Teaching Cantonese opera in primary school:
Enhancing learning effectiveness with Variation Theory

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Abstract

Purpose

This study aimed to examine the effectiveness of learning Cantonese opera using Variation Theory as a guiding principle of pedagogical design.

Methodology

Three types of speech in Cantonese opera were identified as the objects of learning in the study: patter speech, poetic speech and supported speech. Two classes of Grade 5 (N =54) students were arranged into an experimental group and a control group. In the experimental group, the characteristics of the three types of speech were taught using comparison and contrast techniques to help the learners identify and differentiate the characteristics of each type. The control group was taught the three types of speech sequentially without attempting to compare and contrast among the types. Pre- and post-tests were conducted to test the students' understanding of the objects of learning. An independent samples t-test and a paired sample t-test were applied to measure the statistical differences between the groups and the pre- and post-tests, respectively.

Findings

The results indicated that there were no significant differences between the two groups before the treatment ($p = .665$). However, the experimental group achieved a significantly higher level of learning effectiveness than the control group after teaching ($p = .003$). The control group did not significantly improve their understanding after learning ($p = .061$), whereas the experimental group significantly increased their scores ($p < .001$).

Value

The application of Variation Theory in academic subjects, especially mathematics, has been well explored in the literature. This study shows the application of Variation Theory in the cultural subject of music, and points to the potential of Variation Theory as a guiding principle of music teaching to enhance learning effectiveness.

Keywords

Variation Theory, critical aspect, Cantonese opera, music education, learning effectiveness.

Introduction

Cantonese Opera, or 'Yueju', is one of more than 400 genres of opera in China. The genre employs Cantonese as the main dialect, which is widely spoken within Guangdong Province, Hong Kong and Macau. Cantonese opera has been the main Chinese opera genre in Hong Kong since the late 19th century. In 2009, Cantonese opera was recognised by UNESCO as an Intangible Cultural Heritage (UNESCO, 2009). To preserve and help spread this traditional genre, the Hong Kong government has realised that the inclusion of the genre in the school curriculum is a critical means of ensuring that all students encounter it, and so encourages schools to include Cantonese opera in their music curriculum (Education Bureau, 2003). There has traditionally been an imbalance between Chinese and Western music in Hong Kong's school music curriculum, with many teachers ignoring Chinese music as a core component (Cheung, 2004). Further, primary and secondary students in Hong Kong generally lack passion for Chinese music (Ho, 2007). Finding more effective ways of teaching Chinese music is thus considered to be an urgent need.

This article describes a study that employed Variation Theory as a guiding principle of pedagogical design to help Grade 5 students identify three types of speech in Cantonese opera. The study examined whether the application of Variation Theory in teaching this subject can enhance student learning outcomes. The findings of the study provide empirical evidence to support the use of Variation Theory as a guiding principle of pedagogical design in teaching Cantonese opera.

This article is also a learning outcome of a learning study course at a teacher education institution. The first author, having taken a course related to learning study during the second year of a B.Ed. programme at the Hong Kong Institute of Education, attempted to apply Variation Theory in his graduate project in a primary school. Although studies of how Variation Theory can be applied in academic subjects such as mathematics and science are well documented in the literature, there is less evidence of its use in cultural subjects. This study tests whether Variation Theory can help to improve the learning outcome of students in the cultural subject of music.

Teaching Chinese Music in Hong Kong Schools

The modern trend of education in Hong Kong focuses on localisation and nationalisation, rather than globalisation (Law, 2004). It is believed that music education can reflect and enhance the national identity of young people in Hong Kong (Law and Ho, 2004). However, according to a survey carried out by the Education Department of Hong Kong, both primary and secondary music teachers regard Chinese music as the most difficult type of music, and Chinese opera as the least important genre (Curriculum Development Institute, 1998a, 1998b). Another survey (Ho, 2007) found that Hong Kong secondary students ranked music first

among eight school subjects as the avenue for learning about the culture of other countries. The same survey also showed that traditional Chinese music was ranked 8th among 11 genres in musical preferences. Yet another survey of 209 Hong Kong secondary music teachers found that more than 80% of the respondents believed that Chinese music should not exceed 30% of teaching time in the music curriculum (Leung, 2004).

Clearly, teaching and learning Chinese music in Hong Kong schools have not been accorded importance by either teachers or students. Thus, although Cantonese opera is included in the Music Curriculum Guide (Curriculum Development Council, 2003) and music teachers in Hong Kong have been encouraged to teach the genre to promote Chinese culture, students are not interested in it and teachers are not eager to teach it.

Teaching Cantonese Opera in Hong Kong Schools

Teaching Cantonese opera in Hong Kong schools is a new topic on the research agenda in Hong Kong. To investigate students' motivation to learn Cantonese opera, a study was carried out in two primary and two secondary schools with 354 primary and 342 secondary students as subjects (Leung and Leung, 2010). A pre- and post-test design with a questionnaire survey indicated that whereas primary students had increased motivation to learn Cantonese opera after learning about it using a teacher-artist approach, the secondary students did not. The results were attributed to age differences, self-consciousness, intrinsic value and socio-cultural impact.

Teachers are critical factors in the success of almost all new initiatives in education. Leung (2010; in press) studied the attributes of the transformation of five primary and two secondary music teachers in teaching Cantonese opera in their schools and found that informative learning of the content of Cantonese opera with sufficient time is a pre-requisite for teachers' transformation. When teachers accept that teaching traditional music, such as Cantonese opera, stimulates and broadens students' musical interest and provokes their cultural and national awareness, they usually face a disorienting dilemma because of their Western music background. However, this dilemma contributes to the change in their habit of mind (Mezirow, 1997, 2000), and some teachers shift from being disciples of Western music to initiates who value the traditional arts.

In summary, Hong Kong students appear to be uninterested and passive in learning Chinese music because of their unfamiliarity with the genre and culture. Music teachers in Hong Kong are also unmotivated to teach due to their lack of confidence in and knowledge of teaching Chinese music. Very few studies have been carried out to shed light on how Chinese music, in particular Cantonese opera, can be taught effectively. This study aims to fill this gap by implementing a quasi-experimental design using Variation Theory as a guiding principle for teaching the genre.

Theoretical Framework

Variation Theory (Marton and Booth, 1997) was used as a guiding principle for designing the teaching activities. The outcomes are also explained using Variation Theory. According to Lo and Marton (2012), the main contribution of Variation Theory to the improvement of teaching and learning is to draw teachers' attention to the object of learning and help them to focus on the necessary conditions of learning. To help students appropriate an object of learning, teachers must first carefully study the object to identify its critical features, as how one understands an object of learning depends on which critical features are discerned simultaneously. Some students may focus on features that lead to a different way of understanding the object and thus fail to learn what is intended by the teacher, because an object may have many different features. Second, students can discern the critical features only when they experience variations in these features. To help students to discern the critical features, teachers must plan relevant patterns of variation that will help students to experience the variation in the desired critical features. If teaching is planned to provide these necessary conditions, then the opportunity for students to learn effectively will be enhanced. Otherwise, learning will be left to chance, which explains the existence of individual differences in learning in the classroom.

Methodology

Focus of the Study

Cantonese opera is an artistic genre that involves 'Four Skills', which are the basic learning targets for professional artists (Cantonese Opera, 2011). The 'Four Skills' include 1) singing, 2) acting and moving, 3) reciting and 4) fighting and movement (Yung, 1989). In this study, the skill of reciting was selected as the object of learning. Recitation or speech refers to the act of speaking dialogues and monologues. It can reflect the plot and express the ideas, thoughts and emotions of roles.

According to Yung (1989), there are seven common types of speech in Cantonese opera:

1. *Baak* (Plain Speech): free speech.
2. *Tokbaak* (Supported Speech): speech supported by music.
3. *Wanbaak* (Comic Rhymed Speech): speech with rhymes in a humorous style.
4. *Logubaak* (Percussion Speech): speech with percussion as an accompaniment.
5. *Sibaak* (Poetic Speech): speech in poems.
6. *Haugu* (Rhymed Speech): speech in rhyme.
7. *Baaklaam* (Patter Speech): rhythmic speech with pulses played on a Chinese wood block.

This study focuses only on the teaching of speech, and the research lesson was limited to only three types of speech: *Baaklaam* (patter speech), *Sibaak* (poetic speech) and *Tokbaak* (supported speech).

Purpose of the Study

The main purpose of the study was to determine the extent to which teachers can enhance the effectiveness of teaching the three types of speech in Cantonese opera using Variation Theory. A linear teaching method, in which content is taught sequentially without comparison, and a modified method derived from Variation Theory are compared. The research was inspired by Lo and Marton (2012), who reported a learning study on Cantonese Opera and analysed and explained improved student learning outcomes using Variation Theory. The current research also examines whether Variation Theory provides guidance for the teaching of 'speech' in Cantonese opera to enhance learning effectiveness, and explores the reasons for the findings.

Method

This study mainly employed a quasi-experimental design (Cohen, Manion and Morrison, 2007; Jackson, 2009) and naturalistic observation (Adler and Adler, 1994) of class teaching. Random sampling was impossible because of school context limitations. Rather, convenient samples of two Grade 5 (aged 10–11) classes in a primary school were invited to participate in the study, because Cantonese opera is part of the music curriculum in Grade 5. Both classes comprised 27 students. One of the classes was assigned to be the experimental group and the other became the control group. Both groups were taught the three types of speech in Cantonese opera in one lesson. However, the first group was taught with a lesson plan derived from Variation Theory. To help the students to discern the critical features of the three types of speech, each critical feature was compared and contrasted with the others. This technique provided an opportunity for the students to experience variation in the feature (for example, number of words, rhyme, with or without background music). The control group was taught using a linear method, with each type of speech being taught one at a time and illustrated with examples, but without conscious comparison of the examples. This is the kind of teaching strategy usually employed by the music teachers involved in the study.

A pre- and post-test design was implemented to compare the learning effectiveness of the two groups. An independent samples t-test was used to examine the significant differences between the two groups in the pre- and post-tests. A paired-samples t-test was used to measure the significant differences between the pre- and post-tests of the experimental and control groups.

The lessons in both classes were videotaped for repeated observation by the two researchers. Investigator triangulation ensured the credibility of the observations (Cohen, Manion, and Morrison, 2007), which occurs when the researchers agree on observation notes from repeated observations of the tape.

Subjects

A primary school in Hong Kong was invited to participate in the study. Two classes of Grade 5 students (aged 10-11), each with 27 students per class, were the subjects of the study. According to the information given by the teachers, the academic achievement and competence of these two classes were similar. Different music teachers taught the two classes. Both teachers were music majors with at least three years of teaching experience, but had limited knowledge of Cantonese opera and were not confident in teaching the genre. The samples are regarded as convenience samples (Willemse, 2009).

Procedure

The study was not a conventional learning study because the objects of learning and critical features were designed by the researchers, rather than in collaboration with the teachers. A quasi-experimental design was adopted to study the effect of the different teaching modes on student learning. The researchers also designed the teaching plans, materials and the pre- and post-tests. The researchers decided to refer to and adopt the teaching materials on Cantonese opera provided by the music textbook series that the participating students were already using, which covered the three types of speech in Cantonese opera.

The content of the pre- and post-tests was identical, except for the sequence of questions (Appendices 1 and 2 present the English version of the pre- and post-tests; the original tests were in Chinese). After completing the teaching materials and test items, the first author met the teachers to introduce the aims of the study and the types of speech in Cantonese opera. After thoroughly understanding the types of speech and what was expected of them, both teachers discussed and collaboratively developed their own teaching plan, with a slight difference between them: the teacher of the control group would teach the three types of speech one at a time sequentially, with clear explanations and listening activities for each (similar to their original practice), whereas the teacher of the experimental group would also teach each type of speech through clear explanation and listening activities, but would also try to highlight their unique characteristics by comparing and contrasting each type of speech. Instead of teaching the teachers about Variation Theory, the researchers simply asked the second teacher to highlight the similarities and differences between the three types of speeches during teaching. This was achieved in the experimental group by asking the students to recall the characteristics of the first type of speech and immediately compare them with those of the second type after the teaching of the first type of speech was finished but before proceeding to the second type. The characteristics of the first and second types of speech were recalled and compared in a similar way when the third type of speech was taught.

Teaching and testing were completed in two days. Before being taught, the two groups participated in the pre-test. The classes were then taught by the teachers on the same day. The next day, all of the students took the post-test. The test scores were recorded and analysed by independent-samples and paired-samples t-tests.

To achieve a naturalistic observation setting in the classroom, the researchers videotaped the classes rather than sitting in the classroom, which might have influenced the students' and teachers' behaviour. After reviewing the videotapes twice, the researchers made detailed observation notes.

Objects of Learning and Critical Features

Many music teachers in Hong Kong tend to follow textbooks, because the textbooks come with teaching aids and materials that help teachers to prepare their lesson plans. Speech is one of the four basic elements emphasised in the genre of Cantonese opera, and thus many textbooks cover the different types of speech. The three types of speech taught in this study were part of the original music curriculum found in the textbook series used by both classes. These three types of speech are included in the primary curriculum because they are easily compared. Students are expected to become more interested in Chinese music if they develop an in-depth understanding of the genre.

The three selected types of speech have both common and unique characteristics. All three are recited rather than sung. According to Chan (1999), patter speech comprises an unlimited number of couple sentences, with a stable pulse played by a woodblock as accompaniment. The last words of every second sentence must rhyme. A sentence can contain any number of words, but the actor/actress has to organise the sentences so that they suit the rhythm and Chinese linguistic structure.

All poetic speeches have two or four sentences. Similar to patter speeches, poetic speeches must have rhyming last words in the second and fourth sentences. However, this type of speech has no percussive or melodic accompaniment. Instead, a short percussive phrase is played after each sentence is recited that acts as punctuation.

Supported speech is accompanied by music, which is its most significant characteristic. This type of speech has neither limitations on the number of sentences and words nor any requirement for the rhyming of end words. The rhythms of language and music always create interesting sound effects.

For each type of speech a number of critical features must be discerned: whether rhyming is observed, whether the number of phrases is limited, the kind of accompaniment if any, whether percussion is used as punctuation and whether the speech is interweaved with melody. Table 1 summarises the common and unique characteristics of the three types of speech.

Table 1. **Comparison of the Characteristics of the Three Types of Speech**

Critical Aspects	Patter Speech	Poetic Speech	Supported Speech
Recited	✓	✓	✓
Sung	✗	✗	✗
Rhymed	✓	✓	✗
Limitation on number of phrases	✗	✓	✗
Accompaniment	By bukyu	Nil	By melody
Percussion as punctuation	✗	✓	✗
Speech interweaved with Melodies	✗	✗	✓

Our experience suggests that if these three types of speech are introduced one at a time without comparison, students will easily forget the individual characteristics of each type. Consequently, they will barely remember the nature of each speech type and tend to provide incorrect answers when tested. The experience of the participating teachers also confirmed that students tend to forget what they have been taught and do not perform well in written tests.

Teaching and Learning Process of the Groups

The experimental and control groups were taught with two different teaching plans based on identical learning content. The main teaching objective was that the students should be able to identify the three types of speech by listening to excerpts. The control group was taught using a linear method where each type of speech was illustrated by authentic examples of speech from Cantonese opera. The teacher introduced the three types of speech to the class and let them listen to corresponding examples. The individual characteristics of each type of speech were discussed, but no comparison was used to highlight the variation in characteristics among the different types of speech.

Experimental Group. In the teaching plan for the experimental group, the relationship among the three types of speech and the individual critical features and characteristics were compared. For example, one critical aspect is that although all three types of speech are recited rather than sung, their accompaniments are all different. Patter speech is accompanied by a woodblock played with a steady beat, whereas percussion 'punctuation' accompanies poetic speech, and music accompanies supported speech. Another critical aspect is the different limitations on the numbers of words in each phrase in the three types of speech.

To help the students in the experimental group compare the three types of speech, they were asked to fill in a comparison table (see Table 1) while listening to the different excerpts. This technique is considered to be a proactive exercise to increase the opportunity for students to experience variations in the critical features (Lo & Marton, 2012). The teacher of this group constantly reminded the students to pay attention to the characteristics of the

individual types of speech when listening. The following paragraphs are excerpts from the lesson that focus on the critical features of patter speech.

The music teacher played an excerpt of patter speech with the lyrics and musical notation of the rhythm.

 Teacher: What happens when the cross (x) appears besides the text?

Many students raised their hands, and the teacher pointed to one of the boys.

 Student 1: There is a beat of a percussion instrument playing with the lyrics.

 Teacher: Ah, you are very smart! But do you know the instrument? What is it?

 Student 2: It is a bukyu.

 Teacher: When it is played, does the player beat the bukyu randomly or follow a steady beat?

Many students raised their hands, and some said, 'Follows a steady beat'.

 Teacher: Do you want to see a bukyu?

Many students said, 'Yes'. The teacher showed a bukyu to the class and played it.

 Teacher: This kind of speech is called patter speech, which is characterised by a steady beat played by the bukyu as an accompaniment. Now, it is time for you to try to speak patter speech. There is another passage on your worksheet. Please recite it and I will play the bukyu to accompany your speech.

After talking about patter speech, the teacher introduced poetic speech by playing an excerpt and asking the students to fill in the worksheet.

 Teacher: OK. What is the meaning of the exclamation marks in the text?

 Student 3: The drum and some other instruments are played.

 Teacher: Yes, there are drums beating. But is there any music that accompanies the speech when it is recited?

Many students shouted both 'yes' and 'no'.

 Teacher: OK. You might have forgotten. Listen to the excerpt once again.

The teacher plays the excerpt again, and most of the students said 'no'.

 Teacher: Correct. Don't mix up percussion and musical accompaniment. There is no music accompaniment to poetic speech.

The teacher went on to teach poetic speech. However, she compared and contrasted the critical features of poetic speech with those of patter speech. First, she asked the students to recite a poetic speech with percussion as an accompaniment, which is one of poetic speech's critical features. She then asked the students to fill in the table. The following is another excerpt showing how she compared the two types of speech.

 Teachers: We won't go on to the third type yet, but will first compare patter and poetic

speech. First, were the types [of speech] recited or sung?

Many students shouted 'recited'.

Teacher: Yes, so please tick the right box. And did both of them rhyme?

Many students shouted 'yes'.

Teacher: Ok. Then tick that box for both of them. OK. Was there any accompaniment?

Student 3: Yes, there was a bukyu accompanying . . .

Teacher: Yes, do you know how to write 'bukyu', and in which type of speech?

Students 3: In patter speech.

Teacher: How about poetic speech?

Student 4: Yes . . .

Teacher: Was there a kind of accompaniment? Is it regarded as accompaniment?

Many students shouted 'no'.

Teachers: Correct, this is not accompaniment. The accompaniment should go with the speech. And another column – 'percussion as punctuation', which type of speech matches this?

Many students shouted, 'poetic speech'.

Teacher: Correct. So, is there percussion as punctuation in the patter speech?

Student 5: No, there is only bukyu playing without punctuation.

Teacher: Is there any singing interweaved with the speech?

Student 6: In patter speech, yes; in poetic speech, no.

Teacher: You have to pay attention – interweaved in the singing. What does it mean? Is there any singing?

Many students shouted 'no'.

Teacher: Correct, there is no one singing. So is there any singing interweaved?

Many students shouted 'no'.

Teacher: Correct. So we have distinguished between patter speech and poetic speech.

Control Group. The teacher of the control group taught the same content as the teacher of the experimental group. She played the same excerpts in class and introduced the same set of percussion instruments. She also demonstrated the types of speech and asked the students to play the percussion instruments as accompaniment. However, the main difference was that the teacher simply introduced the learning objects (the three types of speech) one by one without comparing them. The following is a sample episode of the discussion in the control group.

The teacher distributed a worksheet to the class. She then played the first excerpt to the class and asked the students to find the answers to the questions on the worksheet.

Teacher: I am going to teach three types of speech in Cantonese opera. The first one is

called patter speech (she wrote the term on the board). You are going to listen to the excerpt and you have the lyrics on your worksheet. Try and figure out the meaning of the crosses (x) in the lyrics.

The teacher then played the audio excerpt twice.

Teacher: OK. You have listened to the excerpt twice. I would like you to pay attention to the percussion played with the speech. Did you notice that there was an instrument playing at the crosses?

Student 1: Yes, there was a woodblock playing at the places of the crosses.

Teacher: Yes. But it is not a woodblock. It is called a bukyu. Now I will show you a real bukyu.

The teacher showed the instrument to the class and played it. She then also showed a gong and a pair of small cymbals to the class and demonstrated their sounds.

Teacher: So, you have listened to the sounds that these three instruments make. Now, please say these words together.

The teacher asked the class to pronounce the last words of each phrase of patter speech to help them to discover that the words all rhymed.

Teacher: Are these words pronounced identically, or mean the same, or do they rhyme?

A few students together: They rhyme.

Teacher: Yes. Now, let's listen to the excerpt again. Clap your hands to the beat of the speech.

Teacher: Can you summarise the characteristics of patter speech?

Student 2: There is no music with patter speech. Sometimes there is an instrument . . .

Teacher: No music. Do you mean rhythm?

Student 2: Yes, there is a steady rhythm.

Teacher: (beating the bukyu) What is it?

Student 2: There is a bukyu playing with the speech as an instrumental accompaniment.

Teacher: Ok. Apart from the instrument, there are 'suen', 'tuen' . . .   What are these?

Student 3: Oh! They rhyme.

Teacher: Yes, they rhyme. Remember these. Now turn to the next page on poetic speech.

Pre- and Post-tests

The pre- and post-tests were both listening tests, which had twelve identical questions that asked the students to identify the three types of speech. The maximum score in both tests was 12. The only difference between the tests was that the pre-test had musical excerpts with verbal illustrations to help the students identify the three types of speech because they had not yet learned about speech in Cantonese opera. In addition, the sequence of questions in the tests was different. During both tests, the music teacher played the excerpts and gave the students 30 seconds to respond to each question.

Results

Both classes had 27 students each, all of whom participated in the pre-test. However, one student in the control group was absent for the post-test. The statistical results in Table 2 indicate no significant difference between the two groups in the pre-test, but show that the experimental group achieved a significantly better result than the control group in the post-test (p = .03).

Table 2. **Results of the Independent Samples T-test of the Pre-test and Post-test Scores of the Control and Experimental Groups**

	N	Mean (SD) (Maximum score = 12)	t	p
Pre-test				
Control Group	27	8.63 (3.410)	.435	.665
Experimental Group	27	9.00 (2.815)		
Post-test				
Control Group	26*	9.69 (2.558)	3.114	.003**
Experimental Group	27	11.33 (.961)		

*One student from the Control Group was absent.   **p<.001.*

Table 3 shows the results of a paired-samples t-test to examine the statistical differences between the pre- and post-tests. The results indicate that there was no significant difference in the score tests of the control group (p = .061), whereas the experimental group showed a significant improvement in the post-test (p < .001).

Table 3. **Results of the Paired-samples T-test of the Pre-test and Post-test Scores of the Control and Experimental Groups**

	n	Mean (SD) (Maximum score = 12)	t	p
Control Group				
Pre-test	26*	8.50 (3.409)	-1.962	.061
Post-test		9.69 (2.558)		
Experimental Group				
Pre-test	27	9.00 (2.815)	-4.168	.000***
Post-test		11.33 (.961)		

*The pre-test score of the absent student in the control group was not considered.   ***p<.001.

To understand comprehensively which type of speech the students found more difficult to learn, the percentage of errors in each of the categories was calculated for both groups. Table 4 shows that the students found patter speech to be the most difficult type of speech to identify during the pre-test, with 40% and 37% of error in the control and experimental groups, respectively. Poetic and supported speech seemed to be of a similar level of difficulty. However, after the lessons, the control group only experienced a significant decrease in error rates in their comprehension of patter speech, but maintained similar error rates for poetic and supported speech. In contrast, the students in the experimental group had significantly decreased error rates in their comprehension of all three types of speech.

Table 4. **Percentages of Errors for Each Type of Speech in the Control and Experimental Groups**

	Patter Speech	Poetic Speech	Supported Speech
Control Group			
Pre-test	43.52%	19.44%	21.30%
Post-test	18.27%	17.31%	22.12%
Experimental Group			
Pre-test	37.03%	23.19%	14.81%
Post-test	6.48%	2.78%	7.41%

Discussion

This study aimed to examine whether Variation Theory can be used as a guiding principle of pedagogical design to help improve the effectiveness of teaching primary students to identify the three types of speech in Cantonese opera. According to the statistical results, the control group did not significantly improve their ability to identify the types of speech, whereas the experimental group improved significantly, although both groups had similar levels of academic achievement. The experimental group also showed a greater improvement than the control group. In terms of the types of speech, patter speech was the most difficult type of speech to learn in both groups.

The results revealed significant differences between the experimental and control groups in the pre- and post-tests. The content of the pre- and post-tests was identical. The only difference was the comparison and contrast technique used in the experimental group to highlight the characteristics of the types of speech at the very beginning and during the learning process, whereas the control group was only exposed to the individual characteristics of the speech types one by one without comparison.

The results show that the students in the control group faced greater learning obstacles than those in the experimental group. The control group students learned the characteristics of each type of speech one by one. After learning all three types, they then had to remember all of the characteristics of all three types. During the learning process, they were not given the opportunity to experience variation in the critical features by comparing and contrasting them. Thus, for some students, each type of speech was only encountered in the initially fused state (Lo and Marton, 2012); that is, they may have had a vague impression of the speech, but were unable to discern the critical features separately or determine how they were related to each other and to the whole. When they were asked to answer the questions in the post-test, they needed to pay attention to the audio recordings, be aware of the characteristics (or critical features) that they knew and recall the characteristics of all three types of speech by comparing and matching. For the students who were only able to identify the types of speech using their vague impressions, this process proved to be complicated and prone to error. This may explain the less satisfactory result for the control group.

The students in the experimental group also encountered each type of speech in an initial state of fusion. However, by contrasting the characteristics of each type of speech with the others, the teacher effectively helped the students to open up dimensions of variation in the critical aspects, such as whether there was musical accompaniment, punctuation and rhyme. During the learning process, the students were reminded to focus on these critical features and to compare the three types of speech. When responding to the questions in the post-test, the students in the experimental group were better able to focus on these characteristics (critical features) and to compare and match what they heard.

In conclusion, this study provides further empirical evidence that supports the use of Variation Theory as a guiding principle in pedagogical design to enhance the teaching and

learning of music in the classroom. We are not claiming that teachers must teach using variation before students can learn, as clearly some of the students in the control group were also able to learn. However, if the teacher does not consciously provide opportunities for students to discern the variation in the critical features of the types of speech in Cantonese opera, whether students will discern the critical features will be left to chance, which explains why there are always differences in student learning outcomes (Lo, Pong and Chik, 2005). A well-designed lesson helped the students in the experimental group to experience variation in the critical features, thereby facilitating their identification of the three types of speech. This study also demonstrates the effectiveness of an alternative pedagogy – teaching through comparison as opposed to teaching sequentially without comparison – which should be explored by music teachers.

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Appendix 1: English version of the Pre-test

<div align="center">

Primary 5
Introduction to Cantonese Opera
Types of Speech: Patter Speech, Poetic Speech and Supported Speech

</div>

Name of Student: _____   Class: _____   Class no.: _____

1. Listen to the excerpts of the following types of speech with reference to the text:
    A. Patter Speech
        [Text listed]

    B. Poetic Speech
        [Text listed]

    C. Supported Speech
        [Text listed]

2. Listen to the excerpts played by the teacher and identify the type of speech by ticking (✓) the correct column.

Excerpt	Patter Speech	Poetic Speech	Supported Speech
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

Appendix 2: English version of the Post-test

<div align="center">

Primary 5

Introduction to Cantonese Opera

Types of Speech: Patter Speech, Poetic Speech and Supported Speech

</div>

Name of Student: _____   Class: _____   Class no.: _____

Listen to the excerpts played by the teacher and identify the type of speech by ticking (✔) the correct column.

Excerpt	Patter Speech	Poetic Speech	Supported Speech
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			