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Embracing team heterogeneity: a case study of the collaborative teaching practice in an international kindergarten in Hong Kong

Jessie Ming Sin Wong[1]*

*Correspondence:
jmswong@hkmu.edu.hk

[1] School of Education
and Languages, Hong Kong
Metropolitan University, Ho Man
Tin, Kowloon, Hong Kong

Abstract

International kindergartens, which offer an immersive dual-language (English and Chinese) environment, are popular among middle-class families in Hong Kong. The international learning and teaching environment is cultivated primarily by developing a diverse workforce, in which Chinese-speaking (Putonghua and/or Cantonese) teachers with local training or from mainland China generally work with their English-speaking counterparts from overseas in the same classroom. Such heterogeneity has complicated the already challenging concept of collaborative teaching. This article presents a case study of the collaborative teaching practice in a trilingual international kindergarten which had been established for over 50 years. Through in-depth interviews, questionnaires, text messaging, document analysis, site visits, and observations, the study examined the collaborative teaching practices among international colleagues in the kindergarten. The findings revealed that collaboration among international colleagues was made successful by (1) senior management and teachers sharing a common goal; (2) a dynamic whole-school supportive structure that embraced heterogeneity; and (3) the development of a shared culture of professional learning. The implications of these findings for management, practice, and research are discussed, including the need to foster a culture of collaboration, the importance of professional development, and the need for further research on collaborative teaching practices in diverse educational settings.

Keywords: Collaborative teaching, International kindergarten, Cultural differences, Bilingual education

Many countries are recognising the need to nurture students to be multilingual and globally engaged citizens to maintain their international competitiveness in the age of globalisation (Bernstein et al., 2015). As an international business hub in Asia, Hong Kong expects its students to be biliterate and trilingual in Chinese (Cantonese and Putonghua[1]) and English (Education Bureau, 2014). Although Cantonese remains the primary language of communication in Hong Kong and is spoken by nearly 90% of the population (Census & Statistical Department, 2022), English has long been perceived as the

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[1] Although both Cantonese and Putonghua share the same character-syllable base, the two are not mutually intelligible. Someone who only speaks Putonghua will not generally be able to understand Cantonese, and vice versa.

"first language of business" (p.42) and is widely used in the Hong Kong Special Administrative Region (HKSAR) government and by the legal, professional, business, and academic sectors (Bacon-Shone & Bolton, 2008). Following the 1997 handover, there has been a strong need to enhance Putonghua language education to facilitate communication and strengthen ties with mainland China (Wang & Kirkpatrick, 2019).

While the government has actively provided Putonghua and English language education support at the primary and secondary levels, mother-tongue (Cantonese) teaching is emphasised in the current kindergarten education policy. Private international kindergartens, however, are particularly popular among middle-class families who demand bi-/trilingual education in kindergartens (Karsten, 2015). These preschools often employ a dual-language instructional model and have both native English and Chinese teachers teaching the class simultaneously, creating an immersive language environment that promotes fluent bilingualism or even multilingualism (Herbert & Wu, 2009; Wong, 2016). Many of these teachers, particularly English teachers, are employed from overseas. Such heterogeneity has complicated the already challenging concept of *collaborative teaching*, which is conventionally defined as two or more teachers collaborating to "plan, teach, and evaluate the educational [programme]" for the same group of students (Aliakbari & Nejad, 2013).

This article provides an in-depth look at how teachers of different language, cultural, and educational backgrounds collaborated to support the learning and development of young children in a trilingual international kindergarten with over 50 years of implementing collaborative teaching. It begins by exploring the notions of collaborative teaching and introducing the context of international kindergarten education in Hong Kong. Based on the above, it presents the framework of the investigation and the study's research questions. The details of the case study kindergarten, together with the data collection and analysis approaches, are described in the Methods section. The discoveries are discussed against the conceptual framework. The article concludes with implications and suggestions for management, practice, and research.

Notions of collaborative teaching

The concept of collaborative or co-teaching initially emerged to address the issue of teaching disabled students in an exclusive classroom (Cook & Friend, 1995; Friend et al., 1993; Stanovich, 1996). Educating students with disabilities was perceived as requiring more workforces due to the difficulties they faced (Aliakbari & Nejad, 2013). While the term is usually used interchangeably with *team teaching*, which typically involves two or more teachers working together in the same classroom to deliver instruction to all students, the collaborative teaching system generally has "two or more professionals", often with different areas of expertise, "delivering substantive instruction to a diverse, or blended, group of students in a single physical space" (Cook & Friend, 1995, p.2). Despite its simple definition, collaborative teaching is often operationalised more broadly. In one common collaborative teaching model, one teacher is responsible for delivering instruction while the other monitors student progress (Scruggs et al., 2007). Another model involves splitting the class so that each teacher delivers instruction to smaller groups of students (Solis et al., 2012). Other collaborative teaching models require different levels of participation and responsibility from the teachers in the classroom, depending on the

situation (Cook, 2004). Regardless of the model, it is common for teachers to develop innovative teaching strategies that would not be possible if only one teacher were present (Cook & Friend, 1995).

While this instructional delivery approach has been used quite substantially in the elementary (e.g., Jackson et al., 2000; Manset & Semmel, 1997), secondary (e.g., Keefe et al., 2004), and tertiary levels (e.g., Kuusisaari, 2013; Tanghe & Park, 2016), and especially to promote quality inclusive education (e.g., Friend & Barron, 2016; Scruggs et al., 2007; Solis et al., 2012), the efficacy of collaborative teaching has not been clearly established. As collaborative teaching relies heavily on collaborative relationships between educators, person-specific characteristics are inevitable, and its sustainability could be questionable (Friend & Barron, 2016). Adding to the paradox are the multitude of collaborative teaching models and the various educational environments in which they are implemented. Nevertheless, research on collaborative teaching points out three inter-related areas that may determine the applicability and efficacy of collaborative teaching: (1) teachers' beliefs and values; (2) interaction and communication among teachers; and (3) institutional structure and culture. Despite the focus of research being mainly on multi-professional rather than multi-cultural teams working together in the formal school system, these areas can provide valuable insights into the challenges and opportunities of collaborative teaching in multicultural contexts.

Teachers' beliefs and values

The beliefs and values of teachers significantly influence their motivation and, thus, their quality of practice in collaborative teaching (Solis et al., 2012). Educators may be asked to work together in schools, but once assigned, it is up to each individual to decide whether or not they will *collaborate*. Scruggs et al. (2007) conducted a meta-analysis on 32 qualitative investigations of collaborative teaching in inclusive classrooms and found that teachers often cautioned about "forced co-teaching" by school administrators. Voluntariness is also stressed in a later synthesis that represented 146 studies conducted by Solis et al. (2012). Friend and Barron (2016) add that there must be at least one shared goal for collaboration to occur. A common goal unites the partners and gives all their efforts a sense of purpose. However, as Herbert and Wu (2009) argue, simply sharing the goal to "support students" would not guarantee successful collaboration. Teachers' beliefs and values need to be aligned, and they must be willing to learn from each other's perspectives and experiences.

Interaction and communication among teachers

Although it is crucial for teaching partners to establish common beliefs and goals, it is essential to note that equal value does not always equate to equality. In other words, while each partner's contribution is considered a vital component of collaborative work, the nature and impact of their contributions may differ considerably (Friend & Barron, 2016). In many studies, collaborative teaching is described as a marriage, implying that it requires effort, flexibility, and compromise for success (Scruggs et al., 2007). Meaningful communication and interaction are central to this shared ownership and responsibility, even though they could be common sources of partnership problems (Hamilton-Jones & Vail, 2013). Across the collaborative teaching literature, teachers consistently reported

that structured planning time is necessary for all instructional personnel to understand the specific goals for students and how those goals can be addressed during lessons (Scruggs et al., 2007). It also allows the teaching partners to bring in their different but complementary areas of expertise to discuss and evaluate curriculum and pedagogies. However, collaboration typically requires more time and effort than working alone, and can be viewed by some as a downfall given the already busy schedules of teachers (Friend & Barron, 2016). Therefore, effective communication and interaction among teachers are crucial, requiring not only planning time, but also mutual respect and trust, as well as clear roles and responsibilities.

Institutional structure and culture

Collaborative teaching requires effective collaboration among teachers and a balance between their personal beliefs and teaching practices. Equally important are the support and resources provided by the school (Friend & Barron, 2016; Luo, 2014; Scruggs et al., 2007). Oftentimes, principals and other administrators are cited as key figures who create or deepen a school culture of collaboration by offering appropriate professional development to all staff (Friend & Barron, 2016). Since the collaborative teaching approach may not be a part of the teaching partners' pre-service training, in-service training is essential for teachers to learn about the different practical and interpersonal skills as well as various models of collaborative teaching (Scruggs et al., 2007). Also, a supportive school administration system is critical to a successful collaboration when teachers cannot coordinate independently or resolve conflicts with each other (Herbert & Wu, 2009). This system should provide appropriate support services, including materials, equipment, and access to specialised personnel, to alleviate the apprehension often expressed by teachers, leaving them room for meaningful interaction and communication on a pedagogical level (Solis et al., 2012). Furthermore, institutional structures and policies, such as scheduling, classroom arrangements, and curricular frameworks, should be designed to support collaborative teaching (Luo, 2014).

International kindergarten education in Hong Kong

Kindergarten education in Hong Kong targets children aged three to six and is widely considered the first step in a child's educational journey, although attendance is not compulsory (Karsten, 2015; Wong & Rao, 2015; 2022). Most kindergartens in Hong Kong are subsidised local institutions that follow the government's curriculum guidelines and teach children in Cantonese. English and Putonghua are taught in separate sessions (typically around 20 min each, three to four times a week) by English and Putonghua subject teachers, many of whom were born and received schooling in Hong Kong and spoke Cantonese as their first language (Wong, 2016).

Meanwhile, although the number of local kindergartens remains consistent, the number of private international kindergartens has increased rapidly in recent years (Table 1), reflecting a high demand from the market (Education Bureau, 2019). On the one hand, private schools often require specific kindergartens as a prerequisite for entry into their primary schools (Karsten, 2015). On the other hand, parents want to enrich their children's language and social abilities as early as possible to prepare them for the rife competition in the increasingly globalised world (Walker,

Table 1 Numbers of kindergartens in Hong Kong from 2013/14 to 2018/19

No. of kindergartens	Academic year					
	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Local	869	874	872	876	881	884
International	100	104	128	138	149	149
Total	969	978	1000	1014	1030	1033

Source: Education Bureau (2019)

2001). A recent survey with 3,000 local parents shows that 49.5% of Hong Kong parents would not mind if their preschool-aged children had acquired English rather than Cantonese as their first language (Wong, 2014).

International kindergartens in Hong Kong are "international" in two senses. First, they generally follow a full non-local curriculum. Some of these are national preschools (e.g., French kindergartens and Japanese kindergartens) that provide educational services designed for the needs of their foreign nationals (Hayden & Thompson, 2008). The majority, however, are English-medium or bi-/trilingual kindergartens (English, Putonghua Chinese and/or Cantonese Chinese) that adopt a globally recognised curriculum. One of the most popular curricula of such in Hong Kong is the International Baccalaureate (IB). These kindergartens usually accept both local and expatriate children. Second, international kindergartens, particularly the latter type, cultivate the international learning and teaching environment primarily by developing a diverse early childhood workforce. It often consists of English-speaking kindergarten teachers employed from various countries and their Chinese-speaking counterparts trained locally or in mainland China. These teachers work hand-in-hand with each other for the children's daily preschool lives to be infused with the languages spoken by native teachers. In cases when collaborative teaching is implemented, the teaching partners execute instructional activities in different languages simultaneously. The challenges for teachers, thus, include not only teaching and managing classes with children who speak different languages and come from different cultures, but also working with partners of different professional, language, and cultural backgrounds (Bailey, 2015).

Research on collaborative teaching practices in early childhood education is limited, especially in the context of international education. Existing research on international education has primarily focused on language development among students (e.g., Jonsson, 2013) or their identity formation (e.g., Grimshaw & Sears, 2008; Sears, 2012). Additionally, research has explored the pedagogical strategies used to enhance or assess these aspects (e.g., Englezou & Fragkouli, 2014; Prasad, 2014), as well as stakeholders' views or satisfaction (e.g., Bailey, 2015; Fryer, 2009; Lai et al., 2016; Mancuso et al., 2010). However, few studies have attempted to understand how a diverse team of educators *collaborates* to facilitate these developments, particularly in preschool settings. In fact, our research team could not locate studies that specifically address collaborative teaching practices in the context of international kindergarten education in Hong Kong.

The framework of investigation and research questions

Therefore, this case study was conducted to explore how collaborative teaching was enabled in this under-researched education sector. It is underpinned by sociocultural theories, including Vygotsky's (1978) theory of sociocultural learning, which posits that learning is a socially mediated process that occurs through dialogue and interaction with others, and Wenger's (1998) theory of communities of practice, which emphasises the importance of shared values and practices in learning and development. According to these theories, collaborative teaching practices that emphasise dialogue, culture, and values have the potential to enhance learning outcomes and promote cross-cultural understanding. Our framework of investigation comprised the three interrelated areas identified earlier, namely (1) teachers' beliefs and values; (2) interaction and communication among teachers; and (3) institutional structure and culture. The trilingual international kindergarten, of which the details are described in the section below, was chosen as our interest of study because it was one of the international kindergartens that had the most experience in implementing collaborative teaching in Hong Kong. The investigation helped highlight how the above areas lead to sustainable collaborative teaching in cross-cultural and cross-language settings.

Based on the above framework, three research questions were developed to guide this study:

(1) What were the teachers' and the administrators' views on collaborative teaching?
(2) How did the teachers collaborate with their teaching partners?
(3) How did the administration support collaborative teaching?

Methods

The case study kindergarten

The kindergarten of interest in this study had been established for over 50 years and was one of the longest-standing international kindergartens in Hong Kong. It was located on Hong Kong Island, where the median monthly domestic household income was highest among the four regions of Hong Kong, and the percentage of international kindergartens was highest (Census & Statistics Department, 2022; Education Bureau, 2022). The kindergarten was an authorised IB World School that followed the Primary Years Programme (PYP). It offered mainly half-day (both morning and afternoon) programmes, but whole-day programmes were also available for K3 students (5–6-year-olds) to smoothen their transition to whole-day primary schools. The student body consisted of approximately 600 individuals, mostly local students from Cantonese-speaking families, accounting for 60% of the total. Around 35% of the students were Chinese immigrants who spoke either Mandarin Chinese or a combination of Mandarin and Cantonese Chinese at home. The remaining 5% of the student population hailed from overseas and spoke English or other foreign languages as their primary language at home.

A typical day for the kindergarten students consisted of reading and writing workshops (approximately 45 min each) and inquiry time (approximately 45 min) based on the IB inquiry units. The reading and writing workshops included daily mini-lessons,

independent reading and writing, and small group instruction. During inquiry time, students worked collaboratively on projects integrating various subjects and exploring real-world problems. In addition, the students participate in English phonics and Chinese word study sessions (approximately 20 min each) to enhance their literacy and language development. They also have library and music sessions during the week to explore different genres of literature and music. Throughout the day, the students have one snack and lunch (whole-day programmes only) at the preschool to ensure they have the energy and nutrition needed to engage in their learning. They attended extra-curricular classes such as fencing, art, and drumming twice a week.

The kindergarten was at the forefront of innovation by adopting a "one-teacher-one-language" co-teaching approach. This approach ensured that each classroom had at least two teachers, each from a different cultural and language background. All activities, except for language-specific sessions like English phonics and Chinese word study, were conducted simultaneously by teachers with different language backgrounds. This allowed the students to interact with teachers who spoke different languages and exposed them to a multicultural and multilingual environment. Additionally, each teacher spoke to the children only in their native language. The classes were divided into two streams: in a bilingual classroom, there would be at least a native English-speaking class teacher and a native Putonghua Chinese-speaking class teacher, whereas in a trilingual classroom, there would be at least a native English-speaking class teacher, a native Cantonese Chinese-speaking class teacher, and a native Putonghua Chinese-speaking support teacher. Many of the English-speaking teachers were recruited directly from overseas. There were 16 English-speaking teachers, 16 Cantonese-speaking teachers, 13 Putonghua-speaking teachers, and a music teacher. Regardless of their origin countries, all teaching staff had already attained at least a Bachelor's degree: 68% attained a Bachelor of Education, 13% Master of Education, 2% Doctor of Education, and 17% other Bachelor's or Master's degrees. Their average years of experience was 16.5 years, ranging from 1 year to over 25 years of experience. The expatriate English teachers often had less teaching experience but higher academic qualifications. Besides, there was a central support unit consisting of the senior management (the Chief Principal, Executive Principal, English Co-Principal, Director of Chinese Curriculum and Development, and Head of Administration and Admissions), "seconded" teachers who helped with curriculum development, and administrative support staff of 10. The Chief Principal and the Executive Principal were born and raised in Hong Kong but received their Bachelor's degrees in the US. The English Co-Principal emigrated to Australia when she was young. All three were fluent in Cantonese and English and spoke some Putonghua.

With a staff of such a high calibre and without government subsidies, the fees charged were understandably high (over US$11,000 per annum for half-day programmes). Nonetheless, it did not deter parents from applying to the preschool for their young children. On the contrary, it was one of the most sought-after kindergartens in Hong Kong.

Interviews/questionnaires

Initially, the research team planned to conduct in-depth, face-to-face interviews with several key individuals, including the Chief Principal, the English Co-Principal, a Chinese headteacher, two English teachers, two Cantonese teachers, and two Putonghua

teachers. These teachers taught various classes and had an average tenure of 6.2 years at the kindergarten, ranging from 1 to 20 years. However, the team could only conduct a face-to-face interview with the Chief Principal due to scheduling difficulties. During the interview, a semi-structured interview protocol was utilised, which focused on comprehending the initial idea and purpose of adopting the one-teacher-one-language co-teaching approach, as well as the institutional structure and culture that supported this approach. The interview with the Chief Principal lasted slightly over an hour. Additionally, we conducted a 26-min phone interview with one of the Chinese teachers. For the remaining informants, open-ended questionnaires containing the original interview questions were used instead.

The questions for the English Co-Principal and the Chinese headteacher centred on discovering how collaborative teaching was executed, how complaints were handled, and what was done to facilitate cooperation and collaboration between Chinese and English teachers. The questions for the teachers aimed to explore their views on collaborative teaching and their daily experiences working with their partners and young children. Follow-up questions were also asked through the mobile messaging application WhatsApp for clarification to ensure the comprehensiveness of their answers. All the questions were posed and answered in the native language of the interviewees/respondents. Table 2 shows the profiles of the informants.

School documents

Throughout the academic year, the research team collected various school documents for both external and internal purposes. Externally oriented documents included promotional materials such as the kindergarten's official website, Facebook page (which featured 7 posts), Youtube channel (which included 14 video clips), 1 bilingual newsletter, and 1 eight-page school profile in English as well as its Chinese version. These documents aimed to showcase the kindergarten's programmes and activities to parents of potential students and the public. Internally oriented documents, on the other hand, included the three-year strategic plan, 4 PowerPoint files used at staff development days, a set of staff orientation documents, and samples of lesson plans and teaching materials. These documents were collected to inform the research team's analysis of the kindergarten's teaching practices and professional development initiatives. To further clarify some of these findings, the research team contacted informants via Whatsapp to gather additional information and perspectives. This approach allowed for a more in-depth understanding of the kindergarten's practices.

Observations

The research team employed participant observation techniques during the study to better understand the teachers' actual behaviours, practices, and interactions in their natural settings. The author observed team teaching practices by working closely with specific teachers/principals for several weeks, attending their classes and observing their interactions with students and other teachers. In addition, the author visited the kindergarten on multiple occasions throughout the academic year to attend various school events, such as staff development days and social gatherings, and to observe other teachers in their natural settings. The observations focused on understanding collaborative

Table 2 The profiles of the educators who participated in the interviews or questionnaire survey

Role	Qualification	Year joining the case study kindergarten	Previous experience in the sector	Answered the questions by
Chief Principal	Doctor of Education from the UK, Master of Education in Early Childhood Education from Hong Kong, Bachelor of Arts in Psychology and Education from the USA	1985	Taught in the USA for a year	Face-to-face interview
English Co-Principal	Bachelor of Education in Early Childhood Education from Australia	2001	Taught in preschool, kindergarten, and year 1 class settings in Sydney, Australia, for 3 years	Questionnaire
Chinese Head-teacher	Master of Arts in School Improvement and Leadership, Bachelor of Education in Early Childhood Education, both from Hong Kong	2001	Taught in local kindergartens for 6 years	Questionnaire
Putonghua Teacher 1	Master of Education in Early Childhood Education from Hong Kong, Bachelor of Education in Early Childhood Education from mainland China	2017	Nil	Questionnaire
Putonghua Teacher 2	Master of Arts in Chinese Studies from Hong Kong, Postgraduate Diploma in Education (Early Childhood Education) from Hong Kong, Bachelor of Education in Primary Education from mainland China	2013	Taught in mainland China for a year	Questionnaire
Cantonese Teacher 1	Bachelor of Education in Early Childhood Education from Hong Kong	2015	Taught in other local and international kindergartens for 12 years	Questionnaire
Cantonese Teacher 2	Bachelor of Education in Early Childhood Education and Special Education from Hong Kong	1998	Taught in local kindergartens for 12 years	Phone interview
English Teacher 1	Bachelor of Education in Primary Education from the UK	2017	Taught in the UK, the United Arab Emirates, and Malaysia for 7 years	Questionnaire

Table 2 (continued)

Role	Qualification	Year joining the case study kindergarten	Previous experience in the sector	Answered the questions by
English Teacher 2	Master of Philosophy in Psychology and Education from the UK, Postgraduate Diploma in Education (Early Childhood Education) from Hong Kong, Bachelor of Science in Psychology from the UK	2011	Taught in the UK for a year	Questionnaire

teaching practices and communication among teachers and professional development initiatives.

Ethical considerations and trustworthiness

To ensure the study's ethical considerations were addressed, the research team obtained informed consent from all participants, including teachers and kindergarten staff. The team maintained confidentiality and anonymity throughout the study by using pseudonyms and securing all data and observations. To establish trustworthiness, the research team employed triangulation and member checking. The processes of identifying codes and themes were reviewed multiple times, annotated, and cross-checked against the data. Participants were asked to review the research texts, make additions, amendments, and clarifications, and verify that they accurately represented their views and experiences. A former staff member who had worked in the kindergarten for five years and a research assistant with no prior experience or connection with the kindergarten also helped check the research texts against the data to ensure their appropriateness and representativeness. Moreover, the research team conducted a reflexive approach throughout the research process, keeping detailed field notes and continuously reflecting on their biases and assumptions. The research team ensured the study's trustworthiness and validity by employing these ethical considerations and research practices.

Data analysis

This case study was qualitative and inductive in nature (Terrell, 2016). The study utilised semi-verbatim interview transcripts, questionnaires, school documents, and observation notes as data sources. The research team analysed the data using a general inductive approach and reviewed them multiple times to crosscheck the information, annotate the text, and develop initial codes (Saldana, 2013). The process of identifying codes and themes was further refined and reviewed through multiple iterations. The author of this article revised and refined the initial codes into several emerging themes and categorised them under the three areas of the investigation framework to construct research texts. To ensure the accuracy of the translation, selected Chinese quotes were translated into English and checked by the original informants. These quotes, along with English quotes, were included as supporting evidence in the Results and Discussion section. While the study employed a general inductive approach to data analysis, the processes

of identifying codes and themes and triangulation were reviewed and refined multiple times to enhance the study's trustworthiness and validity.

Results and discussion

Views on collaborative teaching

As explained by the Chief Principal, the "one-teacher-one-language" co-teaching approach used in this international kindergarten was developed in the 1960s to address the unsatisfactory language standards and qualifications of kindergarten teachers in Hong Kong (see: Wong & Rao, 2015). The founders of the international kindergarten noticed the presence of many British military spouses in Hong Kong and establish an Anglo-Chinese kindergarten with English-language teaching provided by native English teachers. The goal was to provide an immersive, "whole-language" learning and teaching environment to nurture young children's bilingual abilities. Throughout the years, they strived to balance the languages used to emphasise to colleagues, parents, and children that English and Chinese were equally important in this kindergarten. Later, the current Chief Principal took over the kindergarten and introduced the inter-culturally sensitive IB curriculum. This curriculum was deemed "a common platform to put English and Chinese teachers' work together" and "not biased to one side".

In terms of collaboration among teachers, voluntariness was identified as a foundation for collaboration in an earlier section. Since this international kindergarten was well-known for its "one-teacher-one-language" co-teaching approach, teachers were psychologically prepared to share their classroom upon their job applications. The English teachers, who were employed from overseas, were excited to teach abroad and experience a different culture. English Teacher 1 had previously taught in the UK, the United Arab Emirates, and Malaysia, so she was accustomed to working with people from different cultural and language backgrounds. English Teacher 2 had taught in the UK for one year after graduation, making this international kindergarten her first international experience. In contrast, the Chinese teachers had some hesitation. Although some had co-taught classes with teaching assistants in their previous preschools in Hong Kong or mainland China, they had not previously worked directly with a foreign teacher. As the principal class teachers at the time, they were used to having almost complete autonomy over their classes, planning, implementing, and evaluating their lessons without needing prior consultation. They expected to feel somewhat "restricted" in this new collaborative teaching environment.

However, unlike in collaborative teaching literature, where helping "the kids succeed" is often cited as the common desire that fastens teaching partners (Herbert & Wu, 2009, p.61), the teachers in this kindergarten noted that they decided to work in this collaborative teaching environment because they were interested in "learning about different cultures". In other words, cultural learning itself was a motivational factor for collaboration.

Collaboration among teaching partners

Communication was identified as essential in this collaborative teaching environment, where teaching partners shared the responsibility for teaching students and managing classroom affairs. To facilitate collaboration, the management emphasised the importance of teachers developing a "collaborative contract" before the start of

each academic year. This "contract", according to the Chinese Headteacher, included "work distribution, ways of handling students' problems, and the role of supportive teachers", among other things. The kindergarten also allocated specific timeslots for bi-weekly grade-level meetings for teachers to share ideas and concerns, brainstorm, plan and evaluate directions and practices. Teaching partners in the same classroom engaged in weekly planning time to work on the focus of the following week's sessions and classroom settings.

Teaching partners discussed the balance of the languages, content coverage, and in-class activities while following the curriculum guidelines set by the kindergarten. English Teacher 2 described the collaborative teaching practice in her classroom:

> *"We had a discussion about how to distribute the workload among us. Language study times and writing workshops are designated according to language, but we decided to teach the reading workshops bilingually. All teachers will participate in the inquiry sessions and lead the inquiry topics together. As for logistics and transition times, we share the responsibility and coordinate to ensure the day runs smoothly." (English Teacher 2)*

Planning was identified as critical, with daily review of the schedule ensuring partners were in sync with the pace and allowed for last-minute changes or reminders before class started (Scruggs et al., 2007):

> *"Our teaching style involves a lot of dialogue between my partner and me. I speak in English and she responds in Chinese. We must be able to communicate effectively and reciprocate each other's messages. By planning and communicating well before our lessons, we can prevent and resolve any issues that may arise." (English Teacher 2)*

However, language and cultural differences posed challenges for the teaching partners. Since all Chinese teachers had learnt English as a second or a foreign language, while only a few foreign teachers understood Chinese, the conversations between the teaching partners were mainly conducted in English. Chinese teachers reported difficulties accurately communicating their ideas to their English-speaking partners and sometimes needed to "use pictures" or seek "translation help from other bilingual staff members" (Cantonese Teacher 1). Occasional misunderstandings between partners were hard to avoid. Moreover, Chinese teachers were often responsible for parent–teacher communication because most parents were Chinese, leading to some dissatisfaction among both Chinese and English teachers. The former complained about the unequal workload, whereas the latter perceived their communication with parents was somewhat blocked.

Different cultural approaches to instruction and behavioural management also added to the complications. English Teacher 1 explained:

> *"Having worked with four Chinese partners, I realise that all styles differ. Nevertheless, there is a similarity in their background in Chinese education, such as learning vocabulary from memory. Having a background in British education, I believe my learning style provides students with problem skills and learning through exploration." (English Teacher 1)*

Although not explicitly describing their relationships as "marriage" as in other studies (see Scruggs et al., 2007), all teachers interviewed in this case study emphasised the importance of "compromise" and "respect" to resolve the differences (Jeon, 2010). As told by the English and Chinese teachers below:

> *"There have been occasions where I feel my partner may be too harsh or lenient on a child, but we must respect each other's teaching style. As long as the teacher does not hurt the children physically or emotionally, we should accommodate each other." (English Teacher 2)*
> *"It is important to choose your battles. If my partner feels strongly about something, I am willing to adjust things." (English Teacher 1)*
> *" I usually tell myself in advance that my partner left her home to work here. She is emotional because her friends and families are not around." (Putonghua Teacher 2)*

However, if the disagreement escalated to a stalemate, the English and Chinese headteachers would sit down with the teaching partners together to encourage them to arrive at an "essential agreement" on how to handle the difficulties and move on.

Adequate teacher–teacher communication and interaction are essential for successful collaborative teaching. Despite the challenges, all respondents in this study acknowledged that the reconciliation of their differences helped them explore different teaching possibilities, leading to a "positive impact" on their professional development and "new ideas" and "motivation". This finding is consistent with previous research highlighting the benefits of collaboration in promoting understanding, appreciation, and learning from each other's beliefs and experiences, contributing to professional development and collective knowledge construction (Jeon, 2010; Lai et al., 2016).

Furthermore, collaborative teaching that involves teachers from different backgrounds and with different ethnic appearances can have additional benefits beyond those reported in the literature on school and inclusive education. As English Teacher 1 noted, having teachers from diverse backgrounds working together in the same classroom provided a powerful example for students, "demonstrating how people who are different can collaborate effectively".

Administration support for collaborative teaching

The management team recognise the importance of a supportive school administration system for successful collaborative teaching. They provided teachers with various assistance to teachers in the form of resources, mentorship, and conflict mediation. Before the academic year began, the kindergarten organised whole-school teacher training and orientation to familiarise all teachers with the direction and goals for that academic year. Profiles of teachers would also be shared to ensure teachers have some basic ideas about the backgrounds of their teaching partners. On-site teaching support and professional development activities were available throughout the academic year. The headteachers conducted formal and informal classroom observations to assess teachers' teaching strategies and skills and observe the collaboration between teams of teachers. Occasionally, the management team attended grade-level meetings and weekly planning times to ensure "consistency" between English and Chinese (Cantonese and Putonghua) teachers. Social gatherings, including dinners, art jamming, bowling, and cooking, were also

centrally organised to strengthen teachers' bonding. Participation in these informal activities was voluntary and extended to non-teaching staff. These activities allowed the management, teaching, and administrative staff members to "mingle in a non-work environment" and "get to know one another on a personal level" (Chinese Headteacher). Indeed, research has shown that knowing the personal aspects of team members' lives assists in their identification and subsequently helps enhance communication and teamwork (Boyd, 2013).

This regular whole-school professional development and team-building also aimed to facilitate expatriate English teachers to integrate into an environment with a different language, culture, and possibly education system and context. The language barriers and pedagogical differences reported by the teachers in the previous section were not uncommon (Bailey, 2015; Herbert & Wu, 2009). Part of the management's strategy for resolving these problems, besides the support above, was to have a designated bilingual administrative staff member to assist with expatriate teachers' settlement issues, including personal tax, language, schools for their children, accommodation, and utilities.

Perhaps a standout feature of this kindergarten was the availability of the central support unit that assisted in coordinating teachers of different languages. The emphasis placed on Western pedagogies and practices within private and international schools has been widely observed (e.g., Keay et al., 2014; Lai et al., 2016), resulting in a one-way influence of the West on the East on knowledge interactions and decision-making, which in turn contributes to teacher dissatisfaction. As members of senior management with both local and overseas experience, they felt it was essential to treat both English and Chinese teachers equally. All school documents, both externally and internally oriented, were prepared bilingually to ensure "everyone can receive first-hand information and is on the same page" (Chief Principal) thanks to the bilingual administrative staff. Materials for learning and teaching were designed centrally to ensure a balanced amount of stimulation across different languages. The unit would also provide additional materials and resources upon teachers' requests. It helped save teachers a lot of time and hassles and was well-appreciated:

> *"We have many resources and support, so we can focus on working with our part-ners and students rather than doing administrative, non-teaching related work as in other kindergartens." (Cantonese Teacher 2)*

These structures and policies were aligned with the kindergarten's collaborative teaching goals and models to ensure that teachers have the necessary resources to implement them effectively. A positive institutional culture that values collaboration and teamwork can also foster a sense of belonging, motivation, and accountability among teachers, ultimately benefiting the students (Friend & Barron, 2016; Luo, 2014).

Table 3 summarises the activities that prepared for and supported collaborative teaching.

Implications and conclusions

The purpose of this case study was to provide insights into how collaborative teaching was achieved and sustained in an international kindergarten with a workforce that comprised different language, cultural, and educational backgrounds. Our findings

Table 3 Summary of the activities that prepared for and supported collaborative teaching

Before the academic year began
• Whole-school teacher training to clearly define the direction and the goals, team-building
• Sharing of essential documents
• Team-level discussion and confirmation of collaboration
• Signing a "collaborative contract"
Throughout the academic year
• Bilingual communication to ensure first-hand information
• On-site teaching support and teacher development activities
• Formal and informal class observations
• Bi-weekly grade-level meetings
• Weekly team-level planning time
• Activities such as dinners and interest classes encourage teachers to build rapport outside of the kindergarten
Everyday
• Discussion about the timetable before class
• Some sessions were taught bilingually. Thus, teaching partners needed to prepare for the "conversations" and "dialogue" ahead
• Language study times and writing workshops were separated by language
• Shared responsibility in terms of logistics and transition times
• Chinese partners do handle more of the administration and parent communication

suggest that many of the essential elements for collaborative teaching, as identified in research on multi-professional teams in school and inclusive education, also applied to multi-cultural team members in an international kindergarten setting. Central to the sustainability of this practice was, perhaps, a dynamic whole-school supportive structure that embraced heterogeneity. We recommend strengthening the support for cross-cultural and cross-language collaborations in early childhood settings through preschool management, practice, and research.

Implications for preschool management

Linguistically and culturally sensitive preschool leadership and management are unarguably keys to this dynamic whole-school support structure. This is not to say that all preschool senior management members must be multilingual or have lived in another country for a substantial time, like in this international kindergarten. However, they should possess a global vision and an open mind. While employing and establishing a diverse team of teachers is relatively straightforward, treating everyone equally and fairly is much more challenging. The Chief Principal, the English Co-Principal, and the Chinese Headteacher interviewed in this study repeatedly mentioned the need to ensure they would "not [be] biased to one side" in developing and implementing their system of collaboration that emphasised planning, communication, and shared responsibilities. This commitment is conducive to developing professional learning communities and teacher commitment to the preschool (Chan, 2018; To et al., 2021).

This study also discovered that cultural learning was a motivational factor for collaboration. Therefore, preschool administrators are advised to promote opportunities for staff to work with a cultural plurality of colleagues during the recruitment process to attract teachers interested in cross-cultural and cross-language collaborations. Cultural mixing should also be encouraged in and out of the classroom to facilitate the development of a collaborative working relationship.

Implications for practice

Effective planning at both the preschool and individual partner levels is essential to successful collaborative teaching. Many teachers may not have experience working with someone from a different linguistic and cultural background. Even though they may have a strong interest in collaborating, they may lack the necessary skills. Preschool administrators should plan ahead to offer systematic training and development opportunities for teachers, including but not limited to whole-school collaborative learning activities, communication enhancement training, and individualised support. Planning should be emphasised in the school culture, planning time should be structured as part of the staff routines, and planning among teaching partners should be encouraged but not forced. Collaborative planning should aim to discuss and ultimately agree upon a consensus rather than make unilateral decisions.

While teachers' busy schedules and administrative duties hinder their planning and communication (see: Herbert & Wu, 2009; Lai et al., 2016; Luo, 2014), our case study kindergarten, being one of the highest-charging kindergartens in Hong Kong, remedied the situation by developing a bilingual supporting staff to provide necessary assistance. Understandably, not all preschools have such an abundance of human resources. However, one should not underestimate the role of supporting staff in effective teacher collaboration. Supporting staff members should be part of the collaborative teaching mechanism and involved in the planning process. Their efforts should be appreciated and respected.

Implications for research

Our literature review also reveals a significant lack of research on both international early childhood education and collaborative teaching practices in early childhood settings. Our study is perhaps one of the very first studies conducted to investigate the collaborative teaching practice in international kindergarten education in Hong Kong. As globalisation progresses and inter-country movements of people become dynamic and multilateral, this need for further research will only intensify. Further studies on, for example, the collaboration and conflict resolution models of educators of different language, cultural, and educational profiles, process quality, and staff well-being, should be conducted in Hong Kong and elsewhere to support and facilitate staff development and cultural learning in early childhood settings.

In conclusion, this qualitative case study provides valuable insights into how collaborative teaching was established among a cross-cultural and multilingual workforce in an early childhood setting. While the findings and recommendations offer a rich and nuanced understanding of the challenges and opportunities of team concepts and collaborative teaching within the international early childhood education landscape, they cannot be regarded as conclusive or generalisable.

It is essential to acknowledge the limitations of this study. Firstly, the sample size was limited, with only one face-to-face interview with the Chief Principal and a phone interview with one Chinese teacher. The remaining informants completed open-ended questionnaires, which could have been self-selected. Secondly, the study's reliance on data collected by the research team, including school documents and participant observation,

and a general inductive approach to data analysis may have introduced potential bias, despite the researchers' efforts to exercise caution. Finally, while the findings and recommendations can provide insights into team concepts and collaborative teaching within the international early childhood education landscape, we do not contend that the practices of the kindergarten studied represent the "best practices".

Despite these limitations, the study's insights can contribute to the international early childhood education landscape and serve as a groundwork for effective management and practices, as well as evidence-based research, in collaborative teaching and multicultural education. Further research is needed to explore the effectiveness of these practices in different contexts and to address the methodological limitations of this study. Ultimately, this study contributes to the ongoing conversation about how to provide high-quality and inclusive education for young children in a globalised and diverse world.

Declarations

Ethics approval and consent to participate
The work described in this paper was approved by Hong Kong Metropolitan University's Research Ethics Committee.

Consent for publication
The author obtained consent from all the participants before data collection.

Competing interests
The author declares that she has no conflict of interest.

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