

## ***Learning English Tenses Through the Theory of Variation***

**Tong Siu Yin Annie**

*The Hong Kong Institute of Education, Hong Kong*

The appropriate use of tenses has long been an area of concern for many secondary school students of English as a second language in Hong Kong. This paper reports on a series of cyclical research lessons conducted with five classes of Secondary Two (Grade 8) students in Hong Kong. The teachers designed the lessons in ways that allowed the students to discern, through variation, the critical features of the appropriate use of past tense and present perfect tense in descriptive texts. Observation and evidence from interviews and comparison between pre- and post-test results suggest that the research lessons helped the students to learn effectively. At the same time, teachers benefitted from the collaborative reflections and investigations, as well as applying the Theory of Variation proposed by Marton and Booth (1997), suggesting that this model of professional practice may have broad application in teacher development programmes.

**Key words: theory of variation, tense aspects, critical features, research cycles, collaborative reflections**

### **INTRODUCTION**

This paper presents a project that enabled teachers to explore new ways of thinking about teaching and learning a troublesome aspect of English grammar, while also facilitating their teachers' professional development

through the process of collegial deliberation by creating a ‘community of practice’ (Lave & Wenger, 1991) that adopted a critical perspective on their situated practice, consonant with the notion of teachers as ‘reflective practitioners’ (Zeichner, 1994). The project involved the researcher in working with a group of teachers in a secondary school in Hong Kong in teaching the past tense and present perfect tense. It comprised a cyclical series of research lessons underpinned by the Theory of Variation proposed by Marton and Booth (1997) as the conceptual framework. This theory involves the teachers in a process of deliberative construction of teaching strategies, by first of all exploring their own and the students’ understanding of the object of learning—in this case, the appropriate use of past tense and present perfect tense in descriptive texts—and considering ways of enhancing students’ learning of the topic. A guiding principle of the pedagogical design is the use of patterns of variation, through which students’ attention is drawn towards discerning the critical features of the object of learning. The model of research lessons utilizing the Theory of Variation is presented as a model for teacher empowerment that might usefully be adopted in other contexts.

Tenses have consistently been an area of concern to many secondary school teachers of English in Hong Kong as students seem to lack a good grasp of their use and their sense of the tense-time relationship tends to be vague and insecure. Errors are apparent in both discrete focused exercises and contextual writing, which may be due to the fact that there are tremendous typological and linguistic differences between Chinese and English (Li, 2002a, 2002b). The verb stems in Chinese remain unchanged for actions of different times and other time phrases/ markers and connectives serve as the signifiers in qualifying the time aspects, whereas English grammar obliges the user to mark the verb with different time aspects to represent the sequence of events. The obstacles posed to learners of English in Hong Kong is well expressed by one of the students in the project, who conceptualized time in an unexpected way, namely, that the receiver is the determinant of his use of tenses. He explained that, in the context of writing a letter describing his past experiences, he uses the past tense to write a letter to

his friend, because by the time his friend receives the letter, the events he described will have become past actions. Yet if he writes the same letter to somebody who is with him, he uses the present tense because the reading and writing are virtually simultaneous. Some secondary school students mentioned that they avoided the use of some tenses, such as the present perfect tense, in constructing their work as they thought it was too difficult.

These replies triggered my investigation into a new way of thinking about teaching and learning of tenses and into appropriate tools for teaching the content, as I felt that the lack of understanding and misconceptualisations were detrimental to students in their linguistic advancement in the decoding and encoding of narrative and descriptive texts in particular. My investigations found common cause with the teachers in the school where the project took place, as they also believed that the two tenses caused considerable confusion, especially among junior secondary form (Grades 7-9) students.

## **THEORY OF VARIATION**

The main tool that I chose was Marton and Booth's Theory of Variation (1997), which is based on their phenomenographical research tradition and studies that explore and describe the differences in how students understand, experience, or think about a particular phenomenon or an aspect of the world. They conclude that students often experience the same phenomenon, such as a concept that the teacher wants to teach, in qualitatively different ways, and therefore variations in learning outcome are the norm. To improve teaching, the teacher should recognize that the students will understand what he or she intends to teach in different ways, should know what these different ways of understanding are, and should structure the teaching to enable students to see what is taught in the intended way (Marton & Tsui, 2004). Students do not learn by being told; effective teaching requires the elicitation of students' pre-existing understanding, and opportunities must be provided to students to

build on this initial understanding. Students' preconceptions must be challenged and directly addressed for them to be transformed or expanded (Bransford, Brown & Cocking, 2002). In other words, attention has to be paid to what is to be learnt – the object of learning—and any teaching method that can bring about the desired learning effectively may be used.

The concept of the 'object of learning' is derived from the principle of 'intentionality' propounded by Franz Brentano in 1874, that all mental acts are directed towards an object. Learning is always the learning of something and we cannot talk about learning without paying attention to what is being learnt. The choice of a learning object must be found within the encounters between the learners and what is to be learnt, the value of which is derived from how such experiences open up opportunities for the learners to understand the world around them. Based on the object of learning, critical features for students to acquire the intended capability are identified. The critical features are usually those that cause difficulty for the students in the process of learning. But very often teachers themselves do not find these features problematic and consequently fail to highlight them in their teaching. As a result, a learning gap is left unattended. Those students who do not discern the critical features cannot progress because they have missed some pieces of essential information.

If variation is the key to discernment, it should be a useful tool for structuring teaching so that object of learning can be experienced in a particular way. Learning by being able to focus on the critical features either individually or collectively, as Bowden and Marton (1998) argue, presupposes that a learner experiences variation in these features. Different patterns of variation can be created in different combinations and structures, in order to bring about different desired learning outcomes by having the learners focus on certain features of the object of learning. This can be achieved by varying one or more features while keeping certain aspects invariant. It is what the teacher varies and what is kept invariant during the lesson that determines what students are likely to learn (Marton & Runesson, 2003).

A number of studies (e.g., Marton & Morris, 2002; Marton & Tsui, 2004; Pang, 2002) indicate that teachers with theoretical grounding in the Theory of Variation tend to be considerably more effective in bringing about the intended learning outcomes than teachers without the explicit grounding. The theory guides the teachers in deciding what features to focus on, what features to vary, and what features to keep invariant or constant, and in consciously designing patterns of variation to bring about the desired learning outcomes (Marton & Morris, 2002). Marton and Runesson (2003) identify four functions of variation that were commonly found in lessons in their study: contrast, separation, generalization and fusion. Lo and Pong (2005) give some examples to illustrate the four functions: for instance, students could be introduced to the colour "brown" by *contrasting* brown with other colours in a dimension of variation (i.e., colour), and differentiate what is brown from what is not. The same pattern of variation also serves to *separate* the abstract concept "colour" from other features and hence make possible the discernment of the concept. Students can also experience the varying appearance of "brownness" in specific cases, such as brown tables, brown chairs, and can *generalize* from these cases the "brownness" and distinguish it from other irrelevant aspects, such as the "chairness", "tableness" and so on. Thus the pattern of variation, which consists of different appearances of a specific feature in a number of cases, makes it possible for the students to make generalizations of the variant features and their relationship with other invariants. *Fusion* involves the simultaneous use of more than one form of variation in a holistic rather than discrete manner.

## **THE PROJECT**

### **Study Design and Focus**

In Hong Kong, several innovations have been introduced in the English Language curriculum since the retrocession to Chinese sovereignty in 1997.

The intended methodology has moved from pedagogical approaches that emphasised grammatical accuracy and pattern drills in spoken English to those based on more integrated, contextualised and communicative language use. The introduction of task-based learning (TBL) in the secondary school curriculum in 1999 reinforced this move. TBL was presented as operating in a framework of desirable communicative outcomes or targets that promoted English as a means for accessing other curricular knowledge and skills as part of whole-person growth (Curriculum Development Council, 1999, 2007). However, they have had a limited impact in the classroom because they neglect one very pertinent area: how the object of learning might be handled by teachers and students. The assumptions underlying the innovations is that once the objectives and activities to achieve them are specified, the expected learning outcomes will automatically be achieved. This perspective views teaching and learning as a mechanistic and static rather than dynamic process. Therefore the project reported in this paper was devised to support teachers to design lessons in ways that allowed the students to discern, through variation, the critical features of an area of learning that had been identified as difficult for the students, namely, the appropriate use of past tense and present perfect tense in descriptive texts.

The project ran from September 2008 until June 2009. Five teachers in the school, including the Head of the English Department, and a total of 115 Secondary 2 (Grade 8) students were involved, with myself as a researcher-consultant. Five research cycles were arranged to obtain valid and reliable data; each cycle involved the preparation and delivery of a research lesson teaching the specified object of learning. The same lesson was delivered five times (once per cycle) to different classes, with the content and pedagogy used in the lesson adjusted to take into account teachers' reflections on the previous iteration. After each research lesson cycle, we met together to reflect on the following questions:

- How was the lesson in this cycle taught?
- What did students learn in this cycle?

- How can we improve the lesson plan for the next cycle?

Based on the implementation and discussion of all the cycles of research lessons and the comparison between the students' pre-and post-test results, an evaluation of the learning outcomes and the overall impact of the project was carried out, in accordance with the following guiding questions:

- What were the overall learning outcomes?
- How were the outcomes related to the teaching act in each cycle?
- What did we learn from this project?

Developing and delivering an effective initial research lesson on a very challenging topic took several weeks. Based on the principles of the Theory of Variation, we first identified the object of learning, since it would constitute the major focus of the research lessons. The teachers reported that although the past tense and present perfect tense had been taught in primary school, students at junior secondary level (Grades 7-9) had a very superficial understanding of the use of these two tenses. The teachers were all keen to tackle the problem at this stage. They wanted to develop students' ability to use the tenses in texts as they agreed that it was only through communicative discourse that students' understanding of these two tenses would develop. The appropriate use of the past tense and present perfect tense in a descriptive text then emerged as the object of learning in these research cycles.

We then examined how the object of learning was positioned within the overall conceptual framework of English and the kind of pattern that must be discerned to help students transform the factual information they have acquired into deep understanding and usable knowledge. The next stage was to identify the critical features of the object of learning, based on students' prior knowledge; patterns of variation were selected to help students discern the critical features and their relationships. According to Lo and Pong (2005), students' incomplete understanding of content is attributable to a number of reasons: their previous learning experiences may hinder new ways of

understanding, especially when the two seem to be in conflict; sometimes they are unable to focus on the critical features of what is to be learnt; and inappropriate learning experiences might have an adverse impact on student learning. To understand more comprehensively the actual problems students had, the most recent test paper on the use of the two tenses that had been developed by the teachers in their own assessment processes, was our initial point of reference. The information elicited from the results of the test papers and interviews with a sample of students of different levels of performance helped to foreground more explicitly their thinking behind the choices of tenses and to form a sound understanding of students' prior knowledge. The results further problematized the learning difficulties. Three major weaknesses of the students regarding the use of the two tenses were then identified: the verb form, time reference, and understanding the context.

### **Pre- and Post-tests**

The responses also provided clear focal points in setting the pre-/post- test (Appendix 1) for the project. The teachers selected a descriptive text about Sang Lan, the Chinese gymnast who was paralyzed in a practice session for Olympic Games in 2004. The text naturally gave rise to the use of the past tense and present perfect tense, and was similar in terms of text type to the selected text (Appendix 2) that would be used in the first cycle of teaching and learning. Several rounds of discussion were held to set the test appropriately to minimize any unnecessary distractions and variables and to ensure there were adequate and appropriate clues for selection. Ten blanks were given and the choice of past tense and present perfect tense was provided to eliminate any possibilities of misspelling of words and forms/participles. The careful selection and contrastive presentation of items allowed students to discern the critical features of the use of the past tense and present perfect tense in terms of time markers, context, and time referencing (connectives) to determine the appropriate tenses for different parts of the text. For example, among the ten blanks, some assessed student

responses to time markers, while others required them to understand the context and make reference to connectives related to time. These categories were identified to help locate students' problems more reliably. Apart from choosing the appropriate form, space was provided for students to explain their choice of response, in Chinese if they wished, and to further demonstrate their thinking and understanding.

The pre-tests were carried out in five classes and then interviews with 15 students of different abilities (5 of each level) were conducted to elicit a better understanding of the thinking behind their use of the two tenses. The protocol confirmed our perceptions of the students' problems and helped confirm the object of learning and the related critical features for discernment during the research lessons. The critical features thus identified for determining the application of the present perfect tense or the past tense were:

- the sequence of events in the context (as indicated by discourse markers, for example); and
- the relationship of the action to the present moment.

### **Lesson Design**

Different activities were devised with reference to the teaching/learning text—the biography of Yao Ming (a well-known basketball player from China who is currently playing in the NBA in the USA), in which critical features were highlighted so that students could experience the variations and achieve a more powerful discernment of them in the learning process. We felt that Yao Ming's appeal and familiarity to students of this level might help to motivate their learning.

The teachers directed students' attention to the critical features by structuring the lesson in such a way that the character, actions and events from the same text were kept invariant while the linguistic and discourse features linked to the two tenses were varied. Details of Activity 1 are shown

in Table 1

**TABLE 1**  
**The First Application Pattern of the Theory of Variation**

Activity	Critical Feature Discerned	Invariant	Variant
Activity 1 Same sentence but in two different tenses: students have to decide on the correct tense with the help of the timeline	i) Identifying and understanding how time markers, time referencing and the context reveal the sequence of events, and the concept of the relationship of the action to the present ii) identifying appropriate tense use to reflect the sequence of events in the context	The character, actions and events are taken from the same text	Tense aspects of the action verbs and meaning

In Activity 1, pairs of sentences from the text with the invariant and variant features were shown to the learners. This pairing was based on the *contrast* function of variation to enable students to identify the appropriate tense by revealing the relevant time reference and context, and reflecting the sequence of events and the concept of the relationship of the action to the present. Examples for discernment are as follows:

Pair 1: He won the championship in 2001.

He has won the championship in 2001.

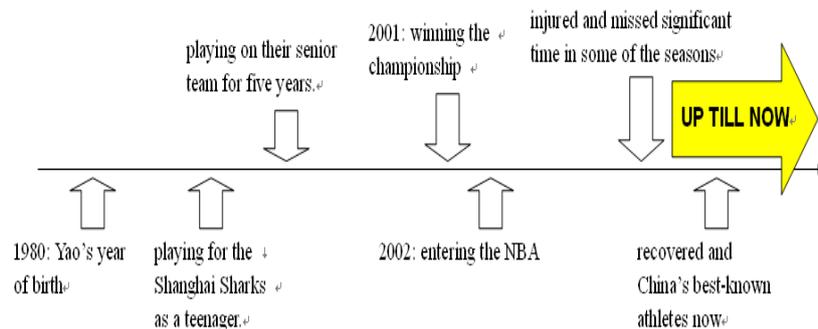
Pair 2: He played on their senior team for five years.

He has played on their senior team for five years.

The above examples work on two different levels. The first type (Pair 1) requires students to work at the discrete semantic level by focusing on the time markers. The second type (Pair 2) requires students to go to the discourse level to look for extra contextual clues for the determination of the use of tenses, as both sentences can be correct in particular contexts. The

*fusion* pattern of variation is also present, as the students have to conceptualize the use of the past tense and present perfect tense simultaneously within the same context, which is challenging as they were previously taught the past tense and present perfect tense separately. The context was provided in the form of a time line (Figure 1), which was meant to serve two purposes: to help students build a clearer concept of time sequence in which different events may occur and to help students discern how those critical features such as time markers (e.g. *in 2001*, *now*, *since then*) may offer clues to indicate when the events may have taken place and if an event taking place in the past is still relevant to the present.

**Timeline for Paragraph 1**



**FIGURE 1**  
Timeline for Activity 1

Activity 2 provided students with the juxtaposition of a text of two different versions, each embodying a similar context (Table 2), and students were required to choose the appropriate tenses for each text. This time, the overall context in the two texts and the text type remain invariant, while the time markers (time specificity) of some action verbs and meaning become variants.

**TABLE 2**  
**The Juxtaposition of a Text of Two Different Versions**

Version A: Past Tense	Version B: Present Perfect Tense
He (1. was/has been) the richest celebrity in China from 2002 to 2007. In 2004, he (2. acted/ has acted) as a spokesperson for various famous brands such as McDonald's. He (3. was/has been) the subject of a documentary film, <i>The Year of the Yao</i> in 2004. In the 2008 Olympics, Yao (4. carried/has carried) the Olympic Flame into Tiananmen Square, as part of the Olympic torch relay. He also (5. led/has led) his country's delegation during the opening ceremony.	Now (1. he was/has been) the richest celebrity in China for five years. Since 2004, he (2. acted/has acted) as a spokesperson for various famous brands such as McDonald's. He (3. was/has been) the subject of a series of documentary films, <i>The Year of the Yao</i> since 2004. Yao (4. represented/ has represented) China to carry the Olympic Flame since 2004. He (5. led/has led) his country's delegation several times.

Descriptions of activities are shown in Table 3

**TABLE 3**  
**The Second Application of Pattern of the Theory of Variation**

Activity	Critical Feature Discerned	Invariant	Variant
Activity 2 Cloze exercises of two versions in which the use of the past tense or present perfect tense would create different meanings	The use of the present perfect tense and past tense in two texts to present different meanings in context	The overall context in the two texts and the text type	The time markers (time specificity) and some action verbs

The *generalization* variation pattern set out in this activity allowed students to see the relationship between the use of tenses and their meaning in texts. The students have to look beyond each sentence and make use of more than one clue to help them determine the tense use. On top of that, students have to articulate why different tenses should be used in each version and need to be able to discern the different meanings conveyed by these two versions. Prompted by the teachers' questions, e.g. "*Why do you use 'has been' the richest celebrity in China for five years, but not 'was', like*

*in the text a?”*, one student was able to say, *“It is the time marker that I refer to, and I also have to look at the context and other sentences to help me decide what tense I need to use.”* They are then asked to conclude and generalize the reciprocal relationship existing between a user of tenses and a context—given that the social context constrains language use and simultaneously, the language user creates and influences the context.

The lesson design allowed students to experience the *contrast*, *fusion* and *generalization* patterns as a means of helping them to discern the critical features of the object of learning. The research lessons, with adaptations made throughout the teaching cycles, directed students to locate time markers and make reference to context to distinguish between the use of past and present perfect tenses, and the different textual meanings created through the use of different tenses. Students were also given opportunities to practise strategies that help them in identifying time markers and events in context, so as to discern the use of appropriate tenses to illustrate the time sense and relationship between events.

## **EVALUATION OF STUDENT LEARNING**

Students’ learning outcomes were mainly gauged from the analysis of the research lessons, and pre-and post-test results. The same test was administered to the students before and after each of the research lessons. The pre-test results provided baseline data, so that the difference between the pre-and post-test results gave an indication of how well students had learnt. There was no discussion of answers after the pre-test so as to ensure there was no memorization of ‘correct’ responses in the post-test. Students doing the pre-test were neither told that they had to do the post-test, nor given any hints about the text used in the two tests.

Students who scored equal to or less than the first quartile and those who scored equal to or more than the third quartile on the pre-test were regarded as ‘weaker’ and ‘stronger’ respectively in understanding the chosen topic,

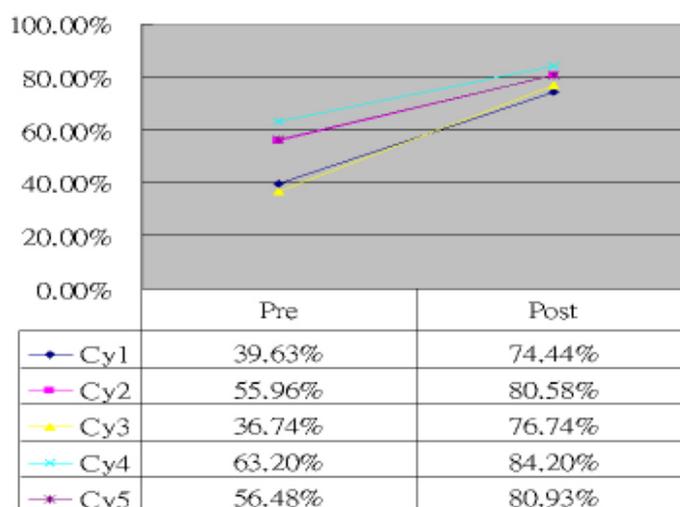
and their performance was traced. Interviews with a selected number of students (perceived by the teacher to be of high, medium, low ability) were conducted to probe students' understanding of the object of learning. The pre- and post-test results are also used for triangulation purposes to provide information about how well the teachers have achieved their intention.

In the pre-test, students' answers were categorized into *intuition/guessing*, *reference to markers*, *reference to context* and *sequence of events*. Three students of different levels of performance levels (high, medium, low) of each research lesson (altogether 15) were interviewed after both the pre- and the post-tests to judge their learning and progress, if any. The lower-ability students could not provide a clear explanation of how the present perfect tense was used to reflect time and its relation with the present. Their inadequate knowledge of English also impeded their understanding of the flow and inter-relationship of ideas. Some did not read beyond a sentence to look for clues. The medium-ability students demonstrated some confusion over the use of present perfect tense, and particular difficulty in seeing how events were linked to the present. The linguistic clues they looked for were individual markers, such as *for* and *since*. However, they quickly floundered when no explicit markers could be located. The high-ability ones viewed the texts as a whole rather than just based on sentences and words, but a few had difficulties when the time sense was not explicit.

The patterns of variation seem to have created an effect on students' performance. After the research lesson, there were some marked improvements in students' choice of tenses and their use of strategies. The concept of context appears to have been a valuable acquisition for them. The evidence from the pre- and post- test results, while not uniform, indicates a pattern that students used specific strategies taught in the lesson on the use of tenses. The accuracy rate in getting the appropriate tenses was also higher in the case of most of the questions in all five cycles of research lessons. The strategy rates improved although there were some small unexpected reverses of practice. An important outcome for students' benefit from this project was their ability to identify the clearly focused features of marker of tenses in

context to make meaning and being able to explain the choice of appropriate tenses.

In general, there were the positive correlations between the strategy used and the choice of tense. As shown in Figure 2, students did better in both the choice of tenses and strategies used when the results of the pre- and post tests were compared. The two weakest classes in Cycles 1 and 3 in fact experienced the greatest improvement (39.63% to 74.44% and 36.73% to 76.74% respectively) when compared with students' performance in other research cycles.



**FIGURE 2**  
Average Score on Answer in Each Research Cycle

When the paired-samples T test procedure comparing the means of the results of the pre-post-tests of each single group was administered, the p values obtained after the treatment, i.e., the research cycles, are 0.002, 0.001, 0.002, 0.001, 0.001 respectively and the overall (N=115) is 0.001 (as shown in Table 4). Since the significant values for change in test results are less

than 0.05, we can conclude that the performance is not due to chance variation, and can be attributed to the teaching.

**TABLE 4**  
**Descriptive Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre score total	6.52	115	1.629	.152
	Post score total	8.26	115	1.439	.134

**TABLE 5**  
**Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	Pre score total & Post score total	115	.259	.005

**TABLE 6**  
**Paired Samples T-Test**

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre score total - Post score total	-1.739	1.874	.175	-2.085	-1.393	-9.954	114	.001

(N = 115)

Post-test interviews were carried with the same 15 students who were interviewed after the pre-test to capture any change or lack of change in the test performance of their understanding of the use of past tense and present perfect tense in a descriptive text. All the students interviewed said that they were able to contrast the use of the two tenses and relate the choice of tenses to time markers. They were able to generalize the impact of the use of the two tenses on textual meaning. They articulated the understanding that the past tense is used with a focus on the time, while the present perfect tense focuses more on the continuity or the impact of an event up to the present

moment. One student of higher ability reported, “*I find the differences of the use of the two tenses much clearer and this can improve my writing as well.*” Another student of lower ability commented, “*I can look for time markers when deciding which tense to use. It is easier now.*”

But a couple of lower-ability students still found it difficult to make the right choice when time markers are not present in a passage. The *contrast* and *fusion* functions of the activities did not seem to have helped them to see the variant features in conceptualizing the use of the tenses and their relationship with meaning. Their hesitant utterances reflect the challenging complexity of the concepts they were trying to articulate. Yet most of them stated that they now have a range of strategies to work out the tense use. For example, they said that they can work out the tense by looking at what tense is used before this event and whether there is any change of events that affects the use of tenses. They also found the use of time-lines very useful. The new learning was that students realized that different tenses will reflect different meanings and that very often they cannot rely on only one strategy (e.g. time markers), but also have to refer to the context to work out the meaning of tenses—a point which came out quite prominently in the lessons.

There were indications that students welcomed the comprehensive and clear examples provided in the lessons—suggesting that the application of the Theory of Variation facilitated the students’ learning. The students also appreciated timely feedback, and the fact that the group work and pair work actually allowed them to conceptualise and clarify the relationship between time and tenses in a meaningful context so they were able to make the appropriate choice. They claimed that they were more aware of the critical features in making a better and more reasonable choice of tenses and they thought that this new awareness could help them to improve their writing.

## **TEACHERS’ PROFESSIONAL DEVELOPMENT**

Conferencing at the post-research lesson stage allowed teachers to reflect

on their involvement in the project. They were able to identify areas of pedagogical improvement that came about as the cycles of research lessons unfolded, such as better use of the time-lines; presenting the two versions of the text in a comparative manner rather than as discrete pairs of sentences alone helped to highlight the critical features; directing students' attention explicitly to the use of tenses; and stressing the use of time markers. At the same time, the teachers demonstrated increasingly sophisticated pedagogical awareness in discussing the modifications that had to be made in each cycle.

Overall, teachers concluded that the project had given a new perspective to their teaching. One teacher stated, "...*The whole exercise engaged me in thinking more critically about my teaching and student learning.*" They self-reported an appreciation and improved understanding of the research lesson process and its benefits—in particular, the increased professional collaboration; the awareness of the necessity to base curriculum planning and lesson plans on evidence of students' needs and abilities; and the value of the Theory of Variation in helping them to clearly identify an object of learning and its critical features. One teacher in the study wrote in her self-reflection, "...*we teachers had the opportunity to finally take the first glance at what and how our students actually 'understand', 'believe' and 'interpret' their precious knowledge as they were asked to articulate what they believe and have acquired before....These steps have greatly widened our horizon and enhanced the effectiveness of our future teaching.*"

They concluded that they had come to understand how students understand and interpret their previous knowledge. They were more aware of the divergence between teaching and learning, and the need to choose the right teaching approaches and resources for a particular topic. Also, the teachers' motivation, commitment and confidence increased markedly over time. One teacher reported, "*The learning is valuable. We all have gained a deeper understanding of what we are teaching and how to teach it more effectively. I can apply the essence of this learning theory as well as the teaching methods to other classes and even to other subjects I teach.*" While they initially sought a great deal of guidance from me for the lesson design, as consultation

progressed, more and more substantive contributions were initiated by the teachers. They were further encouraged when they noticed incremental differences in student learning with each cycle of the research lesson, in the way the students expressed their understanding of the two tenses.

## **CONCLUSION**

This project provided the participants with the opportunity to identify the relationship between how teachers teach and how well students learn. Observation and evidence from the interviews and post-test suggest that the research lessons achieved the objective of promoting the appropriate use of past tense and present perfect tense in a descriptive text. Appropriate activities guided students in discerning the critical features through analyzing the variant and invariant forms, rather than engaging in guesswork. The project suggests that students can learn well if teachers can structure their lessons in such a way that students are able to discern and experience variation in relation to the critical features of an object of learning. This is important for a subject such as English in Hong Kong, as students need explicit induction into the relationship between linguistic features and text types if they are to participate in textual and even social processes within and beyond the school.

The Theory of Variation represents an alternative way of thinking about teaching and learning, and a tool to deal with the content that students find difficult. Allied with a structured cycle of research lessons, this approach provides a solid basis for the structuring of community and collaborative learning and engages the teachers in thinking theoretically as they take on a researcher's identity to look for answers and pose new questions. In this project, their experimental disposition was manifested again and again throughout the research cycles, as they explored their teaching and student learning, and developed a better understanding of themselves as teachers. One teacher mentioned that new questions arose during the research lessons

and she continually found herself linking ‘questions’ to ‘methods’—a researcher’s move. From the questions arising from the lessons, the teachers derived methods for teaching, which they tested and evaluated. They eventually came to see themselves as being empowered as a community to enact changes and bring about improvement in both teaching and learning.

The purpose of this project is not to advocate any particular method of teaching English; instead, it tries to highlight a gap that often exists in lesson planning. The project demonstrates that encouraging teachers to focus on how students understand the content of learning and to take appropriate steps to align their pedagogy accordingly can result in effective student learning and teacher professional development. While the manner in which the two tenses were presented to these secondary school students in Hong Kong may not be effective in other contexts, the use of collaborative and reflective lesson design structured around the Theory of Variation may prove a worthwhile investment.

## THE AUTHOR

*TONG Siu Yin Annie* is an Assistant Professor in the Department of English of The Hong Kong Institute of Education. Her current research interests cover English language curriculum development, learning study, English language arts assessment and school-based assessment. Her recent publications include *Lessons learned? The new senior secondary curriculum in English language in Hong Kong* (2010) and *Mind the gap: Curriculum, pedagogy and assessment in English language arts* with B. Adamson (2010). Email: atong@ied.edu.hk

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## APPENDIX 1

### Text for pre- and post- tests

Sang Lan (1. started \*/has started) practising gymnastics since she was 14. In 1998, while she was practising for gymnastics competition in New York City, she (2. fell\*/has fallen) and seriously injured her spine. Since then she (3. was paralyzed/has been paralyzed\*) from the chest down, but she doesn't feel sorry for herself. 'I won't give up,' she says.

People all over the world (4. found/have found\*) Sang's story meaningful. After the accident, she (5. stayed\*/has stayed) in a hospital in New York for a year. During the time, many famous people (6. visited\*/have visited) her and (7. asked\*/have asked) her to take part in the city's New Year's Eve celebrations. Now that she's back in China, Sang (8. became/has become\*) a famous person and role model. She has been on television and she (9. hosted/has hosted\*) her own TV show on Star TV. This year, the Chinese Government (10. chose\*/has chosen) her to be a torchbearer at the 2008 Olympics.

Sang (11. studied/has studied\*) journalism at Beijing University for some time. She will graduate in 2009.

\* Correct answers

## APPENDIX 2

### Text on Yao Ming for the research cycles

Yao, born in Shanghai in 1980, started playing for the Shanghai Sharks as a teenager. He played on their senior team for five years and won the championship in 2001 (in his final year). He entered the 2002 NBA Draft, and since then he has played in the NBA All-Star Game. However, he missed significant time due to injury in some of the seasons.

He has become one of China's best-known athletes now and has been the richest celebrity in China for five years. Since 200?, he has acted as a

spokesperson for various famous brands such as McDonald's. He was the subject of a documentary film, *The Year of the Yao* in 2004. In the 2008 Olympics, Yao carried the Olympic Flame into Tiananmen Square, as part of the Olympic torch relay. He also led his country's delegation during the opening ceremony.

Yao has also participated in many charity events during his career, including the NBA's Basketball Without Borders program. In the NBA's offseason in 2003, Yao hosted a show on television, which raised US\$300,000 to help stop the spread of SARS. After the 2008 Sichuan earthquake, Yao donated \$2 million to relief work. Up till now, he has raised a lot of money for rebuilding schools destroyed in the earthquake.