。」

資料來源：<http://gb.cri.cn/27824/2011/03/10/5311s3180432.htm>

## 資料L

長久以來，中國大陸存在著食物供應短缺的問題，再加上農地久未休耕，並受到化學肥料與工業廢水的大量污染，土壤正加速惡化，中共官員預測未來30年更將有3~4億農村人口被迫遷移往都市。

據英國《衛報》近日報道，中共主管農業的官員表示，土壤品質的惡化是中國目前非常重要的課題。他預測，未來30年都市人口佔全國人口比例將由目前的47%增加到75%，屆時許多土地將被移做住房、道路以及其他基礎建設。

造成中國土壤惡化的元凶是工業污染，估計全國1/10的農地已遭到重金屬、有毒物質等工廠廢棄物嚴重污染。其次是農民耕作技術不合時宜，大量使用化學肥料，導致中國農地每公頃施灑的氮肥是全球平均的兩倍。

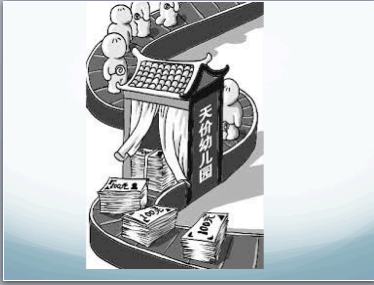
隨著城鄉貧富差距擴大，農村人口持續遷移都市，食物供應的穩定將成為中共當局艱巨的挑戰。然而，中共卻不想仿效外國，為8.5億農村人口建立生產效率較高的大型農場，因為小農經濟對於統治的穩定較為有利。

這位官員稱中國目前勉強供需平衡，但這個平衡卻很容易遭到破壞。

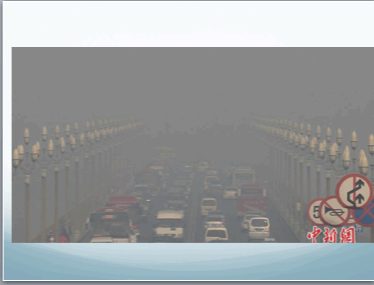
資料來源：<http://big5.soundofhope.org/node/104854>

Appendix 4: Second teaching intervention: lesson plan and teaching materials





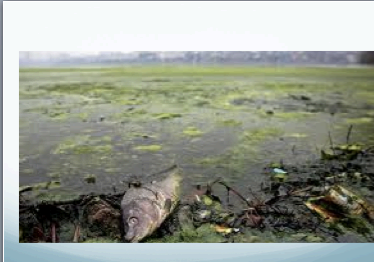
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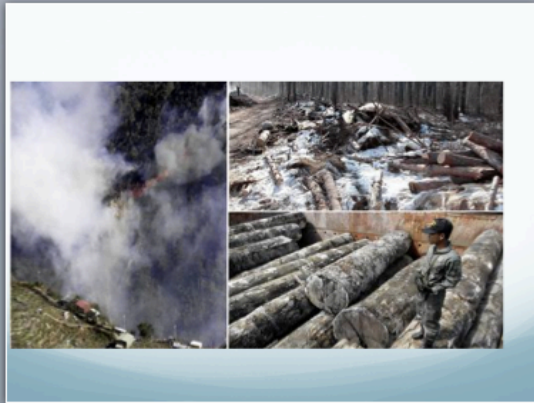
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積分

3/8

中國改革開放是好是壞？（-立場）（8分）

我認為改革開放對中國是一件好事。

首先，改革開放可以令人民的生活質素提升。改革開放引了大量外商到中國投資。三資企業為人民帶來很多就業機會，有更多就業的選擇，而且工資較耕種的高和穩定，人民的生活質素提升。

第二，人民的知識水平上升。因改革開放，和其他地方的交流和合作增加了，可以從而認識到其他國家的科技，再把科技帶到中國，解決科技落後問題。另外，因為和其他地方交流增加了，所以可以更加了解其他國家的文化，知識，更因為外國對科學的研究多了，令中國也開始對這方面有研究。又有外國的老師開始到中國教導學生其他語言（例如英文）這些都可以令中國的市民以及學生的知識水平上升，同時因語言上的溝通方便了，所以可以到國外留學，學習不同的知識。

中國改革開放也帶來了三農問題，農民的農作物不及国外的廉價物美，因為科技不及別人先進。但是，因為中國和外國的交流多了，可以從中引進新科技，或參考国外科技再加以改良，發展更多的機器，方便農民耕種。另外，外商投資在中國設廠，需要大量工人工作，所以農民可以有更多選擇，而不是被迫一定要從事同一間工廠，被老闆壓低工資。所以可以解決農民問題。

總括而言，我認為中國改革開放是好的。

頁

中国改革开放是好是坏? (2 论点 + 1 驳论)

我认为中国改革开放对中国而言是坏的。

第一 中国改革开放令农民的收入下降。中国农民数量众多，改革开放後實行戶籍制度，造成三農問題。农民在農業方面要面对成本上升，政府资源不足所造成的競爭力不足問題，令農業的利潤未能追上成本。除此之外，因政府需要加快工業發展，故故意壓低農產品價格，令农民需要面对「剪刀差」的問題，令他們的收入下降，造成鄉城差距，加重貧富懸殊。即使农民进城打工，因他們的技術及教育水平低下，加上城鎮人对农民存有歧視，造農民工的工資偏向低下，無法解決貧富差距問題。

第二 中国改革开放为城市方面帶來新三座大山的問題。三座大山分別是教育、醫療及住房三方面，改革开放後的成本一直上升，令人民的負擔上升。如在教育方面，(過去二十年内高中大學學費一直上升，結果令很多學校胡亂收費)加重人民的負擔，令人民生活素質下降。雖然政府有推出城市居民最低生活保障條例，但政府的監測未能保證所有城市人民都享有條例的保障，故未可有效解決三座大山的問題。

— 5 改革开放又有何关系?

第三 中国的三峡大壩工程对中国環境造成不可逆轉的傷害。雖然三峡大壩工程著重可持續發展，使用水力發電，減少中国对煤的依賴，減少温室氣體的排放。但三峡工程令魚類無法通過正常長江，令魚類的繁殖受到影響，減少生物多样性，妨礙正常生物鏈，可能會

合某些生物絕種，對環境造成不可逆轉的破壞。

綜以上所述，我認為中國改革開放不利於中國。

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	<u>《勞動合同法》能否解決血汗工廠的問題</u>	
	我認為《勞動合同法》 <u>不能解決血汗工廠的問題</u> ，因為未能保障到工人。	
這句	實施最高/標準工時雖然可以保障到工人不會超時工作，但並沒有最低工資的條例保障。即使工人是在標準工時的情況下工作，但僱主將工資調至最低，亦不能保障到工廠工人的工資有一定的水平。 → 現時中國有訂立最低工資。	
	雖然有人說解僱員工需要一個月通知，而令員工可以在通知期內找到工作。但這個政策並未能針對到血汗工廠的成因。即使工人在通知期內找到工作， <u>並不代表他不會被繼續剝削</u> 。解僱員工需要一個月通知並不能解決血汗工廠的成因。	Q: good
對法上的問題	而且，有額外工時的規定及津貼並不是完全有效。可能在平常日子能有額外工時的規定及津貼，但若遇到大企業的大訂單，便需要大量的員工長時間地趕工，而且他們追求低成本的生產，因此工廠未必會因工人的超時工作而有津貼予工人。所以額外工時的規定及津貼並不是完全對血汗工廠有效。	
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勞動合同法能有有效解決血汗工廠問題嗎？

勞動合同法不能有效解決血汗工廠問題，在勞動合同法中實施多項政策能保障工人權益。

在工時方面，勞動合同法規定標準工時，減輕工人負擔和加班保障。在沒有實施前，很多員工因需長期趕工，和應付生產量，每天工作十八小時，有時時間趕迫，更需工作二十四小時，不停加班。直到工人工作量超出負荷和壓力很大，但訂立標準工時後，工人的工時不再受廠商欺壓和延長工時，所以即使賺取的金錢不多，亦能得到保障，壓力下降，所以能有效解決。加上更有實施規定休息日，規定休息日數，令工人不用長期工作和受廠家所欺壓，例如：需趕工而要雇工人的工時等問題。

在薪金方面，勞動合同法規定了額外工時的津貼，以保障工人的收益。在沒有實施前，很多員工，額外加班之餘，又得不到應有的額外薪金，例如，法例規定加班工時需有1.5倍，但大部分廠商卻沒有按法例付員工應得的人工，甚至不結平盤錢。實施後，規定額外薪金能保障工人能得到公平的收益，避免受雇立剝削，解決血汗工廠工人權益和收益問題。

所以實施勞動合同法是有益的。



積分

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b. 就中國目前的发展而言，經濟發展應優先於環境保護，你是否同意這看法？  
解釋你的答案。

我很大程度上同意。經濟發展應優先於環境保護。環境保護的可逆轉性很低，而且迫切性比經濟發展高。

中國缺乏對環境的保護令環境受損。中國高速的經濟發展令美的自然環境和資源受損。因石代森林的消失導致水質、空氣受到污染，生物的棲息地數量也減少，當地居民和野生動物受到影響。水源和空氣受到污染以現時的科技來看是不可能即時完全地解決，只能靠減少砍伐森林而慢慢地改善污染的情況，而回復生物棲息地更需更長一段時間才能回復原貌。由此可見這可逆轉性若再破壞下去也會更難回復原貌。 10 經濟發展……

中國現時過份著重於經濟發展，大量之工廠水和農地次耕林採伐，導致食物供應不穩定。農地未休耕和工廠廢水的大量污染，令土壤正加速變化，而且農民耕作技術不合時宜，大量使用化學肥料，這些行為都令土壤過度耗損，土壤養分不足便會導致農作物產量下降，營養不好，令市民有時難以自備食物，即便食物供應良好，食物的營養也較有虧時差。若規定農民有一週的休耕期，不再著重於經濟便可以確保食物供應穩定，土壤也會得到適當的休息。


另外，經濟發展與環境保護其實可以並存，現時經濟發展是

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良於環境保護 若經濟增長步伐減慢，發展綠色經濟，~~又~~  
亦便可以平衡 為人民帶來多的就業機會和公共資源。

何謂綠色經濟？

綠色經濟如何能平衡發展  
經濟及環境？

給你讀 

積分

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「就中國目前的發展而言，經濟發展應優先於環境保護。」  
你是否同意這看法？解釋你的答案。

我不同意經濟發展應優先於環境保護。首先，我認為環境破壞後就不能逆轉，但經濟可以再發展。中國現在的污染問題十分嚴重，中國政府太過於注重發展工業，又行「先污染，後治理」，導致中國的污染問題越趨嚴重。而且，中國亦出現過灰塵的問題，可見污染問題已十分嚴重。但經濟正處於發展中，即使環境保護亦不會阻礙經濟發展，但破壞環境後就不能補救，所以，我認為環境保護應優先於經濟發展。

可逆轉性

其次，我認為保護環境的同時，亦能發展經濟。例如：丹麥的風車，原用作風力發電，同時亦是其一旅遊景點，令當地的旅遊業發展平穩。而中國亦可透過長江三峽水壩，在保護環境時，同時亦可發展經濟。所以，我認為，環境保護應優先於經濟發展。

→ good example

雖然有人說保護環境會動用金錢，阻礙經濟發展，但我認為在環境保護的同時，亦可節省金錢。例如：使用太陽能發電，雖需要購買設備，但可拖供電力給人們使用，減少向外國購買煤的數量，其實最終可以節省金錢。所以，我不同意經濟發展應優先於環境保護。

→ 為什麼？那方面？

給你讀

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Appendix 8: Rubrics of Assessment I

**Assessment rubrics**

Suggested marking guidelines	Scores
The student:	
<ul style="list-style-type: none"> <li>Analyzes the situation/question covering different perspectives with full elaboration e.g. economic development, environmental development, etc.</li> </ul>	7-8 (Excellent)
<ul style="list-style-type: none"> <li>Attempts to answer from different perspectives with fair elaboration</li> </ul>	5-6 (Good)
<ul style="list-style-type: none"> <li>Answers questions with single / limited perspectives with elaboration</li> </ul>	2-4 (Fair)
<ul style="list-style-type: none"> <li>Fails/ makes no attempt to answer or explanation to the question</li> <li>Gives an answer which is irrelevant or with limited relevance to the question</li> </ul>	0-1 (Poor)

*“Is it a blessing or a curse to China to reform and open up?”*

Appendix 9: Rubrics of Assessment II

**Assessment rubrics**

*“To what extent do you agree with the statement that ‘it is more harm than good for*

Suggested marking guidelines	Scores
The student:	
<ul style="list-style-type: none"> <li>Analyzes the situation/question covering different perspectives with full elaboration e.g. the economic benefits to Chins, the cost to China economically and environmentally, social problems, social services and infrastructures improvement etc.</li> </ul>	7-8 (Excellent)
<ul style="list-style-type: none"> <li>Attempts to answer from different perspectives with fair elaboration</li> </ul>	5-6 (Good)
<ul style="list-style-type: none"> <li>Answers questions with single / limited perspectives with elaboration</li> </ul>	2-4 (Fair)
<ul style="list-style-type: none"> <li>Fails/ makes no attempt to answer or explanation to the question</li> <li>Gives an answer which is irrelevant or with limited relevance to the question</li> </ul>	0-1 (Poor)

*China in becoming the world factory after reform and opening up’?*

Appendix 10: Rubrics of Assessment III

**Assessment rubrics**

*“In light of the current development of China, Economic development should come before environmental protection.’ Do you agree with this statement? Explain your*

Suggested marking guidelines	Scores
The student:	
<ul style="list-style-type: none"> <li>Analyzes the situation/question covering different perspectives with full elaboration e.g. the economic harms more than goods, the environmental deterioration is unreverable etc.</li> </ul>	7-8 (Excellent)
<ul style="list-style-type: none"> <li>Attempts to answer from different perspectives with fair elaboration</li> </ul>	5-6 (Good)
<ul style="list-style-type: none"> <li>Answers questions with single / limited perspectives with elaboration</li> </ul>	2-4 (Fair)
<ul style="list-style-type: none"> <li>Fails/ makes no attempt to answer or explanation to the question</li> <li>Gives an answer which is irrelevant or with limited relevance to the question</li> </ul>	0-1 (Poor)

*answer.”*

## Appendix 11: Interview questions

### **Interview questions**

6. From what you have learnt in the lessons, do you think collaborative learning enhances your ability in thinking from multi-perspective? Why or why not? How?
7. Do you think collaborative learning has its own limitations or drawbacks to your learning? If yes, what are the limitations and drawbacks?
8. Have you encountered any difficulties in learning with collaborative learning? If yes, what assistances do you need to help you overcome them, e.g. classroom settings, teachers guidance, etc.
9. Evaluate my teaching performances in conducting collaborative learning in the classroom. What are the things that I can improve?
10. Do you prefer collaborative learning to other traditional teaching methods, e.g. direct teaching, in the future study?