

Teaching Hong Kong L2 Learners Wh-Questions—Using a Learning Study Approach

Jackie F. K. Lee

The Hong Kong Institute of Education, Hong Kong

Many ESL and EFL learners find *wh*-question formation difficult to master despite the fact that *wh*-interrogatives are a commonly used structure. Through using a Learning Study approach, this study aims to identify Hong Kong ESL learners' difficulties with *wh*-question formation, to explore effective strategies to enhance the instruction, and to investigate the learning outcomes as a result. Quantitative data were collected from three Hong Kong Secondary 3 classes through a written test and an oral test, and qualitative data from discussion at teachers' meetings, research lesson observation, student interviews, and post-lesson conferences. It was found that Hong Kong learners' L1 transfer problems are an important inhibiting factor in their learning of English *wh*-interrogatives. The most serious learning problems found include Chinese interference with word order and failure to use correct verb phrase structures. The research team, through the Learning Study research cycle, succeeded in designing appropriate contexts and using variation patterns for presenting and practicing interrogative structures. Successful outcomes were evident in the gradual improvement of the design of the three research lessons and significant progress by students in their learning of *wh*-interrogatives.

Key words: interrogative, learning study, *wh*-question

INTRODUCTION

There have been ongoing discussions on the extent to which L1 transfer results in L2 errors. Ellis (1997, p. 51) suggests that “the learner’s L1 is one of the sources of error in learner language.” In this paper I will consider Hong Kong L2 learners’ problems with *wh*-question formation and investigate whether L1 transfer constitutes an inhibiting factor. I will also explore ways to address these learning problems with a group of high school English language teachers using a Learning Study (also known as ‘Lesson Study’) approach, which is a teaching and learning improvement research cycle (Chokshi & Fernandez, 2005; Lo, et al., 2002; Stigler & Hiebert, 1999). During the process, the research team met regularly to identify students’ learning problems, discuss learning goals, plan an actual research lesson, observe how it works in practice, and then revise and conduct the revised lesson with another class. This paper includes discussions of learners’ problems with *wh*-interrogatives and the improved strategies on the instruction based on teachers’ reflections and observers’ suggestions as found in the three research lesson cycles. Students’ learning outcomes will also be examined.

Previous Studies on *Wh*-Questions

Wh-questions in English are questions with *wh*-words (e.g., *what*, *when*, *where*, *which*, *who(m)*, *whose*, *why* or *how*) in pre-verbal position, requesting specific information, and the circumstances surrounding actions and events. The formation of *wh*-questions in English generally follows these principles: (1) the *wh*-word or the *wh*-word with its headword (e.g., *what colour*, *how fast*) is placed in the sentence initial position, (2) an operator (i.e., a form of *do*, *be* and *have* or a modal) is obligatory, and (3) the subject is inverted with the operator, with the exception of subject questions, which follow the declarative structure (*wh*-subject ^ verb).

According to Biber et al. (1999, p. 211), questions are very common in conversation, with an average of one question per every 40 words in conversation. They are also commonly used in news and academic texts. Given the high frequency, it is important to master this structure well to develop English accuracy

and fluency.

L1 children's early acquisition of *wh*-questions has been studied by various scholars (e.g., Ambridge et al., 2006; Erreich, 1984; Maratsos, 1979; Rowland & Pine, 2000; Stromswold, 1995; Valian & Casey, 2003). There have also been studies conducted on the learning of *wh*-questions among ESL or EFL speakers (e.g., Bahns, 1991; Chen, 1986; Kwan-Terry, 1986; Lee, 2008; Yip & Matthews, 2000). Bahns (1991) investigated *do*-support and discussed reasons for common errors among L2 speakers, including tense copying (as in **What did you bought?*) and auxiliary copying (as in **Whose is that is?*). Kwan-Terry (1986) investigated how an English- and Cantonese-speaking child living in Singapore acquired the word order system for interrogative sentences in English and Cantonese. The results found interlanguage transfer with regard to the position of interrogative words but no transfer where juxtaposition of the verbal element was concerned. In a case study of *wh*-in-situ of a Hong Kong bilingual child, Yip and Matthews (2000) revealed that language dominance is the major determinant of language transfer. The English of this child, whose Cantonese was more developed than his English, showed Cantonese influence, as illustrated in **The snail why live in the water?* and **This is for making what?*. The misplacement of the *wh*-word is probably attributable to the fact that Cantonese *wh*-interrogatives remain in-situ. Chinese learners' difficulties with English interrogative structures were also manifest in Chen's (1986) study, in which his subjects were required to translate 55 Chinese questions rapidly into English. Two major error types were revealed: failure to invert, and confusion between auxiliaries *do* and *be*. These learning problems might be caused by the syntactic differences between English and Chinese. While English interrogatives require the presence of an operator and an appropriate form of the predicator, along with inversion of the subject and the operator (*wh*-word ^ operator ^ subject ^ predicator), there is no subject-operator inversion in Chinese interrogatives.

Many Hong Kong students' poor command of the *wh*-interrogative was evident in their weak performance in the oral paper of the Hong Kong Certificate of Education Examination, a public examination for Secondary 5 students. Before the format was changed in 2007, candidates were required to conduct a role play in

which they had to ask an examiner questions based on the prompts given (e.g., “places visited”, “things you do with your father”). Comments about candidates’ poor questioning techniques appeared in the examination report year after year, including: “One wonders why after learning English for at least 11 years, candidates are still unable to ask a proper question” (Hong Kong Examinations Authority, 2000, p. 138). Candidates produced such ungrammatical questions as **Where is you work?* **Where you got ticket?* **What show did you saw?* **How many times did you visiting the coffee shop?* and **Which club are you belong to?* (Hong Kong Examinations Authority, 2001, 2002).

THE PRESENT STUDY

Purpose

The repeated negative comments about the poor mastery of *wh*-interrogative structures by Hong Kong English students suggest that insufficient attention has been paid thus far to the acquisition of *wh*-interrogatives by ESL learners. There is a strong need to identify such problems and to find ways to address them. Accordingly, the present enquiry aims to answer the following research questions:

1. What difficulties do Hong Kong L2 students encounter when learning *wh*-questions?
2. What effective strategies can be used to enhance the teaching and learning of *wh*-questions?
3. What are the learning outcomes?

Learning Study

To answer these questions, a group of Hong Kong teachers adopted a Learning Study approach to examine how they themselves perceived students’ difficulties in the learning of *wh*-questions and how students understood the rules of *wh*-question

formation. It is anticipated that the findings of this study will facilitate improvements in the methodology for teaching this frequently used but often ill-formed grammatical structure.

Learning Study is a teaching and learning improvement process that originated in Japanese elementary education (Lo, 2006; Stigler & Hiebert, 1999). Working in a small group, teachers discuss learning goals, identify students' learning problems, plan an actual classroom lesson (called a "research lesson"), observe how it works in practice, evaluate the research lesson and conduct the revised lesson with another class. Through this cycle of planning, observing and revising teachers gain opportunities for continual learning and improved classroom instruction. Learning Study is credited with the shift from "teaching as telling" to "teaching for understanding" (Lewis, 2002, p. 1). Under the framework of Learning Study, an important role of teachers is to identify what is critical in order for students to satisfy the object of learning. If teachers are unable to highlight these critical aspects in their teaching, a learning gap will remain. To help students see the critical features, Lo (2006) highlights three types of variation: variation in students' understanding of what is taught (V1), variation in teachers' ways of dealing with the object of learning (V2), and using variation as a guiding principle of pedagogical design (V3). While V1 can be identified through pre-tests, student interviews before the research lesson and/or listening to students' views during the lesson, V2 can be shared by teachers at preparatory meetings, peer observation of research lessons and professional dialogues in post-lesson conferences. To enhance teaching and learning, Lo (2006) suggests that teachers should consciously make use of V1 and V2 as inputs to decide V3 - what critical aspects of the object of learning to focus on, which aspects to vary and which aspects to keep constant. Patterns of variation are then created to help students understand the critical features. Marton and Runesson (2003; cited in Lo & Pong, 2005) identify four patterns of variation commonly found in lessons: "contrast", "separation", "generalization" and "fusion", which were adopted in the present study and are discussed below.

Participants

The research team consisted of four Secondary 3 English language teachers, including three young teachers with less than eight years' teaching experience and the English Panel Head. They were supported by the School Staff Development Coordinator and two consultants from a teacher education institute in Hong Kong (including the author). The students involved in the project were three Secondary 3 (Grade 9) classes, with 26, 27 and 30 students in each class respectively. All the students had Chinese as their mother tongue, and had learnt English for about ten years.

METHODOLOGY

Procedures

This Learning Study involved a total of fourteen meetings held over six months, with different focuses at different stages, including: (1) choosing and defining the object of learning, and identifying its critical features, (2) identifying students' learning difficulties, (3) research lesson planning, (4) conducting the research lesson cycle, and (5) evaluating (see Figure 1).

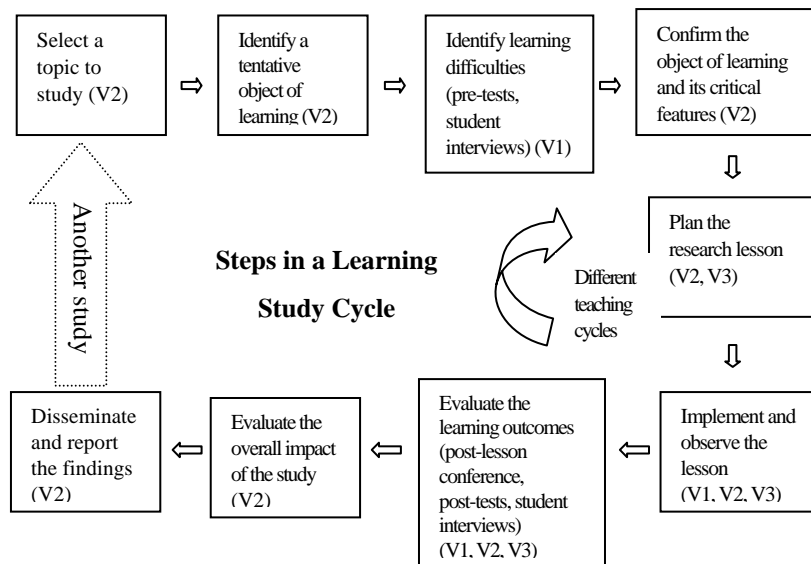


FIGURE 1
Steps in a Learning Study Cycle

Data were collected systematically by various means to answer the three research questions. One major kind of data was based on teachers' discussion at the meetings. Before the three research lessons, a total of ten preparatory meetings were held to determine the object of learning, to design tests, to identify learners' difficulties and to plan the pre-research and research lessons. After each research lesson, a post-lesson conference was held so that the teacher who conducted the research lesson could reflect on his/her own performance, the teaching strategies and students' progress, while the teacher observers gave suggestions to refine the next research lesson based on the data collected during the lesson. All meetings were audiotaped, and all research lessons and post-lesson conferences were videotaped. Detailed written records of each meeting were made by one of the consultants based on the recordings and cross-checked by the other consultant.

Student data were collected through pre- and post-lesson tests with all the

students participating in the project, and through pre- and post-lesson interviews with a total of nine students of high, medium and low English ability from the three research classes. The aim was to gauge students' learning difficulties and progress in a systematic way before and after the research lesson.

To measure students' learning, the questions of the pre-test and the post-test were kept the same. They were composed of a written part and an oral part (see Appendix I). Eighty-three students participated in the written part and 76 students in the oral part of the pre-test. The corresponding figures for the post-test were 79 and 70. The written test included *wh*-question formation based on given answers, among other types of questions. The present paper will focus on the findings of these sentence transformations. Regarding the oral test, school scenarios were presented in Cantonese and students were invited to ask the corresponding questions in English. The pre-test was conducted about one month before the research lesson to allow enough time for the analysis of the test results. The students' learning difficulties found were then used to refine the object of learning and its critical features, and to design the research lesson. To gauge learning progress, the written part of the post-test was conducted immediately after each research lesson, and the oral part the day after. The pre- and post-lesson test results were coded based on whether the following were correctly used by the students in their construction of *wh*-questions: the *wh*-word, the operator, the form of the predicator and the word order. The results were then analysed using SPSS 17.

In the pre-research lesson interview (see Appendix II), three selected students of differing English ability from each research class were presented with three situations in Cantonese and were invited to form the corresponding questions in English. They were also asked to comment on their past learning experience of *wh*-questions. In the post-lesson interview (see Appendix III), the same students were asked about their learning in the lesson, their understanding of the differences between English statements and questions, and their evaluation of the research lesson. To assess their learning, the interviewees were invited to self-correct one ungrammatical question that they had formed in the pre-lesson interview. The interviewees were also given another three scenarios in Cantonese at the end of the interview and were invited to write the corresponding questions in English. Their

learning was manifest through a comparison of the *wh*-questions formed at the pre- and post-lesson interviews. The qualitative data collected in interviews were grouped together under different categories to answer research questions based on Corbin and Strauss's (2008) grounded theory, as presented below.

FINDINGS AND DISCUSSION

Research Question 1. What Difficulties do Hong Kong L2 Students Encounter When Learning *Wh*-Questions?

Students' learning difficulties were perceived from students' perspectives (V1) and teachers' perspectives (V2). It was reported by the teachers that Secondary 3 students did not find question words difficult. According to the teachers, the students' most serious problems included: (a) incorrect word order, perhaps because of L1 transfer, the literal translation from Cantonese (e.g., **Why she is so popular?* 點解佢咁受歡迎?; **Why you don't correct this?* 做乜你唔改呢度?) and (b) incorrect verb phrase structure (e.g., **Who are you love?*).

Are teachers' views of students' learning difficulties (V2) accurate? The pre-test revealed that student problems with *wh*-interrogatives include wrong choice or omission of the operator, wrong word order, and incorrect form of the predicator (see Table 1). Though complex question words which include the *wh*-word as a determiner or a modifier in an interrogative phrase (e.g., *which hat, how often, how far*) were not familiar to some students, they had mastered simple question words (e.g., *when, what*).

TABLE 1
Pre-Test Results of the Percentage of Correct Responses

Written test				
	<i>wh</i> -word	operator	predicator	word order
1. Which hat is Mary's?	50.6%	89.2%	NA	91.6%
2. How much did Mr Lau pay ...?	81.9%	55.4%	47.0%	73.5%
3. How often does Joanne go ...?	60.2%	53.0%	55.4%	88.0%
4. When is she coming?	94.0%	49.4%	85.5%	86.7%
5. What did she buy ...?	83.1%	63.9%	47.0%	89.2%
6. How does Jack go home ...?	78.3%	66.3%	61.4%	88.0%
7. What has Amy told?	89.2%	53.0%	69.9%	77.1%
8. How far is Dan's office from ...?	54.2%	59.0%	NA	74.7%
9. Where does Mandy play the piano ...?	88.0%	51.8%	34.9%	89.2%
Oral test				
	<i>wh</i> -word	operator	predicator	word order
1. What did Miss Wong say?	88.2%	40.8%	36.8%	65.8%
2. Where does Mr Tang have lunch ...?	90.8%	50.0%	51.3%	72.4%
3. Who is singing in the hall?	89.5%	51.3%	47.4%	50.0%
4. How far is your home from school?	59.2%	25.0%	NA	44.7%
5. Whose book is this?	50.0%	67.1%	NA	46.1%

In line with the findings in the studies by Kwan-Terry (1986) and by Yip and Matthews (2000) with young bilingual children, the pre-test results revealed *wh*-word misplacement problems among some lower ability students, probably a consequence of L1 transfer of *wh*-in-situ. Some examples follow:

- (1) *Miss Wong say what?
Miss Wong 講乜 ?
- (2) *This book is who?

呢本書係邊個嘅？

(3) **This is who book?*

呢本係邊個嘅書？

L1 transfer was confirmed in the student interviews. All the nine interviewees indicated that they had learnt *wh*-questions at the primary level. The emphasis at that stage was on the selection of *wh*-words in the form of blank-filling and some simple mechanical drills, while the structure of *wh*-questions was not thoroughly discussed. Their prevalent problem concerned word order. Some attributed this problem to the interlanguage transfer of Chinese and English, with one of them commenting that “Chinese and English have different structures. Errors are often made if we just translate from Chinese into English.” Another student added, “Cantonese and English are different. Direct translation from Cantonese into English will cause errors. The *wh*-word is placed in the initial position in English, but not necessarily so in Cantonese.”

Apart from the misplacement of the *wh*-word, the present study revealed many Hong Kong students’ unfamiliarity with English verb phrase structures, and their confusion over the verbs *be* and *do* (e.g., **What is Miss Wong say?* **Where are Mr Tang have lunch?* **How long did your home from the school?*). Some students simply omitted the operator (e.g., **What Miss Wong say?* **Who singing song in the hall?* **How far your home to school?*). Hong Kong learners’ difficulty with the interrogative construction is compounded by the fact that Chinese verbs, unlike English verbs, do not have verbal inflections for number, person or tense. This is evident in their failure to include an appropriate form of the predicator (e.g., **Who is sing in the hall?*). These findings echo Lee’s (2009) comment that many Chinese learners fail to realize that there are different “*Bes*” and “*Dos*”. While *be* is always an operator when used in non-assertive contexts, *do* is not. Lexical *be* is a copula, used with a following predicative in the form of an adjective/noun/prepositional phrase (e.g., **How far is your home from school?*), while lexical *do* is a transitive verb which requires an operator in non-assertive contexts (e.g., **What does/can/will the teacher do?*). As an auxiliary verb, *be* precedes a present participle in the construction of the progressive aspect (e.g., **Who is singing in the hall?*) or precedes

a past participle in the construction of the passive voice (e.g., *When was the project completed?*). On the other hand, auxiliary *do*, as operator, is followed by a bare infinitive (e.g., *What did Miss Wong say?*).

Learning Study enabled teachers to see learning from students' perspectives. In view of students' problems with the operator *be* and *do* shown in the pre-test, the teachers refined the object of learning as "Developing students' ability to distinguish between the verb *be* and lexical verbs in *wh*-question formation". It was decided that the research lesson should focus on the present and the past tenses, while the use of modals in interrogative structures would be introduced at a later learning stage. The critical features were therefore confirmed as follows:

- (a) Auxiliary *do* is used as operator in interrogative contexts which do not have another auxiliary.
- (b) Where *be* appears, *do*-support is not required.
- (c) *Be* and auxiliary *do* invert with the subject in *wh*-questions.
- (d) The predicator used depends on the auxiliary (e.g., *do* is followed by a base verb form; auxiliary *be* is followed by a present participle in the present/past progressive and a past participle in the passive voice).

Research Question 2. What Effective Strategies Can be Used to Enhance The Teaching and Learning of *Wh*-Questions?

Based on V1 and V2, teachers in the research team collaboratively designed the pre-research lesson and the research lesson cycle (V3), with the aim of developing students' ability to distinguish between the verb *be* and lexical verbs in *wh*-question formation. There follows a discussion of the designs of the pre-research lesson and the research lesson to illustrate some effective strategies used in the Learning Study process.

Pre-Research Lesson

It was agreed that the research lesson would focus on *wh*-question formation and

its critical features. Because of the limited class time of the research lesson (80 minutes), some related concepts were taught in the lesson the day before (the pre-research lesson), in which students were guided to distinguish the semantic and structural differences between the verb *be* and lexical verbs in statements. The input selected for the pre-research lesson was a text about lions, as it was considered important to present grammar in appropriate contexts (Celce-Murcia, 2007; Lee, 2003). The text chosen contains a number of stative uses of copular *be* to describe the physical features of lions, and a number of dynamic lexical verbs to describe their behaviors and actions. The teacher asked such questions as “What are the physical features of lions?” and “How do they get food?” in order to draw students’ attention to the meaning and use of copular *be* and lexical verbs. It was also regarded as important to help students distinguish between copular *be* and auxiliary *be*. Using Figure 1, students were encouraged to classify the different types of verbs and discover their differences in terms of their structure, meaning and use.¹

Action verb	Examples:	
		<i>Lions <u>work</u> together to provide food for the entire pride.</i>
		<i>Lions <u>use</u> their teeth and claws for protection.</i>
<i>Be</i>	as a main verb	<i>Lions <u>are</u> one of the great cats of the world.</i> <i>Lions <u>are</u> in the feline family.</i>
	as a helping verb (followed by an action verb)	<i>Lions <u>are</u> easily <u>recognized</u> by the mane of the male.</i> <i>The number of lions <u>is</u> <u>declining</u>.</i>

FIGURE 1
Verb Classification

As both the negative and the interrogative constructions share some structural similarities, requiring *do*-support when there is no auxiliary in the verb phrase, several negative statements were included in the text (e.g., *They do not eat grass*;

¹ Simplified metalanguage was used with students in the lessons: “action verb” was used for “lexical verb”, “*be* as a main verb” for “copular *be*”, and “*be* as a helping verb” for “auxiliary *be*”.

Cats are not herbivores) to help students appreciate the various non-assertive uses of *be* and lexical verbs.

To link the pre-research lesson coherently with the research lesson, each group of students was invited to write down five *wh*-questions about what else they would like to know about lions. These *wh*-questions were collected and the relevant grammatical errors made by students were used in the lead-in and in an error correction exercise of the following research lesson.

Research Lesson

The research lesson focused on students' most serious problems in *wh*-question formation, as identified in the pre-test, including distinguishing the verb *be* and lexical verb patterns, subject-verb inversion, and the form of the predicator. The preliminary lesson plan designed by the research team was as follows:

- (a) Revision of the semantic and structural differences between *be* and lexical verbs learnt in the pre-research lesson
- (b) Lead-in – Present some wrongly constructed *wh*-questions written by students in the pre-research lesson to focus students' attention on the importance of writing grammatical *wh*-questions.
- (c) Reading – Present an advice-seeking letter which contains a number of *wh*-questions (see Appendix IV). Using an inductive approach, the teacher asks students to identify the questions found in the letter and categorize them according to the kind of verb used: questions containing the verb *be* and those containing lexical verbs. Encourage students to identify the verb form of the predicator. Highlight *wh*-interrogative structures through variation patterns.
- (d) Song listening – Present the students with the song “The End of the World” to sustain their interest and to provide more language input. The song chosen contains a number of *wh*-questions, such as “Why does the sun go on shining?” and “Why do the stars glow above?”.
- (e) Error correction exercise – The exercise contains selected ungrammatical

wh-questions written by the students themselves in the pre-research lesson.

The errors chosen focus on the critical features of the object of learning.

- (f) Follow-up activity – The lesson ends with an activity requiring the fusion of the critical features learnt.

Three research lessons were conducted with three classes (with a total of 79 students). Each research lesson was taught by one teacher according to the lesson plan, and was observed by the whole research team. The lesson was videotaped, and the teacher observers noted down carefully what the teacher and students were doing as the lesson progressed so as to make suggestions for improvement in subsequent lessons.

Research Lesson 1

The teacher, Ms Sze,² used Figure 2 for students to categorize the questions given.

Action verb	<i>Be</i>	
	<i>Be</i> as a main verb	<i>Be</i> as a helping verb
e.g., <i>Why do they treat me like this?</i>	<i>Why am I so shy?</i>	<i>What are they doing now?</i>

FIGURE 2
Question Categorization

When students failed to distinguish between copular *be* and auxiliary *be*, the teacher asked students to compare and contrast the following structures – while copular *be* may be followed by an adjective phrase or a noun phrase (as in *Why am I so shy?*), auxiliary *be* is followed by a lexical verb in the form of a present participle or a past participle (as in *What are they doing now?*). Then on the basis of the questions categorized, the teacher guided the students to generalize patterns of

² All the names used in this paper are pseudonyms.

wh-questions by completing Figure3:

Action verb	<u>Example questions :</u> Question word + _____ + _____ + _____ + ...?
<i>Be</i>	as a main verb <u>Example questions :</u> Question word + _____ + _____ + ...?
	as a helping verb <u>Example questions :</u> Question word + _____ + _____ + _____ + ...?

FIGURE 3
Generalization of Wh-Question Patterns

For the first research lesson with a weaker class, a dream lover activity was designed as the follow-up activity. Students in groups were invited to ask Ms Sze questions based on the reading materials given so as to find out her dream lover. Wrong interrogative structures were discussed with the whole class during the process.

At the post-lesson conference, the teacher reflected that because the revision part at the start of the lesson was long, the song “The End of the World” was skipped. The teacher felt that her presentation on the blackboard had not been sufficiently clear for her students to be able to discern the critical features of the object of learning. The original plan of using different colours to highlight different critical features was not carried out.

Meanwhile, the teachers who observed the lesson made the following suggestions to refine the next research lesson:

- (a) The critical features could be emphasized more through variation patterns. The variants of *do*, *does*, *did* and the verb form of the predicator could be highlighted with better use of visual aids.
- (b) The error correction exercise, which lasted for about 20 minutes, was rather long, and it could be done in pairs to enhance student interaction.
- (c) The dream lover activity would not be appropriate for a married teacher for Research Lesson 2. Another follow-up activity should be designed.

Research Lesson 2

Mr Ng, the teacher conducting Research Lesson 2, was a senior teacher with more than ten years of teaching experience. He was used to adopting traditional teacher-centred, form-focused teaching methodology. The collaboratively-designed student-centred lesson was, therefore, a challenge to him. The Learning Study turned out to be a valuable breakthrough for this experienced teacher. Mr Ng put a lot of emphasis on the different structures of *be* and lexical verbs in negative statements, stressing the presence of *do*-support for the latter. The strategies adopted included: (1) contrasts (e.g., *Mr Wong is a teacher* vs *Mr Wong is not a teacher*; *Mr Wong works in Aberdeen College* vs *Mr Wong does not work in Aberdeen College*), and (2) separation (e.g., Subject + *be* + *not* + noun; Subject + *do not* + verb). This highlight facilitated students' application of similar principles to *wh*-question formation later.

In response to the feedback for Research Lesson 1 that the critical features for *wh*-question formation should be especially emphasized through variation patterns, a blank-filling exercise on the choice of the operator was included. Mr Ng guided students to make a choice of *be* or *do* according to the structure after the subject, as shown in the following extract:

- T: What do we look at when we decide whether to use *be* or *do*? We look at what comes after the subject. For Q1 *Why am I so shy?*, why do we use *am* here?
- S: It [*shy*] is an adjective.
- ...
- T: For Q13 you said **Who is Miss Wan love?*. If you are not sure whether you should use *be*, *do* or *does*, you should look at what comes after the subject. [Teacher points to the word "love"] This is a ...?
- S: Verb
- T: We should use *does*. Why not *do*?
- S: Singular.
- T: Because the subject is 3rd person singular.

As mentioned earlier, the dream lover activity used in Research Lesson 1 was considered inappropriate for Mr Ng. The follow-up activity was therefore changed to guessing Mr Ng's favourite actor. Two students in the post-lesson interview indicated that they liked this activity, as they appreciated the speaking opportunity, which was also considered a way to check understanding.

At the post-lesson conference Mr Ng indicated that he could see students' progress in *wh*-question formation, although he felt that the transition between each part of the lesson was not smooth or natural enough. As for Research Lesson 1, Mr Ng spent a lot of time on the revision part, leaving no time for the song "The End of the World" and correction of students' wrongly constructed questions in the follow-up activity.

Upon observing the 2nd Research Lesson, the Learning Study team made the following suggestions for Ms Wang, the teacher conducting the 3rd Research Lesson, to consider:

- (a) Without Mr Ng's reading the advice-seeking letter with meaning at the start of the lesson, the lesson was not well contextualized. Some students did not have enough time to finish reading the letter by themselves, and therefore could not follow the instructions of the following activities. It was suggested that the teacher should read out the letter with meaning so as to create an appropriate context for the whole lesson.
- (b) It was hard to read the handwritten table showing the structure of *wh*-questions posted on the blackboard. Better visual aids should be used for students' easy reference.
- (c) The use of *wh*-questions, i.e. to seek information, should be highlighted, especially during the follow-up activity.
- (d) Accuracy was important in the learning of *wh*-question formation. Students should be guided to self-correct their mistakes in the follow-up activity.
- (e) The time for each activity should be specified so that there would be enough time for the completion of the planned activities.

Research Lesson 3

With the specification of a time limit for each activity, Ms Wang demonstrated good time management for the whole lesson, and all the planned activities were implemented successfully. The brief revision, together with effective use of PowerPoint slides, succeeded in highlighting the key differences between *be* and lexical verbs in negation. Taking into consideration teachers' feedback at the previous post-lesson conferences, Ms Wang made a conscious effort to relate the object of learning to students' personal lives. The meticulous planning of this lesson was evident in the careful modification of the teaching materials. For example, in order to link the advice-seeking letter to the follow-up activity about an unmarried pregnant girl, the letter writer's sex was changed and the content of the letter was revised accordingly. In order to set a life-like scenario for the follow-up activity, the teacher played the song "Papa Don't Preach", which is about a girl telling her father about her pre-marital pregnancy. Students were asked to imagine that they were the worried and angry father who wanted to find out more about his daughter's pregnancy by asking *wh*-questions. A point worth noting is that a proposed activity similar to this was discussed at a preparatory meeting. However, without the roles created, the activity was then considered artificial and purposeless. Now with an authentic song used to create a simulated situation the activity was more meaningful and life-like to the students. In the post-lesson interview, all the students indicated that they liked this activity because it provided room for their thinking and creativity. They recalled some interesting questions that their groups had formed, as *Why do you want to keep the baby? How heavy is the man's wallet? and How big is his flat?* The students also expressed their appreciation with song listening and letter reading. This suggests that with an appropriate context created students' motivation to learn grammar could be enhanced.

Research Question 3. What Are the Learning Outcomes?

Students' learning in the three research lessons was evident in the findings of both the post-lesson interviews and the post-tests. When the nine interviewees were

asked about what they had learned in the lessons, most of them could identify some *wh*-question patterns and critical features. One said, “I learnt when to use *be* and *do* – if the sentence has a noun or an adjective, use *be*; with an action verb, use *do* or *does*; use *be* if an *-ing* or a past participle follows.” When presented with the ungrammatical questions that they had constructed earlier in the pre-lesson interview, all the interviewees succeeded in self-correcting at least some mistakes, if not all. For example, one student changed **What was Miss Wong taught?* to *What did Miss Wong teach?*. She was also able to explain her correction clearly, saying “*Did* should be used because *teach* is an action verb and the tense is past.” At the end of the post-lesson interview, students were given another three scenarios in Cantonese, and they had to write the corresponding questions in English. A comparison of these three sentences made with the three made before the research lesson also revealed students’ marked improvement. The following are the sentences produced by a student of average English ability before and after Research Lesson 2:

Before the research lesson:

- (1) **What Mr Ng teach in English? (What did Mr Ng teach in the English lesson?)*
- (2) **When Mr Ng back home? (When does Mr Ng go home every day?)*
- (3) **Whoes³ pen? (Whose pen is it?)*

After the research lesson:

- (1) *Where did Mr Ng go? (Where did Mr Ng go at Easter?)*
- (2) *How often do you go to the library?*
- (3) *Which book do you want to get?*

An examination of the students’ performance in the post-test also revealed students’ significant progress. Table 2 compares the pre- and post-oral test results.

³ The student wrongly spelt “whose” as “whoes”.

As the figures show, students achieved substantial progress in all the three areas – operator selection, the form of the predicator and word order.

TABLE 2
Pre- and Post-lesson Oral Test Results of the Percentage of Correct Responses

		Operator	predicator	word order	
1.	What did Miss Wong say?				
		pre-test	40.8%	36.8%	65.8%
		post-test	62.9%	47.1%	81.4%
2.	Where does Mr Tang have lunch every day?				
		pre-test	50.0%	51.3%	72.4%
		post-test	68.6%	60.0%	84.3%
3.	Who is singing in the hall?				
		pre-test	51.3%	47.4%	50.0%
		post-test	74.3%	72.9%	81.4%
4.	How far is your home from school?				
		pre-test	25.0%	NA	44.7%
		post-test	47.1%	NA	70.0%
5.	Whose book is this?				
		pre-test	67.1%	NA	46.1%
		post-test	81.4%	NA	67.1%

CONCLUSION

The Learning Study approach adopted in this study allowed teachers to perceive students' learning difficulties with *wh*-interrogative structures through interviews and pre-tests, the findings of which formed the basis for the confirmation of object of learning and critical features, and the design of the research lessons. The present study reveals ESL learners' L1 interference problems in their learning of *wh*-interrogatives. The most serious learning problems found include Chinese interference with word order, and failure to distinguish between *be* and *do* and to use correct verb phrase structures. Through the Learning Study cycle of planning, teaching, observing and revising, teachers succeeded in designing appropriate contexts for the presentation and practice of interrogative structures. To help Hong Kong students differentiate between the verb *be* and lexical verbs which require *do*-support in *wh*-question formation, an operation which does not exist in their L1, variation patterns including contrast, separation, generalization and fusion were used in this Learning Study. The gradual improvement of the design of the three

research lessons in this study was a successful outcome of ongoing collaboration between the teachers. Data from students' interviews and the test results revealed students' significant progress in their learning of *wh*-interrogatives. It was encouraging to find not only students' improvements in the critical features evaluated, but also the improvement in their motivation to learn English through the interactive activities designed.

ACKNOWLEDGEMENTS

I would like to express my thanks to Ms Shuwen Lin and the school teachers who made valuable contributions to the Learning Study project "Developing students' ability to distinguish between 'verb-to-be' and 'verb-to-do' in *wh*-question formation". Special thanks also go to the Editor, the reviewers and Professor Peter Collins who gave useful comments on the earlier drafts of this paper.

THE AUTHOR

Jackie F. K. Lee is an Associate Professor in the Department of English at the Hong Kong Institute of Education, where she is responsible for teaching English grammar courses. Her research interests include grammar teaching, language and gender, study abroad and Learning Study. Her recent publications include *Construction of gender: A comparison of Australian and Hong Kong English language textbooks* with P. Collins (2010) and *International field experience – What do student teachers learn?* (2011).

Email: jfkleee@ied.edu.hk

REFERENCES

- Ambridge, B., Rowland, C., Theakston, A. L., & Tomasello, M. (2006). Comparing different accounts of inversion errors in children's non-subject *wh*-questions: "What experimental data can tell us?". *Journal of Child Language*, 33(3), 519-557.
- Bahns, J. (1991). What did you bought? Explaining a typical error in the acquisition of English. *IRAL: International Review of Applied Linguistics in Language Teaching*, 29(3), 213-228.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Harlow: Longman.
- Celce-Murcia, M. (2007). Towards more context and discourse in grammar instruction. *TESL-EJ: Teaching English as a Second or Foreign Language*, 11(2). Retrieved 01.07.11 from <http://tesl-ej.org/ej42/a3.html>.
- Chen, J. (1986). *An investigation of the patterns of learning English interrogative structures by EFL learners in China*. Unpublished M Phil thesis. Hong Kong: Chinese University of Hong Kong.
- Chokshi, S., & Fernandez, C. (2005). Reaping the systematic benefits of lesson study: Insights from the US. *Phi Delta Kappan*, 86(9), 674-680.
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Los Angeles: Sage.
- Ellis, R. (1997). *Second language acquisition*. Hong Kong: Oxford University Press.
- Erreich, A. (1984). Learning how to ask: Patterns of inversion in *yes-no* and *wh*-questions. *Journal of Child Language*, 11(3), 579-592.
- Hong Kong Examinations Authority. (2000). *H.K.C.E.E. examination report*. Hong Kong: Hong Kong Examinations Authority.
- Hong Kong Examinations Authority. (2001). *H.K.C.E.E. examination report*. Hong Kong: Hong Kong Examinations Authority.
- Hong Kong Examinations Authority. (2002). *H.K.C.E.E. examination report*. Hong Kong: Hong Kong Examinations Authority.
- Kwan-Terry, A. (1986). The acquisition of word order in English and Cantonese interrogative sentences: A Singapore case study. *RELC Journal*, 17(1), 14-39.
- Lee, J. F. K. (2003). Teaching and testing grammar in context. In G. Poedjosoedarmo (Ed.), *Teaching and assessing language proficiency: Anthology series 45* (pp. 215-229). Singapore: SEAMEO Regional Language Centre.
- Lee, J. F. K. (2008). A Hong Kong case of lesson study: Benefits and concerns. *Teaching and Teacher Education*, 24(5), 1115-1124.
- Lee, J. (2009). Teaching *be* and *do*. *Modern English Teacher*, 18(4), 47-50.
- Lewis, C. (2002). What are the essential elements of Lesson Study? *The California Science*

Project Connection, 2(6), 1. Retrieved 05.04.10 from http://www.lessonresearch.net/newsletter11_2002.pdf.

- Lo, M. L. (2006). Learning study: The Hong Kong version of lesson study: Development, impact and challenges. In M. Matoba, K. A. Crawford, & M. R. Sarkar Arani (Eds.), *Lesson study: International perspective on policy and practice* (pp. 133-157). Beijing: Educational Science Publishing House.
- Lo, M. L., & Pong, W. Y. (2005). Catering for individual differences: Building on variation. In M. L. Lo, W. Y. Pong, & P. Chik (Eds.), *For each and every one: Catering for individual differences through learning studies* (pp. 9-26). Hong Kong: Hong Kong University Press.
- Lo, M. L. et al. (2002). *Catering for individual differences: Building on variation, the first findings*. Hong Kong: INSTEP.
- Maratsos, M. (1979). How to get from words to sentences. In D. Aaronson, & R. W. Reiber (Eds.), *Psycholinguistic research: Implications and applications* (pp. 285-353). Hillsdale, N. J.: Lawrence Erlbaum Associates.
- Rowland, C. F., & Pine, J. M. (2000). Subject-auxiliary inversion errors and *wh*-question acquisition: "What children do know?". *Journal of Child Language*, 27(1), 157-181.
- Stigler, J., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. New York: Summit Books.
- Stromswold, K. (1995). The acquisition of subject and object *wh*-questions. *Language Acquisition*, 4(1/2), 5-48.
- Valian, V., & Casey, L. (2003). Young children's acquisition of *wh*-questions: The role of structured input. *Journal of Child Language*, 30(1), 117-143.
- Yip, V., & Matthews, S. (2000). Syntactic transfer in a Cantonese-English bilingual child. *Bilingualism: Language and Cognition*, 3(3), 193-208.

APPENDIX I

Pre-test / Post-test

I Written test

Make questions for the answers below.

1. The blue hat is Mary's.
2. Mr. Lau paid \$200 for the new CDs.
3. Joanne goes to the gym every week.
4. She is coming tomorrow.
5. She bought some books last month.
6. Jack goes home by bus.
7. Amy has told a story.
8. Dan's office is 100 meters from the MTR station.
9. Mandy plays the piano in Room 406 every morning.

II Oral test

What English questions would you ask in the following situations?

1. 你聽唔清楚 Miss Wong 啱啱講嘅說話。你想問你同學，Miss Wong 啱啱講乜。(You cannot hear what Miss Wong has said. You want to ask your classmate what Miss Wong just said.)
2. 你想問 Miss Wong，校長每日去邊度食晏。
(You want to ask Miss Wong where the Principal goes for lunch every day.)
3. 你上堂時聽到禮堂有人唱歌。你想問 Miss Wong，邊個喺禮堂唱緊歌。
(You hear someone singing in the hall during a lesson. You want to ask Miss Wong who is singing in the hall.)
4. 你想問 Mr Reed，佢屋企距離學校幾遠。
(You want to ask Mr Reed how far his home is from school.)
5. 你係你枱面見到一本唔係你嘅書。你想問係邊個嘅。
(You have found a book on your desk which does not belong to you. You want to ask whose it is.)

APPENDIX II

Pre-lesson Student Interview

1. What English questions would you ask in the following situations?
 - (a) 你今日冇返學，你想問你同學，Miss Wan 係今朝英文堂教咗乜。
(You did not go to school today. You want to ask your classmate what Miss Wan taught in the English lesson this morning.)
 - (b) 你想問你同學，Miss Wan 每日幾點返屋企。
(You want to ask your classmate when Miss Wan goes home every day.)
 - (c) 你係你枱面見到一支唔係你嘅筆，你想問係邊個嘅。
(You have found a pen on your desk which does not belong to you. You want to ask whose it is.)
2. Have you learned how to form *wh*-questions before? When?
3. Do you remember how your former English teachers taught *wh*-questions?
4. Did your teachers tell you what you should pay attention to?
5. What is your difficulty when you form *wh*-questions?
6. Which parts of the questions formed above are you not sure about?

APPENDIX III

Post-lesson Student Interview

1. What have you learned in today's English lesson?
2. What new things have you learned?
3. What is the purpose of learning *wh*-questions?
4. What are the structural differences between *wh*-questions and statements?
5. What do you need to pay attention to when forming *wh*-questions?
6. Do you like the lesson today? What is the difference between today's lesson and previous lessons?
7. Which activity in the lesson do you like most? Why?
8. Do you still remember the questions you formed in the lesson today? Could you tell us some of the questions you formed?
9. Did you encounter any difficulty in the lesson? What do you think your teacher should spend more time on to help you learn better?
10. Which part of the lesson do you think your teacher should spend less time on so that he/she could use the time for other contents?
11. Do you think the questions you formed before the lesson are grammatically correct? Choose a wrongly constructed one and correct it.
12. What English questions would you ask in the following situations?
 - (a) Miss Wan 復活節去咗旅行，你想問你同學，Miss Wan 去咗邊度。

(Miss Wan traveled overseas at Easter. You want to ask your classmate where Miss Wan went.)

- (b) 你想問你同學，佢幾奈去一次圖書館。
(You want to ask your classmate how often he/she goes to the library.)
- (c) 有兩本書你想揀一本送俾你同學，你問佢邊本書佢想要。
(There are two books. You want to choose one for your classmate. You want to ask which one he/she wants.)

APPENDIX IV

Advice-seeking Letter (for Research Lessons 1 and 2)

Dear Miss Lam,

I'm 15 years old. Sometimes I don't feel happy because I have many questions but do not know their answers.

First, I don't understand the meaning of life. My grandmother was killed in a traffic accident last summer. I was very close to her and still feel sad about her death. Why did she leave us so suddenly? Why do people die? Where will they go after death? If there is really life after death, what are they doing now? If we all die one day, what are we waiting for now?

I feel lonely in my class. I have only a few friends there. Most of my classmates do not like talking to me. What mistakes have I made? Why do they treat me like this? How can I make them accept me? Why are some students so popular? Why am I such an unpopular student?

Finally, I think I'm in love. I'm really interested in one of the girls in my class. Of course, she doesn't know I fancy her. I haven't even talked to her. I'm not sure if I'm too young to date a girl. Actually, when is the best time for students to go dating? How do boys attract girls' attention? What do boys and girls talk about when they are together? I really envy the boy sitting behind me in my class. He gets along with all the girls. Why is he such a sociable person? Where does he get his charm? Why am I so shy?

I'm afraid I've asked too many questions. But I hope you have time to answer some of them.

Yours sincerely,
Lonely Heart

