Professional Development Programme on the
New Senior Secondary Learning & Teaching Strategies for Information and
Communication Technology - (2) Quality Interaction
(Course ID: CDI020061597)
<u>**Assignment Summary Report**</u>

1. Background

The EMB commissioned the Department of Mathematics, Science, Social Sciences and Technology of The Hong Kong Institute of Education to conduct the captioned course on 24.1.2007 and 25.1.2007, with the aim to introduce quality interaction to ICT teachers. A total of 337 teachers attended the course. Among them, 324 have completed and returned the assignment with a response rate over 96.1%.

2. Analysis and Findings of the Assignments

Teacher participants were asked to complete and submit an assignment (please refer to Appendix 1 for details of the assignment) at the end of the programme.

2.1 Activity 5 (What is BT?)

The aim of this exercise was to help participants identify and evaluate the encouraging and discouraging factors for enhancing group interactions among students.

In summary, the responses could be categorized into different categories.

Category	Encouraging factors	Discouraging factors
1. Discussion topic	- 多批判思考及討論問題 - 問題有發揮和思考空間 - 開放題目 - 題目與學生的經驗有關係	- 問題屬於資料性的、封閉性的 - 沒有思考的空間 - 問題過深或太過簡單
2. Grouping	- 每組要有一些較爲積極的組員 - 自由組合 - 較相熟的學生編在一組 - 組內能互相支援 - 要有組長 - 每個學生有一個特定的角色與責任	- 組內的文化：敵對 - 不佳的同儕關係 - 組內有人 dominate - 小組人數太多／太少 - 組員學習能力的差異
3. Characteristics of students		- 害羞 - 學生沒有興趣討論 - 害怕別人批評 - 怕老師不認同 - 疲倦 - 學生的表達能力不足 - 學生沒有從多角度分析議題的經驗

				●	缺乏討論的技巧
				●	缺乏自信心
4.	Teacher's guidance	● 獎勵 ● 老師要有清楚的指引 ● 稱讚 ● 認同他們的意見 ● 正面的回應 ● 多些鼓勵 ● 鼓勵有經驗的同學發表意見 ● 對學生的論據加以肯定或解釋不正確的地方		●	師生關係不佳
5.	Preparation	● 提供基本資料(網上資源，阿報章) ● 給予討論例子		● ●	不足夠資料 場地的佈置不理想
6.	Teaching strategies	● 可以用 Role-play 或辯論的形式進行 ● 加入競賽的元素 ● 有趣的課堂協定 ● 安全及鼓勵性的學習環境(例如：不記名，在討論組留言) ● 老師可先講自己的經驗		● ●	課堂氣氛不足 時間太長 / 太短
7.	Assessment	● 組員互評 ● 選舉最佳組合 ● 要有報告 ● 要求記下討論的內容		●	影響他們的學年評估

Nevertheless the categorization of some responses might be controversial, and some responses might be neutral that they are neither encouraging nor discouraging. Different teachers might have their own classification.

The main focus of this exercise was to let teacher participants to evaluate the factors, both encouraging and discouraging, and to try to integrate / avoid the factors identified in daily classroom activities to enhance the quality of interaction between teachers and students.

2.2 Activity 6 (Classroom Protocol)

This exercise asked teacher participants to help Ms Ho to adapt a classroom protocol for her NSS ICT class. Nearly all participants tried their best to express their ideas through simple drawings. From the assignments, we found that most of their designs were inspired by the given Japanese example during the seminar. Some examples did show some innovative designs.

Example B1

手勢	![hand]	![hand]	![hand]	![hand]	![hand]	![hand]
目的	明白	不明白	贊成	反對	提問	補充

Example B2

手勢	![hand]	![hand]	![hand]	![hand]	![hand]	![hand]
目的	發問	不明白	明白	Hang 機	有興趣	完成堂課

However, the main theme of this activity was not merely on the design of a new set of classroom protocol. The main focus of this exercise was to inspire teachers about the non-verbal communication in classroom between teacher and students. This activity stimulated teachers to think about alternative means for students to express their ideas without words as some students might be shy / uncomfortable to express their opinions verbally before their classmates. Therefore teachers should find other means to encourage students to communicate in classroom.

2.3 Activity 8 (Knowing more about Adware and Spyware)

In this exercise, participants were asked to compare the following methods for collecting Internet resources:
1. Provided by teacher
2. Collected by students
by considering pupil involvement, ownership and relevancy.

Their responses showed that most of them agreed that students' involvement would be higher when they were responsible for collecting the Internet resources. Besides, students would have confidence to further develop the collected resources as they were the owner. When

considering the relevancy of the collected resources, teachers held different views. Although resources collected by students were close to their academic level, teachers still thought that accuracy was still a problem.

Example C1

	Provided by teacher	**Collected by students**
Pupil involvement	視乎情況	較高
Ownership	老師擁有（單向）	學生及老師 →雙向 →Interaction　↑
Relevancy	較接近課程 / 考試	接近學生程度

Example C2

	Provided by teacher	**Collected by students**
Pupil involvement	較低	較高
Ownership	學生對資料的擁有權較低，只因應老師提供的資料便用。	學生對資料的擁有權較高，只是他們自己搜尋及整合。
Relevancy	由於老師的專業及知識，所搜尋的資料和課堂內容相關性較大。	未必所有搜尋結果皆與課堂內容相關。

Example C3

	Provided by teacher	**Collected by students**
Pupil involvement	學生較被動	學生較主動
Ownership	主要是老師有權修改	學生認為有權修改、擁有
Relevancy	較集中、貼近有關主題	較多元化、分散

Example C4

	Provided by teacher	**Collected by students**
Pupil involvement	不但大部分學生能參與，而且更能照顧學習上的差異	可能有少部分能力較差的學生未能參與，建議搜習符合學生"口味"的資料，增加學習動機。
Ownership	-----------------	學生有歸屬感
Relevancy	資料準確性高	資料有可能錯誤

2.4 Activity 9 (Planning a Multimedia Presentation)

This activity aimed to help participants to consolidate their understanding of quality interaction discussed in the course through analyzing Mr. Lo's ICT lesson. Teacher participants summarized the strategies which Mr. Lo used to improve the quality of interaction in the class, and listed some factors that would affect the quality of interaction. In general most teachers could show their understanding on the course materials by identifying different strategies employed by Mr. Lo in this activity.

In the first part, teacher participants identified the following strategies used to improve the quality of interaction:
- Clear instruction and activity guidelines
- Using a meaningful topic
- Brainstorming
- Group discussion
- Providing appropriate guidance and feedback
- Share the students' ideas in the class
- Providing immediate feedback to the students
- Using appropriate media for teaching
- Establishing an appropriate learning environment
- Use online discussion for task extension

For part 2, participants identified special features in Mr. Lo's lesson which were the factors mentioned in this profession development program. For example:

- The organisation of the learning environment
  - Classroom layout
  - Learning atmosphere
- Teacher' subject and pedagogical knowledge
  - Creativity
  - Planning
- Teacher' communication skills
  - Clear Instruction
  - Questioning skills
  - Feedback
- Students' communication skills
- Teacher's Behaviors

3. Conclusion

Teacher participants made good effort in completing the required exercises. Performances in Activity 5 and 9 showed that they had reasonable understanding of the importance of quality interaction and the factors affecting class interactions. Their ideas in Activity 6 could be good references for all ICT teachers. Furthermore, responses to Activity 8 could stimulate their reflection on teacher-led interactions in teaching and learning of ICT.

4. Example on Quality Interaction in ICT Lessons

Various strategies with examples on Quality Interaction were included in the course handout of this development program. A practical example on how to make use of these strategies in a specific ICT topic "Threats and Security on the Internet" is provided below for teacher's reference.

The Compulsory Part

Module:	E	Social Implications
Topic:	*d*	Threats and Security on the Internet
Theme		To know, from the users' perspective, the possible security threats on the Internet

Teachers may use news, articles in computer magazines and journals, etc. to let students know about the security threats such as malware, spyware, and adware.

In order to encourage students to share in learning community and learn actively, a social bookmarking system could be introduced as a tool to enhance students' involvement. Students are guided to find links having information about malware, adware and spyware, and bookmark them. Then students may organize the links they found and bookmarked, and contribute their ideas and opinions by providing short comments on the links and materials other students found. In this way students will learn collaboratively and share their findings among peers.

Professional Development Programme on 'New Senior Secondary

Learning & Teaching Strategies for Information and Communication Technology - (2)

Quality Interaction

Name in English: _____ (Please print) Name in Chinese: _____

School Name: _____

E-service Account: _____ （Please print clearly）

Activity 5   What is BT?

Ms Wong held a group discussion on the positive and negative impacts of peer-to-peer sharing software. However, she found that her students were not eager to express their ideas in their group.

(a) What factors will discourage their participation in the group?

_____

_____

(b)   What factors will encourage their participation in the group?

_____

_____

Activity 6   Classroom Protocol

Ms Ho hopes to adapt the classroom protocol in her NSS ICT class. Could you help her to design a new classroom protocol?

Gesture						
Purpose						

Activity 8 Knowing more about Adware and Spyware

Compare the following methods for collecting Internet resources in different aspects.

	Provided by the teacher	Collected by students
pupil involvement		
ownership		
relevancy		

Activity 9 Planning a Multimedia Presentation

Summarize the strategies he has used to improve the quality of interaction in the class.

_____

_____

_____

_____

List some factors that will affect the quality of interaction.

_____

_____

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