Project Title: Teaching approaches and English literacy skills:

An investigation into young Hong Kong Chinese ESL children

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Final Report

by

Principal Investigator

(a) Title:

Teaching Approaches and English Literacy Skills: An Investigation into Young
Hong Kong Chinese ESL Children

(b) Abstract

Currently, there is a lack of understanding in current practices of English language
teaching and its impacts on early literacy skills. Therefore, the present project was
proposed to fill this research gap by (1) describing the current English language teaching
practices in preschools through analysis of curriculum documents and observation of
English lessons; and (2) examining the impacts of various teaching approaches on early
English literacy. Thirteen local kindergartens with varying teaching approaches in
English language instruction were recruited in the present project. Curriculum
documents were collected from these schools. Lesson observation from the beginning to
the end of the school year were conducted in one K3 classroom in each school. One
hundred and twenty-eight lessons were recorded and coded in terms of teaching content,
quality of instruction and pedagogy with an observational system developed by the team
members of the project based on existing documented and validated observational
systems. Children in these classrooms were assessed three times in a year (beginning,
middle and end of the year) on English language and reading skills. The impacts of the
teaching approaches both in terms of teaching components and teaching quality on the

mentioned literacy outcomes were examined. Results indicated that the current English practices in the sampled kindergarten got commonalities as well as differences. School/teacher variations as reflected in the document analysis and lesson coding were found to explain language and literacy gains over the year. Implications on providing quality English instruction in pre-primary setting were discussed.

(c) Keywords

Teaching approaches; language and literacy skills; young children; second language learning

(d) Introduction

Teaching English in early years has become increasingly common in Hong Kong kindergartens. Ng and Rao (2010) conducted a comprehensive survey with 256 kindergartens (38% of the total registered local kindergartens using Chinese as the main medium of instruction). Results of Ng's study showed that English teaching is pervasive in Hong Kong kindergarten settings. All sampled kindergartens (100%) offered English teaching at K2 and K3 levels (age 4 and 5 respectively). English was reported to be taught as a subject, usually following a textbook- based curriculum. The average time of English lessons was around 60 minutes per week in a half-day session.

The Hong Kong government has acknowledged the importance of early exposure to a second language and issued guidelines for kindergartens in second language learning (Education and Manpower Bureau, 2017). Since kindergartens are all privately run and the guidelines are only for reference, in response to the parental demands, many local

kindergartens adopt a comparatively academic curriculum, emphasizing on word reading and writing (Zhou & Ng, 2016). However, more recently, some kindergartens are reported to adopt a more playful and interactive approach in teaching English (Rao, Ng, & Pearson, 2009). The teaching approaches and teaching materials for English language learning are diversified (Lau & Rao, 2013). As far as teaching approaches are concerned, they range from a very skill-based approach to a more whole-language approach. The skill-based approaches stress drilling of individual literacy skills in insolation. Much of the teaching attention pays to the language forms. Also, commercially-developed textbooks were commonly adopted and paper-pencil type of work both at home and in classrooms were regularly assigned to children (Ng & Rao, 2013). For example, there is an emphasis of copying alphabet letters or vocabularies learnt, sounding out individual letters, etc.

On the other hand, there are also some schools who adopt a more integrated approach which provides a more meaningful experience of reading and writing through a thematic story based curriculum. Story books are widely used in the curriculum. Interactive activities which allow children to use and explore more on the meaning of the language rather than just memorize the form are designed for children in these schools (Ng, 2013). The qualitative study conducted by Lau and Rao (2013) has reported a similar trend of diversified teaching approaches. In their observational study of English vocabulary learning in Hong Kong preschool classrooms, they found that "the approaches to teaching vocabulary can vary drastically among different kindergartens" (p., 1374).

Almost all the previous related studies on Hong Kong English teaching are qualitative in nature and there is no detailed and systematic account of what and how English is taught in kindergarten classrooms. As well, very little is known about the effects of the implemented

practices. The present project, therefore, is proposed to fill this research gap by (1) describing the current practices of English language teaching in Hong Kong kindergartens and (2) examining which teaching approaches are associated with better English literacy outcomes among Hong Kong Chinese ESL kindergarten children. Another objective of the present project is to provide and share evidence of effective teaching approaches in early English language learning to local educators.

We believe that the findings would have strong implications for curriculum design for English language learning in kindergartens. The findings would also inform the training and staff development of early childhood teachers in providing quality early English learning experience in a second language.

(e)   Review of literature of the project

Teaching approaches in early literacy

Almost all early childhood programmes aim to improve children's oral language skills which are important determinants of school readiness and future literacy development (National Early Literacy Panel, 2008). On the other hand, low-quality preschool language and literacy experiences result in underdeveloped language and literacy skills. These early skills are related to later reading and academic outcomes (Storch & Whitehouse, 2002).

The debate on the effective literacy instruction for children has continued for many years with the escalating importance of literacy in modern societies. Different instructional models have been developed to guide educators to teach literacy in classrooms. In the 1960s and 70s, there was a "Great Debate" over the code driven (phonics) or meaning driven (whole language

approach) instruction for native English speaking children (Chall, 1967). Despite the fact that this debate has already subsided or has been resolved for L1 learners for some years (Foorman, 1995), the discussion and experimental studies of effective literacy instruction evolving around such instructional emphases are still relevant for ESL learners for whom the benefits of various types of teaching approaches are still not yet clearly known.

Failure in using a "look and say" method to teach reading has led the movement of another "whole word" philosophy in literacy pedagogy. In the 1960s, the whole language approach began to emerge as a new method of literacy instruction (Clay, 1976; Smith, 1986; Weaver, 1994). This approach involves teaching children words which are generally congruent to spoken language, meaning that the teaching of reading is facilitated when children are taught in ways similar to how they learn to talk (Au, 1997; Weaver, 1994). Literacy skills are viewed as a natural extension of oral language skills. Reading comprehension is emphasized in the instruction and decoding of words is regarded as playing a limited role in the reading process (Smith, 1973). This philosophy in literacy instruction guides instructional strategies teachers employ, material they use, classroom environment and views on teaching and learning. In this approach, reading, writing and oral language are not segmented components or skills but are as a unit in teaching and learning (Goodman, 1986, 1987). Authentic text is usually used for children to read, discuss, listen to and write (Goodman & Goodman, 1979). During the use of the authentic text in the teaching context such as storytelling, the teacher would point to the words and letters while she talks about them and therefore concepts of words and letters are learnt incidentally by children (Weaver, 1994). Teachers do not direct children's attention to intra-word components, which is sharply different from the phonics approach.

The use of the whole language approach has received criticisms because it was viewed as responsible for the score decrease of primary school students in California (Foorman, 1995). A more balanced instructional approach which integrated the use of the whole language approaches with phonics has been adopted by many schools for teaching literacy to monolingual speakers (Freppon & Dahl, 1998). Nowadays whole language approaches may involve some instructions in phonics, usually as a part of invented spelling activities or prompts in reading activities (Routman, 1996). However, decoding activities and teaching of letter-sound relationships occur infrequently in whole-language classroom (Shankweiler & Liberman, 1972).

Given the importance of vocabulary and other oral language skills in early literacy acquisition (e.g., Muter & Snowling, 1998), meaning-based instruction which is in line with the philosophy of whole language approach has received empirical support in promoting beginning literacy development among both first language and second language learners (e.g., Culatta, Reese, & Setzer, 2006). The key characteristics of meaning-based instruction include embedding early literacy skills in meaningful contexts, and the use of social or physical contexts to help children gain knowledge about the meaning and purpose of print (e.g., Yopp, 1992). For example, English words are introduced in story book reading sessions and the use of target words will be explored in the follow-up learning activities. It has been argued that the use of naturalistic contexts may be especially crucial for second language learners (Brock & McVee, 1998; Krashen, 2004). L2 learners may need more contextual information in literacy learning given their less developed vocabulary skills as compared to L1 learners. For Chinese ESL children, there is evidence showing that language skills are important for literacy development in an L2 (e.g., Yeung & Chan, 2013; Liu, Yeung, Lin, & Wong, 2017).

However, there is limited research, if any, that examines the effects of meaning-based instruction on second language acquisition among the Chinese ESL children in kindergarten education.

In sharp contrast to the whole language approaches, the phonological-based approach is regarded as a bottom-up approach (Foorman, 1995). Typical phonics instruction emphasizes the explicit teaching of letter-sound correspondences. Individual letters are taught by the sound they represent and children are guided to blend the sound of different letters. The teaching starts from the phoneme level. The analytic nature of this approach also aids children in reading enormous unknown words (Ehri, 2006). Phonics teaching has been shown to be effective in helping children learning to read in different times (for reviews, see Adams, 1990). Phonics has been demonstrated to accelerate not only the learning of letter-sound relationships but also phonemic awareness. The enhanced letter-sound knowledge and phonemic awareness then lead to growth in word reading (Johnston & Watson, 2006).

The strong prognostic power of phonological awareness and letter knowledge in reading naturally leads researchers to quest for the causality and conduct training studies. Numerous studies have demonstrated the positive effects of explicit instruction in phonological awareness and letter-sound correspondences in literacy outcomes (National Reading Panel, 2000). For example, different approaches of phonics instruction (analytic vs. synthetic phonics) have been demonstrated as effective in enhancing reading-related skills (e.g., McGeown, Johnston, & Medford, 2012; McGeown & Medford, 2014). For Chinese ESL children, Yeung, Siegel and Chan (2013) have demonstrated the positive effects of phonological awareness training on reading and spelling skills among Chinese ESL kindergarteners. Additionally, Yeung, Liu and Lin (2017) have demonstrated the significant

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role of phonemic awareness in beginning spelling development of Chinese ESL young children.

Decades ago, the teaching approach of English adopted in Hong Kong classrooms was described as predominately "look and say" (Hanley, Tseng, & Huang, 1999; Holm & Dodd, 1996; Huang & Hanley, 1995). The survey conducted by Ng and Rao (2013) reported that traditional paper and pencil exercise are dominant learning activities in English lessons delivered to young children in Hong Kong kindergarten classrooms, as compared to other learning activities such as story reading and singing. A recent observational study by Lau and Rao (2013) has reported that the teaching of vocabulary in the six kindergartens participated in the study was implemented in the context of theme-based learning, phonics instruction and storybook read aloud. Surprisingly, there was a growing trend of teaching phonics in Hong Kong kindergarten classrooms. The authors argued that this is a result of the recognized importance of phonological awareness and phonics in English reading of Chinese students (e.g., Yeung & Chan, 2013) as well as a high parental expectation on children's early development in English reading and writing in preparation for the primary education. However, there is a lack of understanding how phonics teaching (or other teaching components) is implemented in local kindergarten classrooms and its impacts on early English literacy. Therefore, in the present project, a systematic review was conducted on the teaching approaches for English language in Cantonese-speaking kindergartens. More specifically, we investigated whether phonological-based approach (or named as code-based) or meaning-based approach is more prevalent in local kindergarten classrooms and more effective in boosting the development of various early literacy skills. Theoretically, the findings can allow us to shed light on the importance of early predictors of English literacy

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among Chinese ESL children. If phonological-based approach is associated with better English literacy outcomes than meaning-based approach, the skills such as phonological awareness and letter knowledge would be more important than language skills (e.g., vocabulary) in shaping L2 literacy development and vice versa. Many past studies have looked into the early predictors of English literacy among Chinese ESL children (e.g., Yeung & Chan, 2013). However, most of these studies have employed either a cross-sectional or longitudinal design. The present project seems to be one of the few which look into how early instructional experience would shape literacy outcomes in a second language among Hong Kong Chinese ESL children using a quantitative approach.

Quality of instruction

Apart from the pedagogical content, quality of instruction undeniably is an important predictor of literacy outcomes in program evaluation. High-quality literacy instruction characterized by giving children with lots of individualized opportunities to learn and the learning is translated to improved reading and language development, providing regards for their students, presenting clear instruction and positive feedback and establishing routines that optimizes students' learning time (e.g., Connor et al., 2013).

It has been shown that early childhood practitioners have been not well equipped with skills to provide rich language and literacy experiences to young children (Dickinson & Brady, 2006). In their commissioned study on children studying a foreign language in the classroom setting, Edelenbos et al. (2006) affirmed the central role of the language teacher in providing target language input, in facilitating target language interaction and also in helping children acquire metalinguistic or intercultural knowledge. Teachers who are proficient in both the L1

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and the L2 and can apply age-appropriate methodology successfully are regarded as essential for effective foreign language instruction (Blondin et al, 1997; Bondi, 2001, Moon, 2005). Moon (2005) listed the essential qualities needed for teaching English to young learners. These are grouped under two large categories. The first comprises knowledge of the language itself and the teaching of the language: good English language skills as they are the main language input to children who may have very limited exposure outside the classroom; knowledge of how children learn foreign languages; and appropriate teaching strategies for teaching English. The other concerns knowledge of children's cognitive, linguistic, and emotional development as they affect second language learning. This suggests that both English professional training and early childhood training are the desirable qualifications needed for an English teacher for young learners. For many local Cantonese-speaking kindergarten teachers, they may have already received early childhood education training but very few of them have sufficiently equipped with English professional teaching skills.

Ng's survey (2010) showed a relatively low professional profile in the current English teaching force in Hong Kong early childhood education field. Only 15.2% of the surveyed schools reported having English teachers who had been professionally trained in both English teaching (TESL) and early childhood education (ECE). On the other hand, a similar percentage of schools (13.7%) reported that they had untrained English teachers. Consistent with the relatively low professional qualifications of teachers, the percentage of teachers who had received relevant English teaching training from various sources was also low. There were 29.4% of schools reporting having teachers who did not receive any on-the-job training in English teaching. The above figures include both Native English-speaking Teachers (NETs) and local teachers because many NET teachers can only work part-time in schools. Hence,

local teachers who have very little professional training related to early English teaching are deployed to teach English in the no-NET days. This also results in a lot of in-class and out-of-class collaboration going on between the NET and local teacher in English teaching.

Considering the existing situation in Hong Kong, there is a need to understand the quality of English instruction provided to young children. With a better understanding of the current practices, teachers can be better prepared to meet the challenges to teach English more effectively to ESL children who have limited exposure to English language in daily life. Therefore, in this study, lesson observations were conducted and teachers' teaching quality was examined.

(f) Theoretical and/or conceptual framework of the project

We adopt the ecological model (Bronfenbrenner, 1986) in understanding early literacy development in the present study. The model acknowledges that children are affected by multiple systems simultaneously. Specifically, we investigated one of the microsystems that have direct impact on children's language and literacy development – the school. The school as a microsystem is not conceptualized as a single dimension. Instead, we argued that different factors in the school settings, including teachers' characteristics, instruction provided, and class settings all may have influence on language and literacy development of children.

In the present project, the existing practices of English language learning in kindergartens were examined. Analysis of curriculum documents and classroom observations were conducted. There are a number of well-documented and empirically tested observational systems to measure the variability in the effectiveness of teaching, such as the Framework for

Teaching (Danielson, 2007) and CLASS (Pianta, La Paro, & Hamre, 2008). None of these observation systems are designed to measure literacy instruction but they do offer important insights into quality of literacy teaching (Connor et al., 2013). In the present study, the researchers developed a sensitive and applicable observation system with reference to the existing well-developed tools by considering the Hong Kong context. It is not appropriate to adopt any of the existing observation systems for immediate use because English language teaching in Hong Kong is highly diversified. For example, English teaching can take place in whole class (around 30 children) or small groups (5-6 children). Therefore, the results from the analysis of curriculum documents has provided insights for us to develop the observation system which is able to capture variability in teaching ESL in Hong Kong.

The present study involved measuring several important literacy outcomes including oral language proficiency (receptive and expressive vocabulary) and reading-related skills (word recognition, spelling, phonological awareness, and letter knowledge). When designing the assessment tasks, the existing curriculum was considered to ensure sensitivity to the growth on different aspects of literacy skills.

It is well acknowledged that literacy growth is influenced by many factors, including individual factors (e.g., IQ), school factors (e.g., curriculum and pedagogy) and family factors (e.g., SES). To avoid confounding and examine the specific impacts of teaching approaches, we tried to control for other factors statistically. In this connection, a questionnaire was designed to gather information related to teachers' background (e.g., highest qualification, years of experience) and SES was estimated using the school fee as a proxy. A number of control measures will be included such as test of IQ and word reading in L1.

(g) Methodology

The present project aims to perform a systematic review of English language teaching in local kindergartens and evaluate how the teaching approaches impact on early English literacy outcomes. To achieve this end, kindergartens adopted varied teaching content were targeted to participate in this study. To maximize variety, kindergarten currently adopting different curricula and textbooks, in different sizes (large, medium and small) and in different geographic locations (Hong Kong, Kowloon and New Territories) were recruited. To our knowledge, in many local kindergartens, a full-time teacher is hired to teach English as a subject. We intended to recruit kindergartens with a full-time English teacher and the English lessons conducted by the full-time English teacher were observed.   The participating kindergartens of the present project are shown in Appendix I.

The review of the existing teaching approaches involves analysis of curriculum materials, teaching content and teaching quality. One-hundred and twenty-eight English lessons were video-taped and coded based on researcher-developed observational system in order to provide fine details of implementation of English teaching in local preschool classrooms.

Children's literacy outcomes were measured three times in a year, at the beginning, middle and the end of the school year. The present study is designed to examine the impacts of pedagogy in a comprehensive range of literacy outcomes. Children's outcomes in English include oral language proficiency (receptive and expressive vocabulary), and reading-related skills (word recognition, letter knowledge, phonological awareness, and spelling).

Teaching approaches (indexed after coding on the teaching content) and quality of instruction (indexed after coding on the teaching process) will be used as predictors of children's literacy outcomes in data analysis with other control variables (such as teachers' qualification and family background) statistically controlled. In addition, the pedagogies adopted (e.g., storytelling, singing) were noted for each lesson.

Participants

Thirteen local kindergartens with Cantonese as the medium of instruction participated in the study. For each kindergarten, one K3 class were identified and children in that class were invited to join the study. The English teacher of the class also joined the study and his/her lessons were recorded during the school year. Video recording was scheduled once in 2-3 weeks for each school. Parental consent was sought for each child in the identified classes. There were altogether 13 K3 classrooms and 325 children involved in this study. Children in these classrooms with identified developmental disabilities were excluded from the study.

(h)   Data collection and analysis

Collection of curriculum documents

English curriculum documents were collected from each participating schools. English teachers of the schools were also interviewed to collect further information about the English curriculum at the beginning of the school year of 2016/17.

Language and literacy measures

All measures were administered individually with instructions in Cantonese, which is the participants' spoken language, by trained experimenters. The English items were orally presented in English. All measures were administered three times over the school year, with a period of 4 months between each administration.

Oral language outcomes:

Receptive vocabulary: Peabody Picture Vocabulary Test Third-Edition (PPVT-III, Dunn & Dunn, 1997) was used to assess the overall receptive vocabulary knowledge. Twenty-four items were included in the present study.

Expressive vocabulary: A picture naming task (Learning Disabilities Association of Alberta, 2009) was adapted to assess children's expressive vocabulary. Each child was presented with 12 pictures of common objects such as frog, tree and so on. Children were prompted to name them one by one.

Reading-related outcomes:

Letter knowledge: Twenty-six small capital English letters arranged in random order were presented to participants and they were asked to name them one by one.

Word recognition: A researcher-developed reading test will be used. A 30-item reading test previously used in related studies will serve as a major reference (McBride-Chang & Kail, 2002; Yeung, Siegel, & Chan, 2013). The test was developed based on English textbooks used in Hong Kong kindergarten. After careful examination of the English curriculum of the participating schools, words that are commonly taught across schools were included. The test were refined to include 20 English words. Children will be asked to read the words one by one. One point will be given to correct pronunciation of the printed words.

Spelling: A researcher-developed spelling test was used. The commonly used English textbooks were reviewed and 6 words were selected from the textbooks. Children were asked to write down the spelling of the words pronounced by the experimenter.

Phonological awareness: Phoneme identification task was adopted as a measure of phonological awareness. These measures were used in previous studies (e.g., Yeung & Chan, 2013; Liu et al., 2017; Yeung et al., 2017). The phoneme identification task required children to identify the initial phoneme of an English word orally presented. A picture of the word pronounced was shown to ease memory load.

Control measures

Two measures were included in this study to control for the individual differences in general cognitive ability: Raven's Progressive Matrices (Raven, Court, Raven, 1976) as a measure of non-verbal intelligence and Chinese word reading (subtest of the Hong Kong Test of Specific Learning Difficulties in Reading and Writing; Ho, Chan, Tsang, & Lee, 2000). These two standardized tests were administered to children individually.

Observational System

An observational system for coding the teaching components and instructional quality of literacy instruction was developed by the project team. Existing well-documented and validated observational systems used for examining teaching content and quality had served as major references (e.g., Early Language & Literacy Classroom Observation (Smith, Brady, & Anastasopoulos, 2008), The Classroom Climate Scale (Kim, Briggs, & Vaughn, 2003), The Instructional Content Emphasis Instrument (Edmonds & Briggs, 2003), Measurement of

Teaching Practices During Reading / Languages Arts Instruction and It's Relationship to Student Achievement (Foorman & Schatschneider, 2003)). With reference to existing English curriculum implemented in local kindergartens, the researcher-developed observational system was designed to capture the variety of teaching activities conducted by local English teachers. This observational system has also provided quantitative data on quality of instruction. Details of the observational systems are presented in Appendix II.

Coding and interrater reliabilities

Twenty-five percent of all of the lessons recorded were coded by two independent rators using the observational systems. Interrater reliabilities were calculated based on their coding results. The exact agreement on the coding of the two independent rators was 88%. We acknowledged the potential bias in observational coding.

Demographic information of teachers

A Questionnaire was prepared to gather information related to teachers' background (e.g., age, highest qualification attained, years of experiences in English teaching).

Data analysis strategies

Descriptive analysis was conducted on the curriculum documents and interview with English teachers on the implementation of the English curriculum. The aim of the analysis is to describe the current practices of English teaching in the participating schools. Based on the

information collected, current English teaching practices were examined in the areas of curriculum characteristics (e.g., instructional time, key elements of the English curriculum, vocabulary taught), teaching materials (e.g., use of textbook) and other practices (e.g., homework and other English-related activities).

To investigate the impact of school curriculum on English language and literacy outcomes, multilevel models were conducted to examine what school/teacher variables would significantly predict language and literacy outcomes when control variables are taken into account (e.g., non-verbal IQ, Chinese word reading). We would examine outcomes in five domains: vocabulary, letter knowledge, phonological awareness, reading and spelling.

Results and Discussion

English teaching in local kindergartens: Current practices

The current English teaching practices are discussed in terms of the following aspects: Teachers' profile, instructional time and content, and teaching materials.

1. Teachers' profile

Among the 13 participating kindergartens, majority (92%) have involved Native English-Speaking Teacher (NET) to deliver English instruction. These teachers were responsible for 77% of total instructional time of English teaching in the sampled kindergartens. Some kindergartens (54%) also involved Cantonese-speaking teachers to do English teaching.

For NETs, majority of them (75%) did not possess qualification related to Education. The remaining 25% of NETs possessed professional training in early childhood education. None of the NETs in our sampled schools has formal professional training in teaching English as a

Some kindergartens expressed that they recruited these NETs through agencies and they had no control over the recruitment. These NETs were diverse in terms of their years of teaching experiences, ranged from 1 year to 35 years.

2. Instructional time and content

It is highly diverse regarding the English lessons time provided in the participating schools. The range of the instructional time was from 40 minutes to 400 minutes in a week. In one school, the NET would be with children during the whole class time. This school was excluded from the analysis, as the early childhood programme provided in this school was similar to bilingual programme in which two teachers (Cantonese-speaking and English-speaking) are present at the same time during all learning activities. With this school excluded, on average, there were 4.6 lessons in a week and each lesson lasted for around 25 minutes. As mentioned earlier, around 75% of English instruction was delivered by NET and 25% of English instruction was delivered by Cantonese-speaking teachers.

Regarding the instructional content, as reflected in the curriculum documents, the key components of instruction included oral language (vocabulary and conversation) and phonics. Although instruction on reading and writing was not explicitly shown in the curriculum documents, schools did indicate that it was taught along with activities that aimed to teach vocabulary and conversation.

For vocabulary learning, as shown in the curriculum documents, children on average would learn 9.4 new words per week (range from 2 to 26.5 per week). Again, it is highly diverse in terms of the number of new words introduced to children each week. Another focus of oral language activities is conversation. In almost all curriculum collected (85%), learning of conversation in terms of simple sentences (e.g., "What is this? "These are my …."). On

average, children are expected to learn 2-4 simple English sentences each week in K3. Additionally, children are taught to read and write these words/sentences. Although in some curriculum framework, the conversation/sentences learnt were not stated, teaching content is based on a particular section of the textbook in which conversation in terms of sentences would be taught.

All schools have included phonics as a curriculum component. All kindergartens except one sequenced the learning of letter-sound correspondences for each week/unit. Most kindergartens taught singleton consonants and vowels (e.g., /k/, /u/) with one kindergarten taught children digraphs (e.g., /oi/).

A few schools (31%) stated the use of storybook in their curriculum documents. The use of storybooks may be prevalent in English teaching (to be discussed in the section of pedagogy), but it was not reflected in the curriculum documents.

Learning is organized around learning themes, and most schools (85%) have synchronized the English learning with Chinese learning themes.

3. Teaching materials

Twelve out of thirteen of participating schools used textbook or workbook to aid English teaching. As reported by the participating kindergartens, on average, 3.4 books (textbook and workbook) were used for K3 children in their schools (range: 0 to 20). The use of textbook was also obvious in the curriculum, as related documents have stated related sections of the textbooks in many schools (62%).

In terms of homework, children were required to do 4.2 pieces of homework every week on average for consolidating learning. The homework was usually in written form (e.g., copying, worksheet).

Pedagogies used in English lessons

All the lessons recorded are coded in terms of what pedagogies are used in each lesson. We have developed a coding scheme for the pedagogies as shown in Appendix II. The pedagogies are categorized into storytelling, singing, and games. The coding is conducted based on whether in each lesson a particular pedagogy is present or absent. Therefore, in one lesson, teachers may use more than one pedagogy.

The results of such coding indicated that singing along with teacher is the most commonly used pedagogy in English teaching in the participating kindergartens (55%). Singing with action and movement was also common in the English lessons recorded (31%). Read aloud (pointing to the print) and storytelling from beginning to end were also commonly used pedagogy (around 40% of lessons). Another frequently present pedagogy is game. In particular, games involving attention to the print (reading) and attention to word meaning were similarly common (around 40% of lessons).

Interesting, for singing, it was quite uncommon for teachers to do substituting new words to the songs (7%). In terms of storytelling, the use of shared reading (28%) and dialogic reading (15%) was lesson common than read aloud.

Instructional content, quality of instruction and language and literacy outcomes

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All the lessons recorded (128 lessons from 13 schools) were coded in terms of instructional content and quality of instruction (see Appendix II). Among these lessons, 38% were conducted by Cantonese-speaking teachers and 62% were conducted by NETs. For the instruction content, the coding was done on the time spent on a particular learning outcome. The quality of instruction was rated on a five point scale for various aspects of quality (1 – rarely to 5 most of the time). Table 1 shows the descriptive statistics of the coding and Table 2 presents the descriptive statistics of the assessment results across three time points. It is observed that 81% of instruction intended to enhance children's oral language skills while 15% of instruction was conducted on code-based skills.

The main purpose of the present project is to examine the impact of school/teacher variables, instructional content and quality of instruction to beginning English language and literacy development. In this connection, multilevel models (Hox, 2002) were performed for each outcome in terms of growth over the final year of kindergarten (vocabulary, letter knowledge, phonological awareness, reading and writing, assessed at three time points). Multilevel models were chosen because of non-independence of young children in the same classroom when we tested the effects of school/teacher variables, instructional content and quality of instruction. In each model, non-verbal intelligence and Chinese character reading were entered as covariates. The school/variables tested in these models are (1) NET teachers' qualification; (2) NET teachers' years of teaching experience; (3) total English instructional time; (4) proportion of instruction time deliver by NET teacher; (5) number of target words learnt per week; (6) class size; (7) synchronization with Chinese curriculum; (8) amount of homework assigned to students per week. For instructional content, we entered two variables: (1) percentage of lesson time spent on meaning-focused instruction; and (2) percentage of

lesson time spent on code-focused instruction. We pooled the data from coding of quality of instruction into two variables: (1) class grouping; and (2) teaching quality as indicated by four aspects: communication, engagement, feedback and responsiveness. The results of these analyses are summarized below.

For vocabulary, with age and non-verbal intelligence as covariates, amount of homework assigned to students per week ($p < 0.05$) was the only significant predictor of vocabulary gains over the year. Teaching quality ($p < 0.10$) was a marginally significant predictor of vocabulary gains. More homework assigned each week and higher teaching quality were associated with higher gains in vocabulary.

Regarding gains in letter knowledge, amount of homework assigned to students per week ($p < 0.05$) and time spent on code-focused instruction ($p < 0.05$) were significant predictors. More homework assigned per week and more time spent on code-focused instruction associated with better gains in letter knowledge.

For phonological awareness, English instructional time ($p < 0.05$), proportion of instructional time delivered by NET ($p < 0.05$), synchronization with Chinese curriculum ($p < 0.05$), amount of homework assigned to students per week ($p < 0.001$), time spent on meaning-focused instruction ($p < 0.05$) and time spent on code-focused instruction ($p < 0.01$) emerged to be significant predictors of gains in phonological awareness over the year.

Number of target words learnt per week ($p < 0.05$) and class grouping ($p < 0.01$) were significant predictors of gains in reading. Instruction involving small group activities and larger number of target words per week were associated with higher gains. Synchronization with Chinese curriculum ($p < 0.01$) was a marginally significant predictor, with synchronization resulted in higher gains in reading.

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For spelling, class size ($p < 0.05$) and class grouping ($p < 0.01$) were significant predictors of spelling gains. Again, synchronization with Chinese curriculum was a marginally significant predictor ($p < 0.10$) of spelling. Instruction involving small group activities and smaller class size were associated with better gains in spelling. Synchronization with Chinese curriculum was positively related to spelling gains.

Overall discussion

In the present project, we conducted descriptive analysis of English instruction delivered to Hong Kong Chinese ESL children in our sampled kindergartens. Results indicated that there are similar characteristics and sharp differences in English instruction provided by Hong Kong kindergartens.

Involving NET teachers in English instruction, teaching phonics, and use of textbooks are common features of the English curriculum among the sampled kindergartens. English teaching in kindergarten was documented as being mainly delivered by NET teachers accompanied with Cantonese-speaking teachers (usually the class teacher) who were mainly responsible for classroom management and sometimes translating instructions from English into Cantonese (Ng, 2015). This mode of English instruction is prevalent in Hong Kong kindergartens. Ng (2015) have found that NETs and Cantonese-speaking teachers had minimal out-of-class collaboration.

Phonics teaching has become prevalent in Hong Kong kindergarten (Lau & Rao, 2013). The findings of the present project have shown that all participating kindergartens have included phonics teaching in their curriculum. Often times, phonics teaching were conducted

by NETs. English teaching in Hong Kong kindergartens was once viewed as using the "look and say" method (e.g., Holm & Dodd, 1996). The current findings show that the scenario is changing perhaps as a response to parental demand and preparation for primary education. It may also be due to the awareness of international trends in early English instruction. The importance of the "alphabetic principle" in teaching English reading has been recognized for years for both L1 and L2 learners around the globe (Adams, 1990). More studies should be conducted to examine how phonics teaching is conducted to local kindergarteners and its effects on beginning literacy development. It would be interesting to examine how phonics teaching is integrated into other components of English teaching in Hong Kong.

Using commercially developed textbook was common among participating kindergartens which echoes the findings from previous research (Lau & Rao, 2013; Rao, Zhou, & Sun, 2017). It may reflect the need of professional support in local kindergarten in developing their school-based English curriculum. Only some participating schools have deployed manpower for developing their school-based English curriculum, and given the unstable employment of the part-time NET, kindergarten may tend to utilize teaching plans and materials provided by the textbooks.

English curriculum of the participating schools in the present project are diverse in terms of the instructional time of English per week and to what extent Cantonese-speaking teachers are involved in English teaching. The range of instructional time spent on English varied among the kindergartens in the present project. We believe that such diversity may be due to the market forces as kindergartens are privately run in Hong Kong (Rao et al., 2017). The Kindergarten Education Curriculum Guide (Curriculum Development Council, 2017) only serves as a general reference for kindergarten and the design and implementation of English

curriculum is more driven by the parental demand for more English language experience to prepare for primary school admissions. On the other hand, involving Cantonese-speaking teacher in English teaching is an emerging trend in Hong Kong. SCOLAR has been implementing an initiative of training Cantonese-speaking teachers to deliver English language activities and a completed QEF of the project team has advocated the same practice (Yeung, Ng, & King, 2016). Such initiative has planted the seed of such practice in some kindergartens. We believe that Cantonese-speaking teachers who usually have solid training in early childhood education (Ng, 2015) are able to provide quality English instruction to young children with proper training and support.

Around 80% of English instruction time spending on meaning-focused activities is in line with the recommendation provided by the Kindergarten Education Curriculum Guide (Curriculum Development Council, 2017). However, homework assigned to students still focused on drilling, aiming to enhance reading and writing skills. In addition, the amount of time spent on code-based activities varied a lot among kindergartens (ranged from 1% to 26%). Again, it may reflect the parental demands for academically oriented curriculum and market forces in early childhood education.

Regarding the relationship between school/teacher variables and language and literacy outcomes, there are a number of interesting findings. First, amount of homework assigned seems to be important for several outcomes. We believe that providing homework is a channel for parents to support children's learning at home especially for young children. Therefore, schools which assigned more homework might create more opportunities for parental support on second language learning at home. Home support is found to be important for second language learning (Farver, Xu, Lonigan, & Eppe, 2013). Second, synchronization with

Chinese curriculum seem to be another important factor in predicting language and literacy outcomes. Synchronizing or making connections between the English curriculum and learning in other domains (conducted in Chinese given the use of integrated curriculum in kindergarten) seems to provide multiple exposure to similar words or contexts, although in different languages. Research has demonstrated the interconnected bilingual lexicon and there are potential benefits of using L1 to encode the new L2 words into the lexicon (Mallikarjun, Newman, & Novick, 2017). Third, for literacy skills like reading and writing, class size or class grouping seem to play an important role. Reading and writing are more advanced literacy skills for young children. It may require more support from teachers. Fourth, in general, quality of teaching as indexed by communication, engagement, feedback and responsiveness was not associated with language and literacy outcomes (but class grouping did as mentioned) except for vocabulary learning. This may be due to the inadequacy of the measurement tool of the quality of teaching. The quality of teaching scale we used focused on general teaching quality but not specifically on English teaching quality. It means that the teachers we observed might be providing feedback frequently but the feedback might not be directing to the language learning. It is also possible that when our variables included in this study (e.g., class grouping) were more important than quality of teaching in enhancing language and literacy outcomes. Fifth, school/teacher variables are more important for phonological awareness than other outcomes. We believe that Hong Kong parents are not familiar with the concept of phonological awareness and probably do not have phonics skills themselves. Therefore, they may not be able to support their children on developing English phonological skills. In this connection, school instruction plays a more important role to support development in this domain. In particular, code-based activities such as phonics

teaching provided in school was a significant predictor of phonological awareness among Hong Kong Chinese ESL children.

(i)   Conclusions and Recommendations

The present project identified key features and practices of English curriculum in local kindergartens. We have found commonalities and differences in providing English learning experiences to young ESL children in Hong Kong schools in the pre-primary sector. Through following children in their final year of pre-primary education, we investigated what school/teacher variables were associated with language and literacy outcomes in different domains.

Based on the research findings, we recommended local kindergarten when designing their English curriculum may consider synchronizing the learning themes/units of the English curriculum and integrated curriculum of non-English learning. Various elements of the curriculum, for example phonics and oral language can be integrated, delivering using effective pedagogies. While assigning homework is a positive factor, the content of homework should gear toward a more meaningful consolidation of the learning of the day/week. Shared reading and multiple format of singing activities (e.g., singing with action/movement or singing with substitution of words) can be used more frequently as pedagogies. Extension activities after story reading should be used to consolidate vocabulary/oral language learning.

(j)   Dissemination activities of the project

One of the project objectives is to disseminate project findings to educators. Two dissemination seminars were conducted on 11 November 2017 and 18 November 2017 for project schools. Twenty-eight principals and teachers participated in the seminar. In the seminar, we have presented the project findings and shared practical strategies to develop school-based English curriculum with the use of storybook and rich instruction in vocabulary. Each kindergarten also received a school report which illustrated the assessment results of the school which would be informative for their own evaluation of the effectiveness of the English curriculum.

In addition, the project team has presented two papers at international conferences (Asian Conference of Language Learning 2017 and 7th International Conference on Language, Literature and Linguistics) to disseminate findings to international scholars and educators.

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Appendix I

Participating schools of the present project:

1. 神召會華人同工聯會彩蒲幼稚園
CHINESE CHRISTIAN WORKER'S FELLOWSHIP LTD. CHOI PO KINDERGARTEN
2. 神召會華人同工联會景盛幼稚園
CHINESE CHRISTIAN WORKER'S FELLOWSHIP LIMITED, KING SHING KINDERGARTEN
3. 宣道會陳李詠貞紀念幼稚園
CHRISTIAN ALLIANCE CHEN LEE WING TSING MEMORIAL KINGERGARTEN
4. 鯉魚門循道衞理幼稚園
LEI YUE MUN METHODIST KINDERGARTEN
5. 明雅中英文幼稚園
MINK ANGLO-CHINESE KINDERGARTEN
6. 聖公會荊冕堂士德幼稚園
S.K.H. CROWN OF THORNS CHURCH SADICK KINDERGARTEN
7. 聖士提反堂小學暨幼稚園
ST. STEPHEN'S CHURCH PRIMARY SCHOOL & KINDERGARTEN
8. 香港浸信會聯會利安幼兒園
THE BAPTIST CONVENTION OF HONG KONG LEE ON NURSERY
9. 中華基督教會基真幼稚園
THE CHURCH OF CHRIST IN CHINA KEI CHUN KINDERGARTEN
10.   將軍澳循道衞理幼稚園
TSEUNG KWAN O METHODIST KINDERGARTEN
11.   東華三院馬陳景霞幼稚園
TUNG WAH GROUP OF HOSPITALS CHAN KING HAR KINDERGARTEN
12.   東華三院黃朱惠芬幼稚園
TUNG WAH GROUP OF HOSPITALS WONG CHU WAI FUN KINDERGARTEN
13.   路德會聖雅各幼稚園
ST. JAMES LUTHERAN KINDERGARTEN

Appendix II

Observational System of Teaching Content

Code Based	Phonics	Teaching letter sound correspondence
	Print Awareness	Teaching print direction and space
		Teaching letter identification / identifying letter name + shape
	Reading and Comprehension	Teaching reading of texts
		Engaging students to read independently
		Checking comprehension of text
		Engaging students to reading their own writing
	Writing	Engaging students to copy words/sentences
		Engaging students in Independent writing
		Giving handwriting instruction
	Spelling (with text involved)	Dictation
		Instructing oral spelling
	Others	
Oral Language	Listening	Teacher talk (and all other oral instructions)
		Storytelling
		Checking listening comprehension
	Speaking	Class singing, rhyming, chanting etc
		Modelling pronunciation
		Chorale reading
		Questioning students
		Partner speaking
	Oral Vocabulary	Word meaning instruction
		Application of word meaning in different contexts
	Syntax	Teaching sentence Structure
	Phonological awareness	Phonemic awareness; Rhyme—identifying words that end with the same sound (e.g., Jack and Jill went up the hill);

		Syllable awareness
	Others	
No specific activity		

Observation System of Teaching Quality

Class grouping	Whole class or very large group
	Teacher with small or cooperative group (three to six students)
Communication	Teacher communicate his/her expectations
	Teacher gives clear instruction
Engagement	Teacher gives equal chances to students
	Engages students in meaningful interactions regarding to the topic/materials taught in class
	Secures and maintains student attention during lesson
Feedback	Teacher provides positive feedback
	Make negative comments, including sarcasm or personal ridiculer
Responsiveness	Checks student's learning and understanding by asking questions
	The teacher respond to the needs of students

Observational System on Pedagogy

Stories	Story telling	Tell the story from beginning to end
	Story reading	Read aloud (point to the print)
		Shared reading (teacher and student read the same book, teacher invite children to read part of the phrases, sentences with and without reference to the print)
		Dialogic reading (teacher ask open ended questions and invite children to talk about the story orally)
	Activities	Role playing the character

		Miming the character (only actions, no speaking involved)
		Inventing the story ending
		Story related extension activities to consolidate vocabularies learnt (story book making, arts and crafts, labelling pictures etc)
Songs/rhymes		Singing along with teacher
		Substituting new words to the songs
		Singing along with action and movement
		Teacher sings, children do the actions, clap the beat etc
Games		Children are led to solve a problem through the use of language
		Attention to the print (word puzzle, word search, find the missing words, pick the right word card, tap the right word, which word is missing).
		Pay attention to meaning (mainly aural and oral, e.g. whispering game, total physical response (Simon says), pick the right picture card/ objects, what is missing)

Table 1: Descriptive statistics of the lesson coding results

Items of Observation	M	SD
Teaching Content		
Meaning-focused activities	0.81	0.05
Code-focused activities	0.14	0.08
Teaching Quality		
Class grouping	4.74	0.34
Communication	3.52	0.41
Engagement	4.00	0.47
Feedback	4.31	0.34
Responsiveness	2.99	0.27
Pedagogies		
Tell the story from beginning to end	0.40	0.33
Read aloud (point to the print)	0.42	0.36
Shared reading	0.28	0.26
Dialogic reading	0.15	0.18
Role playing the character	0.06	0.06
Miming the character	0.11	0.16
Inventing the story ending	0	0
Story related extension activities to consolidate vocabularies learnt	0.15	0.16
Singing along with teacher	0.55	0.30
Substituting new words to the songs	0.07	0.11
Singing along with action and movement	0.31	0.24
Teacher sings, children do the actions, clap the beat etc	0.14	0.13
Children are led to solve a problem through the use of language	0.36	0.21
Games - attention to the print	0.44	0.23
Games - attention to meaning	0.42	0.26

Table 2: Descriptive statistics of language and literacy measures at three time points.

Domains	T1	T2	T3
	M (SD)	*M (SD)*	*M (SD)*
Vocabulary	19.22 (8.27)	21.95 (8.13)	22.69 (8.31)
Letter knowledge	19.41 (6.87)	21.30 (6.38)	22.05 (6.06)
Phonological awareness	2.91 (3.06)	4.18 (3.33)	5.26 (3.08)
Reading	2.57 (4.65)	4.13 (5.78)	5.71 (6.48)
Spelling	0.53 (1.22)	0.97 (1.55)	1.31 (1.79)