

Chapter 5

Pedagogical Issues of Collaborative Teaching in “Learning Communities”: An Exploratory Study of Co-teaching Chinese



Tung-Fei Lam and Kwok-Ling Lau

Abstract This study explores pedagogical issues arising from the practice of collaborative teaching using co-teaching strategies as adopted by Chinese teachers at schools where a “Learning Community” approach is advocated. The issues identified include factors which have to be taken into consideration when implementing collaborative teaching in a new context, the different co-teaching strategies adopted and the challenges perceived by teachers. Multiple cases from two international education schools in Hong Kong and Guangzhou were studied. Three Chinese teams, two from lower secondary and one from primary, participated in the study. Classroom observation and post-observation focus group interviews were conducted to collect data. The findings suggested that the school’s expectations regarding pedagogical shift and teacher’s perceptions as shaped by previous experience were key factors in determining ways of collaborative teaching. It was also found that teachers demonstrated different qualities of co-teaching strategies such as team teaching defined by Friend’s study (2010) as opposed to the models defined. The perceived challenges of implementing the strategies were related to administration, such as timetabling and collaboration time, and teachers’ readiness, such as their beliefs about teaching effectiveness and their student’s preparedness in relation to the pedagogical changes. The result of this study illustrates issues related to collaborative teaching and offers practical reference for teachers to work collaboratively in a manner which is responsive to their circumstances and learning environment (225).

Keywords Collaborative teaching · Co-teaching strategies · Learning communities

T.-F. Lam (✉) · K.-L. Lau
Curriculum and Professional Development Division, Yew Chung Yew Wah Education Network,
Hong Kong, China
e-mail: tungfei.lam@ycef.com

K.-L. Lau
e-mail: kwokling.lau@ycef.com

Suggested Questions for Reflection:

1. How would you describe your own classroom learning environment?
2. In your context, do you see any potentials/challenges to adopt a collaborative teaching approach?
3. What co-teaching strategi(es) do you think might help you better cater to the individual needs and characteristics of students?

5.1 Introduction

A “Learning Community” approach has been formally adopted in the participant schools, which offer international education programs in Hong Kong and Guangzhou, since August 1, 2018. Commitment to the approach is articulated in their Mission, Principles and Practices as “We believe that ‘Learning Communities’¹ best enable students and teachers to creatively and holistically explore different fields of knowledge, fostering individual and collaborative learning skills that are critical for the 21st Century”. In the same year, a guiding statement on “Learning communities” was also published and their characteristics were defined. It was stated that learning communities “allow for flexibility in modes of learning and teaching, in order to cater for the individual needs and characteristics of students”.

In accordance with these characteristics, teachers are expected to:

- Model collaboration by engaging in shared problem-solving, proposing solutions, evaluating ideas, planning, implementing and evaluating outcomes;
- Be open to experimenting with new pedagogical approaches and
- Be flexible and proactive in adopting different roles; for example, facilitator, mentor, assessor, resource compiler and/or instructor.

The concept of “Learning Communities” adopted here differs from that proposed by Professor Manabu Sato (佐藤學, 2003, 2010), who refers to a pedagogical model of collaborative learning in junior high schools. Rather, it refers to various forms of communities for learning in which the individual learner is placed at the heart, within flexible learning spaces. Bielaczyc and Collins (1999, p. 4) identify four main features of the learning communities’ approach which more closely resemble the approach adopted by the participant schools. These features include “(1) diversity of expertise among its members, who are valued for their contributions and given support to develop, (2) a shared objective of continually advancing collective knowledge and skills, (3) an emphasis on learning how to learn, and (4) mechanisms for sharing what is learned”.

Clearly this critical paradigm shift is likely to challenge teachers accustomed to teacher-centered classrooms who find themselves having to teach collaboratively in

¹ From literature review, the notion of learning community could mean differently in different contexts. In this study, we refer the term “Learning Communities” to a specific meaning defined by the participant schools whereas we keep the terms learning communities or learning community without capital letters that were originally presented in papers.

the new context. In a recent study (Lai et al., 2020, p. 536) of flexible learning space and teacher’s behavior in innovative learning environments, it was found that “individual teachers’ identities, capacity and beliefs were found to play an essential role, in addition to cultural and structure factors, in shaping the teachers’ sense-making of their social practice in the (open learning) space, and the subsequent becoming of the space and social practices”. Other than making sense of the space, it is also essential to understand ways in which teachers make sense of working collaboratively, specifically by co-teaching, in the context of “Learning Communities”.

Hence, this article aims to identify pedagogical issues related to collaborative teaching with co-teaching strategies as adopted by Chinese teachers in the early stages of such a paradigm shift. Three main research questions are raised in the study: (1) What are the major considerations when Chinese teachers plan collaborative teaching in the context of “Learning Communities”, (2) What co-teaching strategies do the teachers adopt to achieve their set goals and (3) What major challenges do teachers perceive to be involved in enacting the strategies?

Research questions	Research methodology
(1) What are the major considerations when Chinese teachers plan collaborative teaching in the context of “Learning Communities”? (2) What co-teaching strategies do the teachers adopt to achieve their set goals? (3) What major challenges do teachers perceive to be involved in enacting the strategies?	Literature review, classroom observation, in-depth interview teachers, using semi-structured questions

5.2 Literature Review

As key concepts of this study, “collaborative teaching” and “co-teaching” should be carefully reviewed. Wadkins et al. (2004) defined “collaborative teaching” as “a method in which more than one instructor. . . . typically, two or more instructors are in the classroom during class time for each class meeting”. It was distinguished as a form of team teaching other than “tag-team teaching” and “coordinators of multiple guest speakers”. “Co-teaching” is a form of collaborative teaching, but has been the subject of research development, primarily in the field of special education, since the 1950s. It has been defined as “the partnering of a general education teacher and a special education teacher or another specialist for the purpose of jointly delivering instruction to a diverse group of students” (Friend et al., 2010, p. 11). Honigfeld and Dove (2010) point out that the term has been frequently used to describe collaborative partnerships between mainstream teachers and service providers or specialists other than special needs teachers, such as the English as a Second Language teacher in their case. However, Fluijt et al. (2016, p. 189) indicate that a contemporary definition of co-teaching is generally described as a form of collaboration. It commonly takes place in a classroom within a general education setting and is defined as:

Multiple professionals working together in a co-teaching team, on the basis of a shared vision, in a structured manner, during a longer period in which they are equally responsible to good teaching and good learning to all students in their classroom. (Fluijt et al., 2016, p. 197)

In the field of co-teaching studies, five common strategies namely “one teach, one assist”, “alternative teaching”, “parallel teaching”, “station teaching” and “team teaching” have been identified (Cook & Friend, 1995) and the sixth strategies “one teach, one observe” was added at a later stage (Friend et al., 2010). These six strategies are defined as follows (Friend et al., 2010, p. 12) (Table 5.1).

It is worthy to note that (a) some practitioners would simplify “one teach, one observe” and “one teach, one assist” to one strategy “one teach, one support” (e.g. Teacher Education Department, 2019), (b) team teaching as described in the table is a well-defined co-teaching strategies, in contrast to the more general concept indicated by the term “collaborative teaching” in the work of Wadkins et al. (2004), (c) the stated intention of adopting the strategies listed above was to “add a depth and richness to the co-taught class that is different from a classroom led by two general educators and should benefit all the learners” (Friend et al., 2010, p. 15).

In this study, the participant schools moved away from the early twentieth-century model of “Cells and Bells” (Nair & Fielding, 2005), by adopting the “Learning Communities” approach and the associated innovative learning environment in a context in which more than one general educator was increasingly involved. Many primary and secondary school case studies of collaborative team teaching in a broader sense involving this kind of environment have been reported and analyzed (Blackmore et al., 2011). To be specific, this study regards co-teaching as one form of

Table 5.1 The definitions of six co-teaching strategies (Friend et al., 2010)

Strategies	Definitions
One teach, one observe	One teacher leads large-group instruction while the other gathers academic, behavioral, or social data on specific students or the class group
One teach, one assist	One teacher leads instruction while the other circulates among the students offering individual assistance
Station teaching	Instruction is divided into three non-sequential parts and students, likewise divided into three groups, rotate from station to station, being taught by the teachers at two stations and working independently at the third
Parallel teaching	The two teachers, each with half the class group, present the same material for the primary purpose of fostering instructional differentiation and increasing student participation
Alternative teaching	One teacher works with most students while the other works with a small group for remediation, enrichment, assessment, pre-teaching or another purpose
Team teaching	Both teachers lead large-group instruction by lecturing, representing opposing views in a debate, illustrating two ways to solve a problem and so on

collaborative (team) teaching² in the context of “Learning Communities”. It adopts the contemporary definition of co-teaching suggested in the latest work done by Fluijt et al. (2016) but also includes the specific application of co-teaching strategies suggested in Friend’s study (2010) when interpreting the effects of the paradigm change on teachers’ practices, since most case teachers worked together in pairs to adopt the new pedagogy in the early stages of professional change. Therefore, the term “collaborative teaching” here is used to describe the nature of the pedagogy applied to the new context whereas the term “co-teaching” is specifically referring to the six co-teaching models or strategies aligned with the pedagogy.

When investigating the implementation of co-teaching, many researchers have studied different factors which co-teachers or school administrators need to consider in order to make it effective. Previous studies (Brendle et al., 2017; Cook & Friend, 1995; Friend et al., 2010) all point out the importance of administrative support. Cook and Friend (1995, p. 12) identified support as the following actions by administrators “(a) to help the co-teachers to plan and schedule their programs, (b) to provide incentives and resources that allow co-teachers to design and reflect about desirable changes in the way they provide services, and (c) to assist teachers in setting priorities that will protect their limited time”. In the same study, they also raised the issue of professional preparation, and described it as activities for “developing communication and collaboration skills, assessing one’s readiness for collaboration and co-teaching, and designing the parameters of the co-teaching relationships (among two or more teachers)” (p. 12). Other research studies of pre-service or in-service teachers in inclusive education also showed that issues related to time allocation for discussion and planning (Bristol, 2014) and teacher’s belief in co-teaching models (Shin et al., 2016) were potential challenges to the implementation of co-teaching. These findings suggest that, while analyzing the cases in relation to the research questions, the current study should mainly focus on aspects of administrative support such as collaborative planning time, and on teacher’s readiness including their professional beliefs and preparation.

5.3 Methodology

In order to address the research questions, a multiple case study approach was adopted to collect qualitative data from participant teachers. The cases were identified upon discussion between the researcher and individual schools. Three cases from two different schools, School A in Hong Kong and School B in Guangzhou, were involved in this study in the academic year 2018–2019.

Two teaching teams from school A joined the study, including two Chinese teachers in Year 7 and three in Year 8. School B had a team of two Chinese teachers

² In this study, the term “collaborative teaching” is used to describe the nature of the pedagogy applied to the new context “Learning Communities” whereas the term “co-teaching” is specifically referring to the six co-teaching models or strategies aligned with the pedagogy.

in Year 4. Their teaching experience ranged from novice to a master teacher with more than eighteen years of experience.

The study used pre-class observation meetings, class observations and post-class observation focus group interviews to validate data from multiple sources. Data was collected through classroom observations and in-depth interviews, which were coded and categorized by the researchers to identify how Chinese teachers adopted co-teaching strategies by thematic analysis. The resulting meaning was validated through cross-checking and analysis of empirical evidence.

In terms of types of data, the following table shows what exactly the data were being used and analyzed in this study (Table 5.2):

In terms of the context of the lessons selected for classroom observation, the following table outlines background information of the chosen units from two schools where different co-teaching strategies were analyzed (Table 5.3).

The data were triangulated in response to the research questions and finally interpreted with reference to the contexts, strategies and challenges of collaborative teaching, in particular co-teaching, observed in the lessons or perceived by the teachers.

5.4 Findings and Interpretation

1. “Learning Communities” Contexts: Considerations of Collaborative Teaching

The study identified that the teams from the two schools interpreted collaborative teaching in the context of “Learning communities” differently. This was mainly due to two major factors; firstly, the school’s expectations and the extent to which these supported or hindered the implementation of collaborative teaching, and secondly, the individual teachers’ perceptions and previous experiences of such teaching.

In terms of the school’s expectations and related supports and obstacles, School A adopted a project-based learning approach to construct learning communities for junior secondary students. In principle, Chinese was perceived as part of the learning communities and expected to integrate with other subjects such as English, Humanities, Mathematics and Science. However, the timetable was an obstacle to this, as Chinese was not scheduled at the same time block as the other subjects did. It was an issue raised by Year 8 Teacher Z and Teacher W that,

The main challenge in implementing the learning community is the limited time and space available, with only one cycle per class and coordination among three different classes being difficult. (Year 8 Teacher Z of School A, interview, November 2018)

Students may ask when the class will be combined again because the class is not often combined. (Year 8 Teacher W of School A, interview, May 2018)

In terms of learning spaces, Year 7 and 8 students were allocated common flexible learning spaces with a maximum capacity of 150 and 200 students, respectively. The

Table 5.2 A summary of research method and type of data being used and analyzed

Methods	Data	Description
Pre-class observation	Minutes written by two researchers individually and cross-checked with each other	<ul style="list-style-type: none"> • An hour-long informal conversation with each team before class observation to understand the collaborative teaching context, including planned units, expectations and any temporal or physical conditions that may affect co-teaching methods • Three teaching teams were met without recording
Classroom observation	Lesson observation video recordings; Observational notes written by two researchers individually and cross-checked with each other	<ul style="list-style-type: none"> • At least one collaborative teaching class chosen by each team was observed in order to understand how teachers and students interacted while implementing co-teaching strategies in “Learning Communities” • Four classroom observations were recorded and detailed observational notes describing the behaviors of teachers and students were kept, including, <ul style="list-style-type: none"> – School A Year 8 2 lessons with 55 min each in September 2018 and 3 lessons with 55 min each in November 2018; – School A Year 7 2 lessons with 55 min each in May 2019; – School B Year 4 2 lessons with 45 min each in May 2019
Post-class observation	Focus group in-depth interviews by using semi-structured questions; Interview notes written by two researchers individually and cross-checked with each other	<ul style="list-style-type: none"> • Focus group interviews on the day of class observation with teachers and curriculum leaders were conducted <ul style="list-style-type: none"> – 20 min interview with 2 observed School A Year 8 teachers in September 2018; – 30 min interview with 3 observed School A Year 8 teachers in November 2018; – 35 min and 32 min interviews with 2 observed School A Year 7 teachers and 2 more Year 7 teachers who joined the class observation in May 2019; – 40 min interview with 2 observed School B Year 4 teachers and 2 School B leaders who joined the class observation in May 2019 • The interviews were audio-recorded and covered topics such as supporting collaborative teaching, reflecting on co-teaching strategies and addressing challenges

spaces supported the implementation of collaborative teaching by allowing teachers to structure different types of learning activities including collaborative teaching for students as a whole or an individual class.

School B also adopted a project-based learning approach to construct learning communities but the school did not expect the Chinese subject to integrate with other

Table 5.3 A summary of contextual information of the chosen units from two schools

	School A Year 7	School A Year 8		School B Year 4
1. Title of the unit(s)	Explanation Unit	Fable Unit	Fiction Unit	I am a campus ambassador
2. Size of the learning community	About 50 students	About 50 students in the first unit	About 70 students in the second unit	About 40 students
3. Focus of the co-teaching	How to write an explanation essay	How to write a fable	Understand chivalry in Chinese fiction	How to address a debatable issue on campus
4. The number of teachers observed	2 teachers	2 teachers	3 teachers	2 teachers
5. Types of co-teaching strategies	Team teaching; Station teaching; Alternative teaching	Team teaching	Team teaching; Station teaching	Team teaching
6. General approach to curriculum implementation ³	Chinese as part of an interdisciplinary project	Followed Chinese language curriculum mainly	Followed Chinese Studies curriculum mainly	Project-based learning in Chinese subject

subjects which were taught in English. The school had tried out bilingual collaborative teaching prior to this study and found that it was not successful. As a result, Chinese teachers were asked to carry out projects in Chinese lessons without being necessarily aligned with other subjects. In this school, Year 4 students had Chinese class scheduled at the same time, but unlike School A, the school did not have flexible learning spaces and the students were based in their own classrooms. However, there was a big classroom on a different floor with a maximum capacity of 50 approximately students, which was used to create a learning community environment for classes combined.

In terms of teachers' expectations and their experience of collaborative teaching, participant teachers in School B aimed to improve the design of a project-based unit called "I'm a campus ambassador" (我是校園大使) (previously called "United Nations Summit"). In the previous year, co-teaching was used to introduce a project at the outset of the unit. After meeting with the researchers, the teachers decided to restructure the unit and adopt co-teaching throughout. They stressed in the focus group interview that classes were combined for collaborative teaching when learning objectives were related to the project, whereas students would stay in their own classes to consolidate the language skills prescribed in the textbook. At the time

³ General approach to curriculum implementation in this study refers to the positioning of Chinese in relation to other subjects in the context of "Learning Communities". In this regard, at the time when classes were observed, School A adopted project-based learning to include Chinese where appropriate, whereas School B adopted project-based learning in Chinese and English separately.

when the class was observed by the researcher, it was half way through the unit and the fifth collaborative teaching lesson from the outset in which the engagement and initiative of students in response to questions or tasks given by the teachers were clearly demonstrated.

School A teachers intended to explore both the potential advantages and the challenges of collaborative teaching in relation to flexible learning spaces. Year 8 teachers expanded the size of their learning community from approximately 50 (2 classes) to 75 (3 classes) students in two different topics, whereas Year 7 teachers aimed to find a better way to meet different learning needs through collaborative teaching within a unit.

None of the participant teachers had collaborative teaching experience and their students were taught in the flexible learning space but grouped in their own individual classes. Unlike School B, where teachers looked for a better option to implement the unit, School A teachers perceived this study as a taster of a new pedagogy known as collaborative teaching in the context of “Learning Communities”.

Against this background, it is concluded that School A took the approach of collaborative teaching in a lesson in which few distinctive co-teaching strategies such as team teaching, alternative teaching and station teaching could be identified, whereas School B took a collaborative teaching approach in or throughout a unit, specifically the strategy of team teaching in the observed class. Details of the application and challenges of the identified co-teaching strategies will be further elaborated with the aid of supporting evidence from the cases studied.

2. Co-teaching Strategies: Team Teaching, Station Teaching and Alternative Teaching

The study identified three major types of co-teaching strategies in the observed classes and the focus group interviews that followed. They were team teaching, station teaching and alternative teaching. Data from the observed classes showed that team teaching was a common strategy applied by all participant teachers. Station teaching and Alternative teaching were used occasionally depending on different purposes planned by teachers.

Team teaching: In the study, participant teachers in all three cases adopted team teaching to teach two to three classes, ranging from 40 to 70 students, at the same time. School A Year 8 teachers stated in the group interview that team teaching allowed them to divide up work according to each member’s expertise, skills and experience. Specifically, in the observed class on the topic of writing fables, a young teacher shared the creative writing process he had used when writing his own fable at university, and an experienced teacher who was a master teacher in Language A guided students to overcome possible difficulties in writing fables, such as how to choose characters to bring out the allegorical meaning.

In addition, School B Year 4 teachers mentioned attention training was a key to succeed in co-teaching although there were initial concerns about classroom management. In the group interview, Teacher J stressed that,

Year 4 Chinese lessons have better discipline compared to other classes. Teachers have done a great job in attention training by reinforcing “eyes on me” and “viewpoint plus reason” concepts multiple times, and calling on less attentive students to answer questions and ensure their understanding. (Teacher J of School B, interview, May 2019)

To ensure that all students understand the lesson material, the teachers make a special effort to call on less attentive students to answer questions. They emphasized that teachers could take turns to lead different stages of the lesson using a “one teach, one assist” model, which also allowed students to receive more support. With this model, an observer teacher pointed out that, especially in upper primary, both teachers and learners must have shared expectations with regard to instructional language (e.g. eyes on me and views followed by reasons).

Students benefited from the combination of different perspectives and well-reasoned argument offered by a wider learning community. Teacher J reflected that,

I am shocked by the actual performance of the students. In addition, with more students in the combined class, they are able to hear more good perspectives and different voices, which broaden their knowledge and open up their horizons. (Teacher J of School B, interview, May 2019)

Regarding the implementation of team teaching, this study found that all teams adopted a one-lead-one-assist approach with structured turn-taking. The assignment of turn-taking was generally based on teachers’ interests and/or experience and mostly resulted from negotiation. The frequency of turn-taking ranged from once a lesson to multiple times in a lesson. Table 5.4 shows how teachers in School B Year 4, who had co-teaching experience in the past, took turns with different stages as the lesson progressed.

Station teaching: In the lessons observed for this study, station teaching was used as a strategy to support student’s learning on two occasions. In School A Year 7, it was used to address the issue of learning differences and in School A Year 8 it was used to motivate students to conduct deeper investigation of a topic by providing choices of task.

In the former case, the strategy of station teaching was adopted in the first observed lesson. Teachers presented it to students as a “scavenger hunt”. There were three stations representing three different levels of reading and writing explanation essays suggested by the teachers, from the least challenging (Station 1/Level 1) to the most challenging (Station 3/Level 3). Station 1 required all students to identify the explanation devices of a text from textbook using socrative.com, whereas Station 3 required the students who had passed Station 2 to apply the explanation devices which they had learned to create a mind-map of their own explanation essay. At all stations, students worked independently with individual support from teachers as required.

In the latter case, the strategy of station teaching was applied to the third lesson of a topic called “Chivalry in Chinese Fiction”. At the outset of the lesson, three pieces of student work were presented, each by a different teacher. The teachers gave positive comments and then described three options for the summative assessment task which

Table 5.4 Turn-taking in team teaching by Year 4 teachers in School B

Staging	Teacher A	Teacher B
Setting the lesson objectives	<ul style="list-style-type: none"> Guided students to understand the topic and learning objectives of the lesson 	<ul style="list-style-type: none"> Mainly observed
Presenting the required skills	<ul style="list-style-type: none"> Mainly observed 	<ul style="list-style-type: none"> Guided students to read and respond to Texts 1 and 2 in order to learn how to identify views
Applying the skills	<ul style="list-style-type: none"> Guided students to discuss in groups to identify views in Text 3 	<ul style="list-style-type: none"> Facilitated discussion for several groups while Teacher A supported others
Posing challenges	<ul style="list-style-type: none"> Supported Teacher B to manage the group activity and facilitated discussion for several groups while Teacher B supported others; Chaired the whole class sharing session after group discussion 	<ul style="list-style-type: none"> Posed a debatable question to students and allowed several students to express different views; Assigned different debatable questions to tables and asked them to have group discussion
Finishing the lesson	<ul style="list-style-type: none"> Specified the requirements of homework 	<ul style="list-style-type: none"> Concluded several key points to learn in the lesson

followed. The options were stationed in three different learning spaces next to each other, and were run simultaneously, led by the three teachers. The station tasks were poster design, four-panel comic creation and flash fiction writing. The students were given two opportunities to choose the summative tasks. They made their first choice after the summative assessment and its requirements had been introduced and were given a chance to change their choice after further details of the chosen summative task and its requirements were specified in the station. After that, the students were asked to complete their chosen tasks independently or in a group at their stations, with teachers offering support.

In short, there were two major differences between the applications of station teaching in School A Year 7 and Year 8. The first difference concerns function. The Year 7 team used the strategy in the input stage of the unit, to help students develop the reading and writing skills necessary for an explanation essay, whereas the Year 8 team adopted it at the output stage of the unit, to motivate students to complete a summative assessment task by providing them with choices. The second difference is related to structure. The stations in Year 7 were placed in sequence and students moved from one to the next based on their readiness. The tasks in Year 8 were all open to students at the same time, and selection was driven by their personal choices, rather than by readiness. The actual staging of the lessons and the application of station teaching strategies presented by Year 7 and 8 teachers can be illustrated as follows (Table 5.5).

Table 5.5 Comparison of station teaching between Year 7 and Year 8 teachers in School B

Staging	Year 7 Team	Year 8 Team		
Setting the lesson objectives	Presented the problems (Year 7)/products (Year 8) arising from previous homework to all students and instructed them in the differentiated tasks for formative (Year 7's)/summative (Year 8's) assessments			
Assessing student's understanding or skills against the objectives	Station 1/Level 1: identify the explanation devices of a text from textbook by using socrative.com. (All students started this task at the same time)	The teachers at each station specified the requirements of tasks		
	Station 2/Level 2: identify the explanation devices of an unfamiliar text by completing worksheet questions (only for those who had passed Station 1/Level 1)	Poster design station	Four-panel comic station	Flash fiction writing station
	Station 3/Level 3: apply the learnt explanation devices to draw a mind-map of their own explanation essay (only for those who had passed Station 2/Level 2)	The students were allowed to change their choices of assessment tasks, followed by individual support from the teachers at each station		
Finishing the lesson	Asked students staying at different stations/levels to complete corresponding tasks as homework	Poster design station	Four-panel comic station	Flash fiction writing station

Alternative teaching: It was found that School A Year 7 had applied the strategy in the second observed lesson. Teachers explained in the interview that, a few weeks into the unit, students were progressing at very different paces. To address this issue, they used grouping and the available space to provide differentiated tasks.

Teacher W: I assessed the students' abilities and decided to group them in fours and act as both their coach and player throughout the year. This approach to levelling up may divide the teacher's cognitive resources among various tasks. (Teacher W Year 7 of School A, interview, May 2019)

In the lesson, the students were divided into two big groups based on their learning progress in writing an explanation essay. The first group consisted of 34 students who were further grouped in mixed ability pairs to review the devices of writing an explanation essay and edit their own work on an iPad with their partner's help. This group stayed in an open space with flexible tables. The second group consisted of 14 students who were progressing more slowly than the first group. They stayed in a conference room with an oval-shaped table and were led by a teacher who guided them to complete a worksheet with structured questions and to edit their own essays using the structure shown in the worksheet. In comparison with the majority group (led by Teacher C), shown in the following table, the alternative group (led by Teacher D) in the lesson also shared two stages of learning, i.e. group learning

and peer/individual learning though the details of scaffolding in the strategy applied were different (Table 5.6).

To summarize, the co-teaching strategies as implemented by the teachers showed variations from their original definitions. This was due to the fact that the strategies were adopted by two or more general educators who aimed to improve teaching effectiveness through collaborative teaching in the context of “Learning Communities”.

Firstly, “team teaching” did not only manifest itself as “both teachers lead large-group instruction” but could also be observed as teachers taking equal responsibility for learning by taking up or interchanging multiple roles such as instructor, facilitator or assistant teacher within a set lesson. It is therefore apparent that the strategies of “one teach, one observe” or “one teach, one assist” could be used as an integral part or a subsidiary device of team teaching depending on different pedagogical purposes.

Secondly, “station teaching” is not necessarily divided into several “non-sequential parts” but can include multiple learning stations with tasks organized sequentially or simultaneously, where each teacher leads one learning station at one time. When discussing the lessons in focus interviews, the teachers reflected that students’ capacity to work independently could determine whether the strategy was successful.

Thirdly, “alternative teaching” could be blended with “parallel teaching” where a teacher offers an alternative learning opportunity in a different space to a small group of students who need a different approach to achieve the learning objective(s). The primary goal of “alternative teaching” was to promote instructional differentiation, increase student participation and motivation, while utilizing the same materials.

3. Challenges Perceived by the Teachers

Table 5.6 The way of alternative teaching shown by Year 7 teachers in School A

Staging	The majority Group (Teacher C)	The Alternative Group (Teacher D)
Setting the lesson objectives	<ul style="list-style-type: none"> Teacher D presented six types of problems identified from student’s writings Teacher C organized students into two learning groups 	
Group learning	<ul style="list-style-type: none"> Reviewed the structure and devices of an explanation essay through reading a new text 	<ul style="list-style-type: none"> Reviewed the structure and devices in a known text with the teacher’s guidance
Peer/individual learning	<ul style="list-style-type: none"> Adopted peer review strategy to help students edit their own essay by typing into iPad 	<ul style="list-style-type: none"> Individual support to students while they edit their own essay
Finishing the lesson	<ul style="list-style-type: none"> Teachers C and D instructed students to complete their essays as homework 	

Data from the focus group interviews in conjunction with the observed lessons showed that the participant teachers encountered various challenges when implementing the co-teaching strategies in the context of “Learning Communities”. The challenges can be understood in two ways as suggested in the literature, these are: (1) administrative issues such as timetabling and assignment of classes to the participant teachers, (2) teacher’s readiness, including their beliefs concerning the new teaching paradigm and use of space.

Administrative issues: In the interviews, all participant teachers claimed that collaborative teaching required much more preparation time than individual teaching. School B’s Year 4 team met each other every few days in contrast to once a week in the past in order to develop a better chemistry. School A’s Year 8 team used the term “hardware” as a metaphor to describe administrative supports such as measures to overcome timetable constraints, and assigned time for collaboration.

Teacher Z: Our teacher cooperation is smooth, with tasks assigned based on expertise rather than specific individuals. The challenge is in students’ adaptation, change, and administrative support. Due to time constraints (as an evidence of lack in administrative support), students are unable to fully engage in discussions. (Teacher Z of Year 8, School A, interview, November 2018)

Although they acknowledged that meetings were essential to the success of collaborative teaching, both teams from School A found that it was very difficult to find time to meet since they all taught multiple year groups at the secondary level. This was one of the reasons explaining why School A Year 8 team could only plan co-teaching in a lesson instead of a unit as a whole.

Teacher’s readiness: Although there was a broad spectrum of attitudes toward the pedagogical change among the participant teachers, all of them demonstrated an awareness of the need to cater to individual differences and saw the potential of the co-teaching strategies and new learning spaces to address this issue. In School A, the Year 8 team implied that this goal could be achieved with sufficient support from the school.

However, the Year 7 team questioned how grouping could work effectively in a collaborative teaching context, to allow teachers to support students at different levels, with different rates of progress.

Teacher W: To be honest, I don’t have any evidence or valid proof that the students have learned more. We have only worked together twice, and the results haven’t been significant. (Teacher W Year 7 of School A, interview, May 2019)

The School B Year 4 team also pointed out challenges of grouping, such as the issue of effective group size. They also reflected on the rationale behind the use of collaborative teaching, and how to identify situations in which it would be more effective than individual teaching.

In relation to teacher’s readiness, student’s social identity was often mentioned by participant teachers from different teams as contributing to the challenges of collaborative teaching. In the observed School A Year 7 lessons, students from different classes did not interact actively and collaborate well with their peers, although teachers deliberately put them together in groups.

Teacher L: Since the students from 7D and 7E are not very familiar with each other, and have only met twice, there doesn't seem to be a peer learning effect as they don't interact much afterward. (Teacher L of Year 7 School A, interview, May 2019)

School A Year 8 also observed that students tended to respond to questions raised by their class teacher who taught them on a daily basis, rather than to the co-teacher.

Teacher C: It is to see if the students can break the idea of the class because they then look for their friends are they able to find a familiar teacher themselves? (Teacher C of Year 8, School A, interview, November 2018)

However, School B Year 4 did not encounter the same challenges in the observed lessons, although they had been concerned about discipline issues in the combined class. They stressed that ongoing focus training, such as consistent cues used by teachers to influence students, was essential. Similarly, the teachers from School A mentioned that the lack of independent learning skills including self-regulated learning (in Year 7) and self-evaluation (in Year 8) made it more challenging to apply the co-teaching strategies in their lessons, as these skills would take longer to develop. Teachers interpreted these issues as evidence of students' readiness or otherwise for collaborative teaching, but they could also arise from lack of preparation for collaborative learning in the context of “Learning Communities”.

5.5 Discussion and Conclusion

In conclusion, this study suggests that schools' expectations regarding this pedagogical paradigm shift and teachers' perceptions, as shaped by their experiences, influence teachers' approaches to collaborative teaching in the light of “Learning Communities”. Although teachers gave different purposes for its use, team teaching as a major co-teaching strategy was generally adopted in addition to station teaching and alternative teaching as a means to differentiate instruction and assessment at both the early and end stages of a unit. It was found that the original definitions of the strategies suggested by previous studies (e.g. Friend et al., 2010) could be further modified to suit the new context. Finally, through teachers' reflection, the study revealed that the perceived challenges of implementing collaborative teaching in the new context were related to administrative support, such as timetabling and collaboration time, as well as teacher's readiness, such as their beliefs about teaching effectiveness in flexible learning spaces and how they prepared students for the pedagogical changes.

From the conclusion, two questions have arisen which merit further discussion. First, why did the co-teaching strategies adopted by the teachers not always conform to definitions proposed in the literature? The researchers believe that the term “flexibility” was key to the discussion. Several previous researches (Blackmore et al., 2011; OECD, 2013) showed that flexible learning space and pedagogical flexibility were both key characteristics of innovative learning environments. In line with the notion of flexibility, teachers were empowered to design their own strategies as a collaborative team to deliver their school's curriculum and meet students' needs. In

the new learning environment, the participant teachers did not intentionally follow any model of co-teaching strategies but planned collaboratively to achieve the set goal(s) in a flexible manner. Therefore, blended collaborative teaching combined with different types of co-teaching strategies was shown in the cases in this study. In another study, Lai (Lai et al., 2020, p. 527), also found that “teachers were observed executing agency to utilize the curricular structure of block timetabling and turn the physical flexibility into pedagogical flexibility”.

Second, what were the challenges specific to the context of “Learning Communities”? As discussed in the literature, “administrative support” and “teachers’ readiness” were two key issues. The study identified challenges perceived or experienced by teachers which were similar to those observed in previous studies. These include the complexity of collaboration and ways of communication when teaching together (Friend et al., 2010). However, the issues of collaborative teaching related to “whether timetable allowed classes to be combined” and “how to group students effectively with combined classes” were unique to the new context. The notion of “readiness” is relevant not only to teachers but also to students and to the school as a whole at a time when “Learning Communities” as a new pedagogical concept is being introduced to the community. Regarding the school’s readiness, some teachers mentioned that timetabling constrained their ability to implement collaborative teaching and also made it more difficult for them to co-plan and team teach. For students, whether they had developed a sense of belonging to a larger community in learning was also a factor contributing to the effectiveness of the co-teaching strategies. Regarding teachers’ readiness, the teachers were still shaping and constructing their beliefs toward the new paradigm while trying to make sense of the learning communities and implement collaborative teaching in their schools. Lai et al. (2020) suggested that learning space and practices co-shaped each other as teachers made sense of the process.

With regard to contribution, for researchers, this study has extended our understanding of co-teaching strategies generally discussed in the field of general education setting in the first language Chinese classroom. It provides an evidence-based interpretation of collaborative teaching including its application and participants’ reflections in the context of a “Learning Communities” approach. In particular, in relation to the notion of flexibility, there is a need for further research on different ways of grouping and use of time and space in order to enhance the effectiveness of collaborative teaching. For practitioners, this study gave teachers an opportunity to evaluate the situation critically when considering the implementation of co-teaching strategies in the new context, and allowed them to prepare themselves for this educational transformation. Concerning the notion of readiness, in particular suggested by School B’s Year 4 case, teachers’ experience and their perception of co-teaching influenced each other. Therefore, this study also calls for further research and provides professional development to allow in-service teachers to adapt a gradual change in “Learning Communities”. This would provide them with a better chance to succeed and construct their new professional identity. Brendle et al. (2017, p. 548) in their

study also argued that “the success of a co-teaching partnership is based on the co-teachers’ understanding and expertise in implementing research-based co-teaching models”.

The study was limited by the frequency and length of classroom observation, since these were all determined by the participant teachers. The data of class observation only included a few lessons from each case, and therefore may not give a comprehensive picture of collaborative teaching in the context of Learning Communities. More classroom observations would allow many more aspects of the strategies to be observed and investigated. Although the focus group interviews helped the researcher to fill in some information gaps between or prior to the observed lessons, more intensive engagement at the stages of unit planning as well as implementation by the researcher as an insider participant would be beneficial. Such involvement would provide more data for triangulation between different cases and between comments made in interviews and behavior observed in lessons. In addition to teachers’ perceptions, the student’s perspective on the experience of collaborative teaching in the new context would add a meaningful lens to future study of the same topic.

Three reflective questions related to the article.

1. How would you describe your own classroom learning environment?
2. In your context, do you see any potentials/challenges to adopt a collaborative teaching approach?
3. What co-teaching strategi(es) do you think might help you better cater to the individual needs and characteristics of students?

References

- 佐藤學. (2003). 靜悄悄的革命 (李季湄譯), 長春:長春出版社。
- 佐藤學. (2010). 學校的挑戰---創建學習共同體 (鍾啓泉譯), 上海: 華東師範大學出版社。
- Bielaczyc, K., & Collins, A. (1999). *Learning communities in classrooms: Advancing knowledge for a lifetime*. National Association of Secondary School Principals NASSP Bulletin (Feb).
- Blackmore, J., Bateman, D., Cloonan, A., Dixon, M., Loughlin, J., O’Mara, J., & Senior, K. (2011). *Innovative learning environments research study*. Retrieved from <https://leirimar.pt/images/Recursos/learningspaces-final-report.pdf>
- Brendle, J., Lock, R., & Piazza, K. (2017). A study of co-teaching identifying effective implementation strategies. *International Journal of Special Education*, 32(3), 538–550.
- Bristol, L. (2014). Leading-for-inclusion: Transforming action through teacher talk. *International Journal of Inclusive Education*, 19(8), 802–820.
- Cook, L., & Friend, M. (1995). Co-teaching: Guidelines for creating effective practices. *Focus on Exceptional Children*, 28(3), 1–17.
- Fluijt, D., Bakker, C., & Struyf, E. (2016). Team-reflection: The missing link in co-teaching teams. *European Journal of Special Needs Education*, 31(2), 187–201.
- Friend, M., Cook, L., Hurley-Chamberlain, D., & Shamberger, C. (2010). Co-teaching: An illustration of the complexity of collaboration in special education. *Journal of Education and Psychological Consultation*, 20(1), 9–27.
- Honigsfeld, A., & Dove, M. G. (2010). *Collaboration and Co-teaching: Strategies for English Learners*. Corwin.

- Lai, C., Huang, Y. X. H., & Lam, T. F. (2020). Teachers' socio-spatial practice in innovative learning environments. *Cambridge Journal of Education, 50*(4), 521–538.
- Nair, P., & Fielding, R. (2005). *The language of school design: Design patterns for 21st century schools*. DesignShare.
- OECD. (2013). *Innovative learning environments*. Centre for Educational Research and Innovation. Author.
- Shin, M., Lee, H., & McKenna, J. W. (2016). Special education and general education preservice teachers' co-teaching experiences: A comparative synthesis of qualitative research. *International Journal of Inclusive Education, 20*(1), 91–107.
- Teacher Education Department. (2019). *Student teaching handbook 2018–2019*. School of Education at the Liberty University.
- Wadkins, T., Wozniak, W., & Miller, R. L. (2004). Team teaching models in Peck. In E. G. (Ed), *UNK/CTE: Compendium of teaching resources*. Morris Publishing.