A Project entitled

The Factors Affecting Hong Kong Preschool Teachers Implementing ICT in Teaching

Submitted by

submitted to The Education University of Hong Kong for the degree of Programme Title (Bachelor of Education (Honours) (Early Childhood Education)

in 11th April, 2024

(7420 words)

Declaration

I, declare that this research report represents my own work under the supervision of *Dr. Zhou Yan Ling*, and that it has not been submitted previously for examination to any tertiary institution.

Signed

11th April, 2024

Table of Contents

List of Tables

List of Figures

Abstract

In the 21st century, people live in a digitalized society where information and communication technologies (ICT) are essential. Research shows that integrating ICT in education settings can support the learning of children. However, difficulties can limit preschool teachers' implementation of ICT in teaching. In Hong Kong, little has been reported about the individual perspective of preschool teachers' using ICT. This study investigates how factors and views regarding ICT implementation influence 8 Hong Kong Special Administrative Region (SAR) preschool teachers. By conducting individual interviews, this study finds that utilizing ICT in Hong Kong preschool settings remains challenging for preschool teachers. Teachers' views and internal and external factors affect Hong Kong preschool teachers' integration of ICT during instruction. For instance, some findings include teachers' teaching approach, causes of addiction, lack of access to resources, eye health, and learning with physical teaching materials. This study discusses the support for preschool teachers in ICT-related professional learning and the importance of resources for promoting usage of ICT in early childhood education (ECE).

Keywords: preschool teachers, factors, views, Hong Kong

1. Introduction

1.1 Background

All educational levels, including early childhood education (ECE), are now beginning to use digital-based education, emphasizing the importance of technology in modern education and, looking into the utilization and responses of technology in schooling, and demonstrating a change from traditional teaching (Nurdiantami & Agil, 2020). The COVID-19 pandemic has highlighted the necessity for ongoing transformation towards online learning on a global scale (Barbara-Sanchez et al., 2022). According to UNESCO (2023), early childhood settings worldwide are adopting technology at a rapid rate. Young children may have access to various information communication technology (ICT) applications at home and school. Hence, using ICT for effective learning in the kindergarten setting is essential, and this becomes important for teachers to acquire sufficient knowledge to employ effective ICT in class (Weber & Greiff, 2023).

1.2 Significance of Study

Over the past few decades, there has been growing recognition of the potential of ICT to facilitate learning in ECE (Hu & Yelland, 2019). Prior research has predominantly concentrated on Western contexts, such as Hatzigianni et al. (2023), which found that preschool teachers use ICT widely in educational settings and that teachers have enhanced the use of ICT. Similarly, research by Magen-Nagar & Firstater (2019) focuses on the Western context and the obstacles and beliefs of preschool teachers using ICT. Until now, there are few studies conducted on the utilization of digital technologies within early childhood settings in Hong Kong (Leung & Choi, 2024). Little is known about preschool teachers' ICT usage and resistance to adopting ICT within ECE settings, specifically focusing on Asian regions like Hong Kong. With limited knowledge of the Hong Kong situation, there is a research gap to explore that influences preschool teachers' implementation of ICT, as this significantly affects the effectiveness of ICT use in ECE.

2. Literature Review

2.1 Definition of Major Terms

2.1.1 Preschool

Hong Kong preschool refers to the kindergartens and kindergarten-cum-child care centers that the Education Bureau officially recognizes; all are privately operated, and the preschool can be classified as either private independent (PI) kindergartens or non-profit making (NPM) kindergartens (KGs) (Cheng, 2016). Children in Hong Kong attend kindergartens for three years, from age three to age six and attend K1, K2, and K3, respectively (Hu & Yelland, 2017). This study refers to all the early childhood education (ECE) sectors of Hong Kong as “preschool.”

2.1.2 Information and Communication Technologies (ICT)

Information and Communication Technology (ICT) permits users to access and modify data (Drigas & Ioannidou, 2013). In education, the interactive qualities of technologies greatly influence how children learn, grow, develop, communicate, and create their values (Lupu & Laurenţiu, 2015). In this study, “ICT" is defined as the technologies that support preschool teachers' teaching in preschool settings and the learning of children.

2.1.3 ICT Integration

In the term "ICT integration" the ICT devices includes computers, tablets, digital cameras, multi-touch mobile devices, interactive websites, digital data networks, graphics, TVs, and many other devices at any time and any location (Ihmeideh & Al-Maadadi, 2018). "ICT integration" in this study indicates using all technological tools designed especially for teaching and learning in preschool settings.

2.2 ICT Integration and Affordance Theory

The theory of affordance by Gibson (1979) states that humans' physical environment offers various opportunities for actions and behaviors. According to Norman (2013), an individual's perception of the affordance of an environment is influenced not only by their physical abilities,

but also by their intentions, plans, values, beliefs and prior experiences. In brief, the affordance of any object is influenced by (1) the inherent properties of the object, (2) human intentions, and (3) the abilities of humans (Fayard & Weeks, 2014). Besides, Norman (2013) suggests that understanding affordance is crucial in a user-centered approach to designing everyday objects that offer users relevant, perceptible, and accessible affordance.

ICT integration is a complicated phenomenon that extends beyond the utilization of digital devices and software (Leung & Choi, 2024). ICT integration in ECE settings offers more effective methods for whole-class instruction than traditional materials (Dong & Mertala, 2021). Walan and Enochsson (2022) stated kindergarten teachers regarded digital tools as valuable instructional aids for delivering knowledge and searching for information about lessons. By utilizing the aforementioned theories and concepts related to affordance, this study aims to explore the views, and factors that influence Hong Kong preschool teachers' resistance to ICT integration in the classroom.

2.3 ICT Integration in Preschool Settings

ICT has transformed the functioning of the world, and the impact brought is equally experienced in education including the kindergarten classroom (Chalak, 2018). Teachers use ICT in ECE settings to change practices and provide children with more learning and playing experience; the ultimate objective is to support children in learning in this digital age (Yang & Hong, 2022). Based on Zhang (2022), technology offers advantages in making learning more engaging, increasing learners' engagement, and personalized learning by giving children better assignments. Learning can be encouraged using scanned image books to create PowerPoint presentations, facilitating the learning interests of children (Yang & Hong, 2022).

Integrating ICT in ECE benefits the development of children in different learning areas. Stanikzai (2023), suggests ICT enhances the development of learners in the 21st century, particularly

fostering skills development in critical thinking, creativity, communication and cooperation. Besides, ICT provides interactive and repeating features that benefit children by lowering cognitive demands, particularly for children with poor memory, therefore helping overcome mathematics learning gaps that arise in ECE (Outhwaite et al., 2017). Moreover, incorporating ICT into the early childhood curriculum positively impacts the development of children in different domains, including early mathematics, language, social, emotional, cognitive, physical, creative abilities and individual reading (Drigas & Kokkalia, 2014; Simon & Nemeth, 2012).

Nevertheless, ICT supports preschool teachers in lesson preparation and teaching. Internet-connected computers are reported as the most commonly used device for searching teaching and learning materials related to curriculum information and displaying educational materials for instruction to the class (Hu & Yelland, 2017). During the lesson, preschool teachers may support teaching using ICT; accordingly, for example, if a child shares an object, the teacher may immediately search online to explore more about the object with the class (Magen-Nagar & Firstater, 2019). Western preschool teachers often select ICT devices that are easy to control, considering preschoolers' needs; this helps enhance teachings with a range of activities (Nurdiantami & Agil, 2020). Preschool teachers could use ICT to document learning of the class using digital cameras in portfolios (Hu & Yelland, 2017).

2.4 Views of Preschool Teachers Implementing ICT in Classroom

Preschool teachers play a crucial role in the organization of the classroom (Manassakis, 2020), including incorporating digital technologies to enhance meaningful learning experiences for children (Brown & Englehart, 2019). Preschool teachers are responsible for making decisions regarding digital technologies and taking action to ensure the high quality of such technologies within their classrooms (Schriever, 2021). Indeed, teachers' perspectives regarding ICT in preschool are formed based on their beliefs about the importance of ICT in ECE (Preradović et

al., 2017). Teachers' beliefs significantly influence their instructional methods with ICT, and their utilization of ICT is largely influenced by their existing values and pedagogical background (Mikelic et al., 2017).

Magen-Nagar and Firstater (2019) found that some preschool teachers believed that preschool education is comparatively crucial for children, but they expressed concern that ICT activities consumed a significant amount of time, which resulted in less time available for other activities like social play and crafts. Similarly, attitudes affect ICT usage of preschool teachers. Preschool teachers also have other individual views, such as preferring physical and interpersonal learning over computer-based learning, so children can interact socially (Magen-Nagar & Firstater, 2019). Furthermore, there is another belief from school that technology could act as a source of distraction, impeding students' learning, for example access to iPads during early childhood affects visual spatial attention span, resulting in problems such as lack of social skills, lower ability to concentrate and developmental delays (Espiritu, 2016).

2.5 Factors Influence Preschool Teachers Implement ICT in Classroom

Despite the benefits of ICT in educational settings, preschool teachers encounter challenges in incorporating related tools into teaching smoothly. Researchers have identified that the perception of external resources and support is the key factor influencing one's perspective of ease of use (Alwabel et al., 2020). The quality and availability of ICT devices provided by the preschool for teachers affect the use of ICT in the lessons, such as the equipment and resources available for teachers within the preschool (Hoareau et al., 2021). Preschools may face a shortage of necessary hardware, including laptops, notebooks, and computers; consequently, preschool teachers lack the essential digital resources for integrating ICT into their teaching practices (Liu & Pange, 2015). Besides, preschools may have old computers, some with technical problems and some out of order, such as lack of technical maintenance, microphone volume, connection speed, and technical

support causing difficulties for preschool teachers to integrate ICT into their lessons (Cheng, 2016; Magen-Nagar & Firstater, 2019).

In addition, although teachers acknowledge the potential benefits of ICT in promoting ECE, there are concerns regarding the adverse impact of screens (Monteiro et al., 2022). Preschool teachers consider children to be young and should be aware of health development, ICT may cause children to have prolonged exposure to screen time (Magen-Nagar & Firstater, 2019).

On the other hand, internal factors arising from teachers affect effective ICT utilization. The difficulties preschool teachers may encounter during effective usage of ICT in education are caused from lack of positive attitudes, technical skills, digital literacy and knowledge required (Leung & Choi, 2024). Teachers' abilities and behaviors are considered to have the most significant impact on teachers' adoption of digital technologies in the classroom (Hoareau et al., 2021). Likewise, a lack of technology skills, specifically a lack of knowledge and experience with ICT integration practices for preschoolers' education, is considered an important challenge (Ihmeideh & Al-Maadadi, 2018). Insufficient related skills in using ICT during teaching pose a challenge for preschool teachers, particularly among older teachers who are accustomed to traditional teaching methods and may encounter difficulties adapting to new instructional approaches (Magen-Nagar & Firstater, 2019).

Moreover, educators' opinions affected how they conducted their classroom instruction and utilized ICT; more specifically, the opioids depended on their technical skills (Mikelic et al., 2017). Preschool teachers believe that utilizing computers in ECE settings is unsuitable and insignificant, primarily due to discomfort in handling ICT (Mikelic et al., 2017).

2.6 The Hong Kong Content

According to Cheng (2016), Hong Kong preschool teachers were willing to employ ICT to enhance students' educational experience and possessed a clear understanding of ICT significance within the curriculum. However external and internal factors affected preschool teachers ICT implementation, factors mainly include few resources, funding, support, personal skills and institutional factors that discourage preschool teachers' use of ICT in teaching (Cheng, 2016). Among the factors the most common difficulty encountered by Hong Kong teachers was lack of computer skills (Hau et al., 2023). Besides, as an international Chinese city, Hong Kong has inherited Chinese cultural values to a significant extent, which study revealed explicit different ECE practices between Confucian-heritage societies and Euro-American countries (Yang & Li, 2022). In Confucian heritage culture, the purpose of learning encompasses the moral refinement of oneself and the attainment of social status and honor, where students are expected to be humble and respect knowledge and teacher (Li, 2010). The enduring impact of traditional Chinese values on ECE continues to be significant (Yang & Li, 2018).

In Hong Kong ECE context Hu and Yelland (2017) found that preschool teachers integrate ICT into their teaching, including using computers to display learning resources, PowerPoint slides, pictures, and videos and using CD players to play music. However, there are limited current studies about ICT implementation by preschool teachers in Hong Kong.

In 2017, the local committee conducted a review of the guide for the pre-primary curriculum, subsequently renamed as the *Kindergarten Education Curriculum Guide, focusing* on the development of the whole person (Leung & Choi, 2024). The guide promotes learning in 6 learning domains: arts and creativity, language, early childhood mathematics, physical fitness and health, self and society (Curriculum Development Council, 2017). According to the Curriculum Development Council (2017), the incorporation of technology lies within the nature and living

learning area as outlined in the Guide. The guide explicitly emphasizes that information technology serves as a supportive tool for facilitating learning and teaching that engage learning activities that cater to educational needs of children. Moreover, the guide asserts that teachers can play a guiding role in helping children become aware of technological products and utilize technology effectively. However, the curriculum lacks sufficient guidance on supporting teachers in developing their competences in digital technology, including strategies for effectively integrating technology to provide interactive and engaging activities for children.

Furthermore, there is limited support for preschool teachers to utilize ICT in teaching. The Government of the Hong Kong Special Administrative Region Press Releases (2022) shows there is comparatively less ICT support for local preschools than primary and secondary schools; this includes providing a school network, enhancement of e-learning resources, and ICT-related professional development programs for teachers. To address this issue, the Hong Kong local government established the Quality Education Fund (QEF) with the aim of providing financial support for initiatives that enhance the standards of education in Hong Kong, including kindergarten, primary, secondary, and special education (Quality Education Fund, 2020). As part of this initiative, preschools can apply for grants specifically meant to support ICT needs. Simultaneously, The Education Bureau (EDB) offers EDB Educational MultiMedia (EMM) (2024) as a resource for learning and teaching for students and teachers in kindergarten, primary, and secondary education. EMM consists of various educational materials such as theme-based short videos, interactive short films with multiple endings, animated content, nursery rhymes, picture books, photos, soundtracks, and video clips divided into chapters and brief segments lasting a few minutes. These free materials are designed in alignment with the school curriculum, catering to students' learning needs and enhancing learning experiences.

Likewise, there is little support offered by local organizations. The Hong Kong Jockey Club Charities Trust (2024) implemented the Jockey Club digital Capacity building for the Kindergarten project, a project aimed at enhancing digital capabilities in Hong Kong preschools by supporting local preschools in purchasing electronic digital equipment. In addition to equipment support, the project also offers professional teacher training workshops and professional teacher exchange groups for preschool teachers across Hong Kong to participate and promote professional exchanges within the industry.

In addition, adopting ICT initiatives in Hong Kong education became necessary to maintain the competitiveness of the Hong Kong education system and improve the standard of instruction and learning in local schools, alongside nations like Singapore and Taiwan, which have strong ICT policies (Cheng, 2016). Suggesting the importance of studying ICT usage by preschool teachers in classroom settings.

2.7 Summary

In the modern era of technology, ICT has become increasingly prevalent in education and is widely acknowledged as a valuable asset in preschool settings. The incorporation and utilization of ICT in critical areas of ECE are crucial, as implementing ICT in preschool supports preschool teachers in enhancing instructional practice. Besides, ICT integration provides immersive learning experiences for children, with the ultimate goal of fostering holistic development in this digital era. However, there is a lack of studies focusing on factors and individual perspective of Hong Kong preschool teachers, which influence effective utilization of ICT in preschool classrooms. Nevertheless, the Hong Kong Education Bureau still needs to establish clear guidelines for local preschools regarding the integration of ICT. Consequently, the future ICT adoption by preschool teachers in this context remains to be determined. Given these

circumstances, this study is important to explore the individual views and factors contributing to the resistance of Hong Kong preschool teachers adopting ICT in teaching.

3. Research Objectives and Research Questions

ICT is widely used in life, and there is a demand for ECE, as preschool learning is adopting digital-based education in this era. This qualitative study aims to understand the factors and views that influence Hong Kong preschool teachers from ICT implementation in the classroom. This study may help promote the effective use of ICT and support the development of preschoolers.

This study posed research questions as follows:

1. What are the views of preschool teachers integrating ICT in Hong Kong preschool education?
2. What are the factors that contribute to Hong Kong preschool teachers' resistance to the adoption of ICT during teaching?

4. Methodology

4.1 Qualitative Research Approach

This study adopted qualitative study design to explore the views and factors that influence the ICT implication of teachers in Hong Kong preschool settings. Qualitative interviews are the most commonly used approach in qualitative research, as interview participants are given the chance to openly discuss their feelings, opinions, perspectives, aspirations, and attitudes regarding various phenomena they encounter within the workplace or other organizational settings (Dunwoodie et al., 2023). Similarly, qualitative interviews allow those individuals to express their feelings about specific issues in their own words (Pessoa et al., 2019). Enabling researchers to ask follow-up questions and explore specific issues in greater detail is the distinct advantage of qualitative interviews over alternative qualitative methods (Bryman, 2015).

4.2 Rationale for the Selection and Sampling of Participants

This study conducted convenience sampling. Golzar and Taijik (2022) stated that the sampling method is essential in strengthening the representation of the sample and the generalizability of the research findings. Their research also suggested that convenience sampling is widely adopted in qualitative research, providing easy access to the target population. Convenience sampling is suitable for this study as the study aims to obtain the perspective and attitudes of preschool teachers and conduct an interview to collect information (Nikolopoulou, 2022).

Participants in this study comprised Hong Kong preschool teachers from different Hong Kong non-profit-making (NPM) schools. This sample of teachers were chosen as these preschools have comparable resources and are eligible to participate in the local Kindergarten Education Scheme.

The selection criteria for the target preschool teachers are as follows: (1) teaching experience has to be one year or more; (2) acquire at least a bachelor's degree in ECE; (3) preschool teachers from Hong Kong; (4) includes preschool teachers of both gender; (4) teachers from K1 to K3; (5) and are willing to participate in the study voluntarily.

4.3 Participants

I contacted the preschool teachers from my previous teaching practicum schools, and they referred some teachers to me. Initially, I contacted the participants by sending phone messages to clearly explain the research objectives and procedures and request their participation. This study uses pseudonyms for preschool teachers to maintain the anonymity of their identity. The names of the interviewees are pseudonyms.

The participants included 8 Hong Kong preschool teachers from 3 different NPM Hong Kong preschools. There are 6 preschool teachers from the same school, and 2 others from other preschools. The years of teaching of participants range from 1 to 17 years. Most participants have

bachelor's degrees in ECE background, and 2 teachers have master's degrees. Table 1 provides the basic information of the participants.

Table 1 *Basic information of the participants*

Preschool	Name of Participants	Years of teaching	Education level	Class
A	Teacher C	6	Master degree	K3
A	Teacher L	17	Bachelor degree	K2
A	Teacher Z	15	Master degree	K2
B	Teacher H	7	Bachelor degree	K3
A	Teacher T	1	Bachelor degree	K1
A	Teacher B	8	Bachelor degree	K3
A	Teacher G	11	Bachelor degree	K3
C	Teacher A	3	Bachelor degree	K3

The participants of this study are 5 female and 3 male preschool teachers, their ages are from 20 to 45 years old. Among all the age groups 26-30 years old age range group consisted of the most participants with 3 preschool teachers. Likewise, participants consist of 5 K3 teachers, 2 K2 teachers and 1 K1 teacher. Table 2 provides the participants' demographic characteristics.

Table 2 *Participants' demographic characteristics (N=8)*

		Frequency	Percentage (%)
Gender	Male	3	37.5
	Female	5	62.5
Age range	20-25	1	12.5
	26-30	3	37.5
	31-35	2	25
	36-40	1	12.5
	41-45	1	12.5
Education level	Bachelor	6	75
	Master	2	25
Working Position	Preschool class teacher	8	100
Years of teaching	1	1	12.5
	3	1	12.5
	6	1	12.5
	7	1	12.5
	8	1	12.5

		11	1	12.5
		15	1	12.5
		17	1	12.5
Classes	K1		1	12.5
	K2		2	25
	K3		5	62.5

4.4 Research Instrument

This study utilized interviews as a research method to gain an understanding of participants' views and the factors contributing to resistance to integrating ICT in preschool classrooms. The interview consisted of eight open-ended questions (see Appendix A). Open-ended interview questions were designed to delve deeply into topics and gain insights into potential reasons behind them, and participants may produce lengthy narratives (Weller et al., 2018).

The interview questions used in this study were developed by drawing upon the semi-structured interview questions employed by Ihmeideh and Al-Maadadi (2018). Given that both studies targeted preschool teachers as study participants and aimed to explore participants' perception, ICT usage, and the resistance affecting the integration of ICT in teaching, the interview questions were considered relevant and appropriate. By developing the interview questions based on those developed by scholars, this approach aimed to establish validity, consistency, and credibility, which enhances the reliability of the study, aligning with the current study about preschool teachers' ICT integration in classroom teaching.

4.5 Data Collection

Data collection of this study utilized interviews. To offer flexibility, participants could choose their preferred interview time and format, which could be a video conference interview using Zoom or a phone call interview. Virtual and phone call interviews were adopted as both save cost compared to in-personal interviews. Research has shown virtual Zoom interviews reduce the cost and the convenience of interviewing from a familiar location, eliminating the inconvenience and

expenses associated with travel; this also provides rich therapeutic value by allowing participants to freely express individual thoughts in a location where they feel comfortable (Oliffe et al., 2021).The majority of the participants opted for phone call interviews. Table 3 provides a summary of the interview details of the participants. The participants' information was maintained anonymously and confidential, ensuring their privacy.

Participants are allowed to select preferred interview language, English or Cantonese, as Cantonese is the mother tongue of Hong Kong people (Cheng, 2016). This study conducted the interviews individually in Cantonese and lasted from 15 to 32 minutes. For specific details regarding the interviews, please refer to Table 3.

Table 3 *Interview details of participants*

Preschool	Name of participant	Class	Age of students	Interview Date	Duration	Interview method
A	Teacher C	K3	5-6	17/2/2024	19 minutes	Phone Interview
A	Teacher L	K2	4-5	19/2/2024	15 minutes	Phone Interview
A	Teacher Z	K2	4-5	21/2/2024	31 minutes	Phone Interview
B	Teacher H	K3	5-6	24/2/2024	25 minutes	Phone Interview
A	Teacher T	K1	3-4	29/2/2024	23 minutes	Zoom Interview
A	Teacher B	K3	5-6	24/2/2024	16 minutes	Phone Interview
A	Teacher G	K3	5-6	3/3/2024	29 minutes	Zoom Interview
C	Teacher A	K3	5-6	26/2/2024	32 minutes	Zoom Interview

Before the interview began, participants were provided both English and Chinese consent forms (see Appendix B) and information sheets (see Appendix C) via messaging platform. These documents were explicitly communicated to the preschool teachers, stating that any information provided would remain confidential and would be solely used for study purposes. Each participant

was required to sign the consent form. Additionally, the teachers were informed that ICT refers to any technologies that support preschool teachers' teaching in the classroom. Consent was given from the participants to record the interview for data collection purposes, and participants were encouraged to respond to the 8 interview questions (see Appendix 3).

4.6 Data Analysis

Thematic analysis was used in this study. Based on Castleberry and Nolen (2018), thematic analysis (TA) refers to a technique for analyzing qualitative data; using this analysis on open-ended transcribed interviews can explore the context of teaching and learning context at a profound level that quantitative analysis lacks. TA offers flexibility and interpretation in the analysis of the data. The systematic nature of the TA involves a sequential progression of each stage in the process, which contributes to a comprehensive interpreting of research data (Naeem et al., 2023). This structured approach enhances the findings' consistency and reproducibility while facilitating coherence between the data interpretation and final conclusions. In this study, TA was chosen for flexibility and adaptable nature as a qualitative research technique. Likewise, this approach enables the generation of new insight for the study.

The present study adopts the TA procedures by Nowell et al. (2017), as this method is suitable for addressing research questions. The phases of TA involve data familiarization; generating initial codes; identifying themes; reviewing themes; defining and naming themes and generating the report (Nowell et al., 2017).

The preschool teachers' interview was transcribed and coded (see Appendix D), and themes were developed from collected information according to the research questions. Table 4 summarizes the phases of TA adopted in this study.

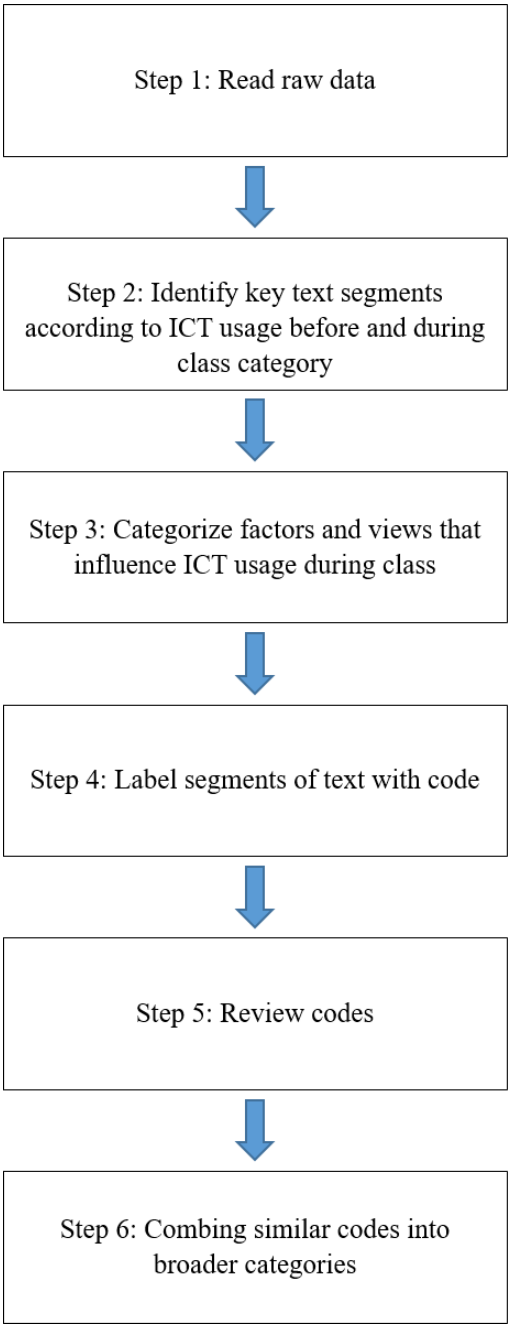
Table 4 *Phases of thematic analysis*

Phases	Description of the process
Phases 1: Data familiarization	Generate transcript from interview data, engaging in repeated readings of the transcript to establish familiarity with the data, make notes of initial ideas.
Phases 2: Generating initial codes	Coding significant and interesting short phrases and words related to research questions from data.
Phases 3: Exploring themes	Organizing and collating all the potential relevant coded data and generating codes into themes.
Phases 4: Reviewing themes	Examine the coded data extracts from the whole dataset, better understand the relationship between and to assess whether they exhibit a cohesive pattern.
Phases 5: Defining and naming themes	Determine the specific aspect of the data each theme represents, identify the elements that make them significant, and name themes.
Phases 6: Generating the report	Write a report that presents the themes, analyze and interpret the findings through reference research questions and the literature.

After transcribing all the interview audio recordings for further analysis, proceed to the initial reading to obtain an overview. The first phase was data familiarization with data collected from interviews. This is followed by the second reading word-by-word to deeply engage with the data, which involves repeatedly reading and searching for meanings and patterns (Nowell et al., 2017). While re-reading the data continuously, reflecting, and thinking about the data, completed phase two, generating initial codes. During this process, keywords were used and highlighted for code development, data categorization, identifying patterns, comparing data that may highlight similarities and contrasts, and enhancing understanding of patterns (Naeem et al., 2023). This study utilized inductive coding, as this coding approach adopts inductive reasoning to analyze data and involves identifying themes and topics by repeatedly examining and comparing the raw data from transcripts (Chandra & Shang, 2019). Inductive coding allows labeling textual units,

such as words, sentences, based on the data without being influenced by existing concepts, constructs or theories (Chandra & Shang, 2019). Figure 1 shows the steps of coding. Coding version transcript is shown in appendix 4.

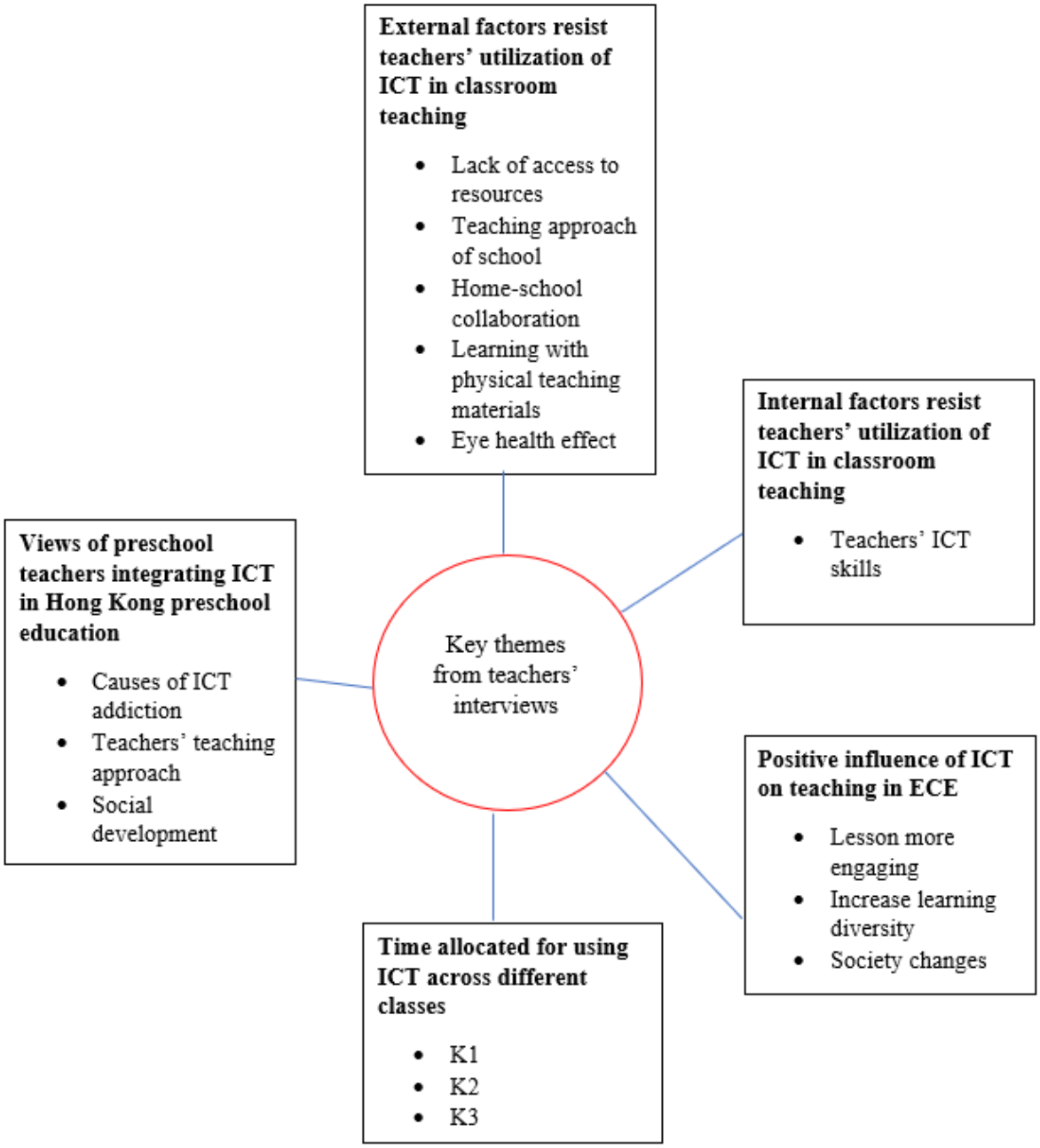
Figure 1 *Steps of coding*



Subsequently, in phase three themes were explored based on the coding by organizing fragments of ideas and experiences from participants' recurring words. In phase four, coded data extracts

for themes were reviewed, determining whether the themes represent the meaning evident in the entire dataset (Nowell et al., 2017). Phase five involves further evaluating how themes contribute to the dataset in relation to the research questions. There was a comparison between data to understand better the themes developed. Figure 2 shows the key themes from teachers' interviews.

Figure 2 *Key themes from teachers' interviews*



4.7 Validity of the Data

In this study, data was collected through participant interviews, serving as a valuable source of information. All participants were interviewed with the same questions developed from the research objectives to ensure validity. Audio recording and transcribing of the interview allowed for accurate review and analysis. To maintain data quality and confidentiality, transcription software was used to verify the accuracy of transcripts and ensure anonymization of any private or sensitive information. In order to enhance the reliability and consistency of the analysis process, a coding approach, specifically thematic analysis, was adopted. This involved identifying and organizing the main interview themes, contributing to a comprehensive understanding of information.

4.8 Ethical Issues

I obtained ethical approval from The Education University of Hong Kong prior to starting data collection. For ensuring the privacy of the interview participants in the study, a consent form was provided for participants to sign, and their actual names and the respective working preschools were not used. Instead, the pseudonyms I assigned, such as Teacher C, were used throughout the study. All participants retain the right to withdraw from the study at any time without facing any negative consequences. The collected data, including interview audio recordings, were securely stored on my computer, and once the study is concluded, all data will be appropriately and confidentially destroyed.

5. Discussion and Findings

5.1 Introduction

A study was conducted to explore Hong Kong preschool teachers' views and factors that influence resistance to utilize ICT during classroom teaching. The research questions are as follow:

1. What are the views of preschool teachers integrating ICT in Hong Kong preschool education?
2. What are the factors that contribute to Hong Kong preschool teachers' resistance to the adoption of ICT during teaching?

This section highlights the themes that are derived from the data analysis conducted using thematic analysis. The views influencing teachers from ICT integration in classroom teaching will answer the first research question. While the second research question will be answered in section 5.3 with the theme external factors resist teachers' utilization of ICT in classroom teaching, and internal factors resist teachers' utilization of ICT in classroom teaching. Besides, this last section will discuss the positive influence of ICT on teaching in ECE, and time allocated for using ICT across different classes.

5.2 Discussion of Views of Preschool Teachers Integrating ICT in Hong Kong Preschool Education

5.2.1 Causes of ICT Addiction

2 interviewed teachers, one young and one experienced teacher believes that preschoolers will be addicted to ICT devices easily. An example of this was highlighted by teacher T: Preschool children are young, and it is easy for them to get addicted to these ICT products. Teacher G also highlighted preventing children from being addicted to ICT, as they will rely on it or even have an excuse to be addicted. I think this is the most challenging thing to control. Teachers are concerned that children will rely on ICT, which impacts the time spent adopting ICT teaching. In recent years, computers, the internet, and video games have become new types of addiction, referred to as technology addictions driven by behavior (Jamir et al., 2019). Addiction to technology results in experiences that have adverse effects on both physical and mental health (Bulatbaeva et al., 2023). Preschool teachers may control the time allocation of ICT usage to prevent addiction of children.

5.2.2 Teachers' Teaching Approach

Based on the affordance theory, individuals perceive opportunities in an environment that is also shaped by values, beliefs, and experiences. The interview reveals that teachers' teaching approach is crucial in effectively implementing ICT in education. Utilization of technology is closely linked with teachers' perspectives on the nature of teaching and learning in the class (Akram et al., 2022). Teachers consider ICT a resource; however, their teaching approach emphasizes learning through social interactions, and finding balance with traditional teaching materials significantly contributes to ICT integration. Suggested that a comprehensive understanding of technology implementation can only be achieved when teachers' perspectives on technology usage are considered.

Teachers' explanations:

> .. I think that ICT cannot replace the advantages of influencing children's life with teacher's experiences, especially only learning from computers .. ICT products are attractive to them. However, they will easily ignore the interaction between people and surroundings, life influences is the concept I always emphasize in my teaching. (Teacher G)

> Striking a balance between the use of traditional teaching materials and the appropriate use of technological software is essential. (Teacher T)

5.2.3 Social Development

As the interviews with teachers indicated, social development is essential in ECE. However, ICT could not provide sufficient social development for preschoolers. This was mentioned by 3 experienced teachers, teacher H, teacher Z, and teacher G, with 6 or more years of teaching experience. Proposing experienced teachers to implement teaching aids will focus on the impacts

on different developmental aspects of children, such as social development. Excessive use of ICT equipment limits the interaction between others; in ECE, learning to communicate with peers is essential. Increased screen time will result in lower performance in social skills in early childhood (Madigan, 2019). As a result, teachers use traditional, and physical teaching materials to foster social interaction between children, which affects the usage of ICT due to limiting communication and discussion between children.

Comments from teachers of views regarding ICT is insufficient to support social development:

> In traditional teaching, you may use picture books or other teaching materials to create a drama about the teaching theme. I can invite lots of children, ask them to collaborate with peers. With the use of electronic products, the interaction will become interaction between children and ICT, so the interaction between children and their social development will be reduced. In my opinion, ICT is not enough for developing children's social development. (Teacher H)

> When children attend education in physical school, they are actually learning how to socialize, how to get along with others, which is so important, to communicate with others, discuss and to learn from each other. This is actually what preschool is about, social development will be ignored if you use ICT. (Teacher Z)

5.3 Discussion of the Factors that Contribute to Hong Kong Preschool Teachers' Resistance to the Adoption of ICT During Teaching

5.3.1 External Factors Resist Teachers' Utilization of ICT in Classroom Teaching

(i) Lack of Access to Resources.

All interviewed teachers mentioned that schools provide ICT resources for teaching and consider the availability of resources as a major factor impacting adopting ICT in teaching. However, some teachers said that current schools provide insufficient support, causing challenges for teaching

with ICT. The availability of ICT resources for teachers has been shown to impact usage significantly and positively (Lomos et al., 2023). Teacher C emphasized that the lack of resources highly affects teaching with ICT.

Teacher commented about the limited support from school:

> Insufficient support, inadequate school facilities, with only one laptop, no SMART boards, which makes it difficult for me to use ICT in the classroom. (Teacher T)
>
> Schools support teachers' teaching by providing one laptop, however the monitor is too small for children. If school can provide more resources, it will be better. (Teacher B)
>
> School's electronic devices are insufficient. (Teacher Z)

Due to the limited school support, some teachers have to borrow their own devices for children, including iPads, phones, and speakers. When teachers have to bring suitable ICT equipment to class, this causes inconvenience and may reduce adopting ICT. Moreover, teacher H likes it when the school listens to teachers' needs and provides resources proposed by teachers. Preschools could collect ideas from teachers to purchase adequate ICT resources to support effective technology implementation in education (Akram et al., 2022).

(ii) Teaching Approach of School.

The schools' teaching approach influences the implementation of ICT in classroom practice, and significantly affects new teachers. Teacher T commented that the school uses a traditional teaching approach; teachers mainly use paper books and teaching materials, and the school does not encourage ICT usage. Therefore, this causes challenges in using ICT to teach, instead teachers will create physical teaching aids with other teachers. The use of technologies in teaching practice conflicts with traditional education beliefs; this belief is held by many preschool educators

(Hatzigianni & Kalaitzidis, 2018). Consequently, chances for using or promoting teaching with ICT in preschool could be eliminated for teachers.

(iii) Home-school Collaboration.

Data collected from 3 experienced teachers who have teaching experience of 11 years or more, highlights home-school collaboration as an important factor in the adoption of ICT teaching. Teachers consider parental concerns, including parents' perspective and acceptance. Teacher G said home-school cooperation is important for schools utilizing ICT in teaching, and whether parents cooperate. Similarly, teacher Z stated some parents may not accept the use of ICT, which raises concerns about parental acceptance and how it affects teachers' utilization of ICT in the classroom. Data implicates how parents think will influence teaching tools selection by teachers.

(iv) Learning with Physical Teaching Materials.

Data reveals that learning with physical objects is one of the external factors that impact the ICT usage of a few interviewed teachers. Experienced teachers with 6 years or more of teaching experience, regarding physical objects and teaching materials are crucial in preschool learning. ICT cannot allow manipulation like physical objects and could not provide multi-sensory learning as traditional teaching aid. Multi-sensory activities in ECE are important, learning with sensory organs is beneficial to children, and is the responsibility of teachers' implementation (Manja et al., 2022). Teacher H stated, "Traditional teaching aids allow manipulation; it's physical, and I think it's better for children's sensory development. Because teaching aids have a lot of different textures." Teacher C also said, "Sometimes, I will use real objects instead of ICT." Similarly, teacher Z commented, "If real objects can be shown, children can touch, smell, manipulate, it's certainly better than just using ICT purely. Kindergarten stage needs more sensory input, because of multi-sensory learning." Teachers would then select physical objects and teaching aids instead

of ICT during teaching, providing more learning experience. Consequently, leading to less time for ICT instruction.

(v) Eye Health Effect.

Majority of the teachers showed concern about eye health and visual development of children during the interview. Teachers regard preschoolers at a young age and exposure to screens is harmful to the health development of children. For example, teacher L said, “Blu-ray will hurt children’s eyes.” Besides, teachers further explained that the visual development of preschool-age children is not fully matured. Teacher H said “Visual development is not fully mature. I think their eyes will get tired, affect their health, and be harmful to their physical development.” Excessive use of digital or online resources by children can lead to impaired vision (ECA, 2018). At school, preschool teachers are responsible for providing suitable screen guidance for children (Wilkinson & Gluckman, 2021). The factor of ICT devices affects eye health, impacts the screen time allocated for children, suggesting limited usage with screen devices in teaching.

5.3.2 Internal Factors Resist Teachers’ Utilization of ICT in Classroom Teaching

(i) Teachers’ ICT Skills.

The ICT skills of teachers are an important factor that limit teachers from using ICT in teaching. Insufficient knowledge to integrate digital devices is a challenge for teachers to adopt ICT teaching (Leung & Choi, 2024); this limits the ability to use ICT in the classroom. Some teachers pointed out that they have limited technical knowledge, as their background is education major. As a result, teachers need to spend time studying and exploring technical knowledge.

Teacher commenting on own ICT skills:

> IT knowledge is not enough, my ICT skills are actually limited. (Teacher L)
>
> I may not have enough IT knowledge, so I really spent a lot of time studying ICT. (Teacher Z)

Need to study ICT usage on my own. (Teacher R)

Hence, adequate training for teachers is important for the implementation of technology into teaching. Accessible professional development opportunities that offer hands-on technology training, support for the latest digital device, and technological knowledge are needed for preschool teachers (Donohue & Schomburg, 2017). The majority of interviewed teachers believe that schools and the government should provide suitable ICT training and seminars, and professionals may teach teachers technology strategies and implement appropriate technologies in preschool settings. Some teachers even mentioned that in-school training would be convenient and beneficial for teachers to learn together.

5.3.3 Positive Influence of ICT on Teaching in ECE

(i) Lesson More Engaging.

According to the interviews, ICT has a positive influence on ECE teaching. Both teachers H and Z believe that with the integration of ICT in the classroom, children are more engaged in learning. Teacher H also stated, “Children enjoy learning through ICT games.” Likewise, teachers such as teacher Z consider that ICT can stimulate learning interest and enhance learning effectiveness. Therefore, teachers use ICT to make learning more interesting.

(ii) Increase Learning Diversity.

On the other hand, teachers adopt ICT in teaching as this provides learning diversity. For example, teacher T emphasized that ICT is a diverse learning resource for children, is interactive, and allows children to explore through different games. Teachers from the interview believe that children should be exposed to various teaching materials, including technology devices. Besides, the interviewed teachers talked about the different types of stimulation by ICT. There are 4 interviewed teachers who commented that ICT is beneficial for ECE, as this can provide visual and auditory learning. Children may watch related videos or pictures to gain deeper understanding.

Meanwhile, teachers can search for relevant pictures immediately using devices such as computers, fostering learning.

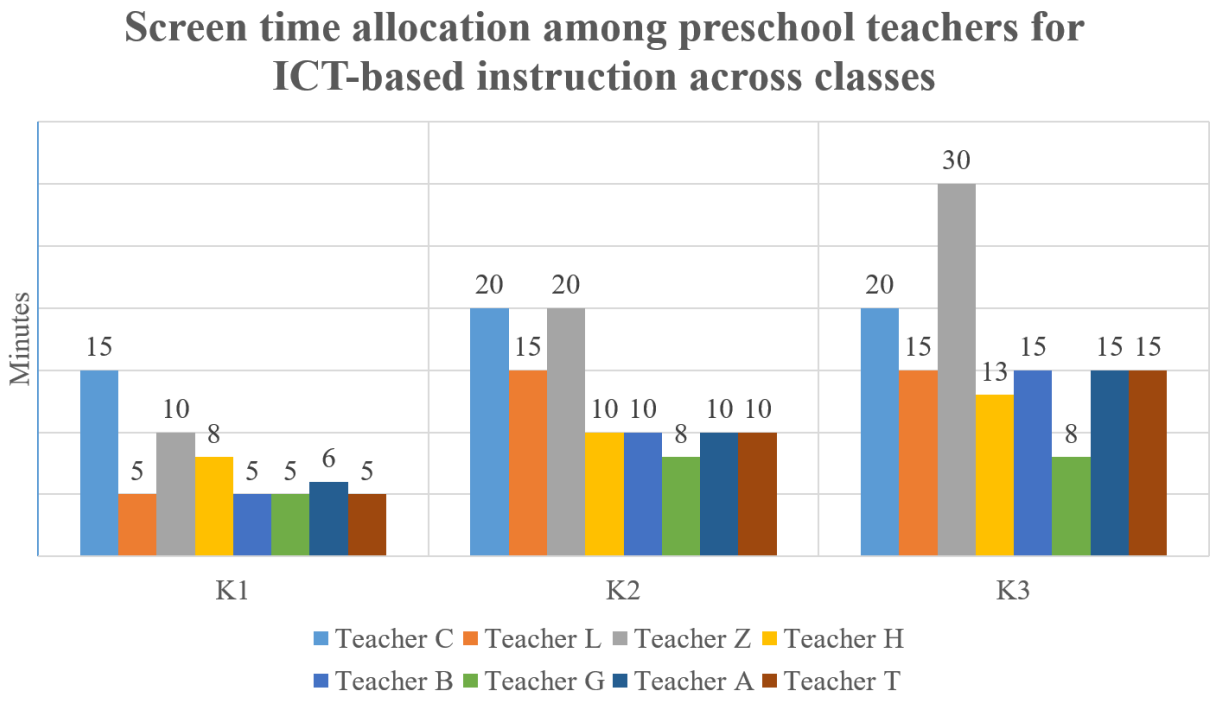
(iii) Society Changes.

Furthermore, learning has transformed, ECE in the 21st century involves ICT integration (Stanikzai, 2023). The data shows 6 teachers from the interview, considering children are in the age of technology. The world has changed, and children are exposed to electronic devices daily. Besides, teaching is different nowadays; due to the social changes, teachers are likely to integrate ICT into teaching. Suggesting teachers adapt to changes. For example, teacher Z said, "It's the age of technology; children have more access to technology, and we don't teach traditionally. I think it's the progress of time."

5.3.4 Time Allocated for Using ICT Across Different Classes

Data reported all interviewed preschool teachers aged 20-45 have high acceptance and willingness to integrate ICT in teaching. The teachers also considered ICT an appropriate and beneficial tool for learning in ECE settings. Study found that middle-aged teachers permit children to utilize ICT devices and are exposed to more extended screen periods than younger teachers. Figure 3 illustrates the distribution of screen time allocation among preschool teachers for ICT-based instruction across classes. The measure for the time allocation is in minutes per week for half day classes.

Figure 3 *Screen time allocation among preschool teachers for ICT-based instruction across classes*



6. Limitations and Directions for Future Research

Finding participants for this study posed challenges due to the limited connections with Hong Kong preschool teachers. The sample size for this study is relatively small, consisting of a small number of Hong Kong preschool teachers. Therefore, the result would be difficult to generalize to represent all the Hong Kong preschool teachers. Likewise, this study has underrepresented male preschool teachers compared to female teachers, and the age range of participants collected was limited to between 20 and 46 years old. Future studies can gather larger and more representative samples across a more comprehensive age range, including preschool teachers of all genders and from diverse preschool backgrounds. In addition, this study had limited data from the 8 interview questions. Future studies could utilize classroom observation and interviews to gain more objective and comprehensive data.

In addition, this study revealed that some Hong Kong preschool teachers face a lack of ICT knowledge. Future research could examine strategies for current preschool, and higher education institutions in support of current preschool teachers, and preservice teachers respectively. Enhancing teachers' confidence in ICT skills and knowledge is likely to promote ICT usage in teaching (Valdez & Mendoza, 2024).

7. Conclusion

Previously, there was limited study of digital technologies in Hong Kong ECE settings. The findings of this study reflect the current situation of ICT integration by some Hong Kong preschool teachers, including views and factors that influence teachers using ICT in classroom teaching. Digital-based education is now being implemented across all educational levels, including ECE. The findings of the current study show that Hong Kong preschool teachers are willing to adopt ICT in teaching. Preschool teachers' views have shown a relationship to the time allocation for digital devices during instructional practice. Furthermore, the utilization of ICT by preschool teachers is associated with internal and external factors.

Although technology equipment provides diverse learning experiences for children, there is resistance that causes preschool teachers to adopt ICT in preschool teaching. This study suggests that the Hong Kong government could increase the awareness of ICT development in ECE settings. Likewise, current preschools may provide more ICT support for teachers, including hardware equipment and related training. These may engage preschool teachers to implement ICT in ECE classrooms.

8. References

Alwabel, A., Al-Gahtani, S., & Talab, A. (2020). Factors influencing the use of smartphones for programing: a structural equation modeling approach. *International Journal of Innovation and Technology Management, 17*(05). https://doi.org/10.1142/S0219877020500327

Akram, H., Abdelrady, A., Al-Adwan, A., & Ramzan, M. (2022). Teachers' Perceptions of Technology Integration in Teaching-Learning Practices: A Systematic Review. Frontiers in psychology, 13. https://doi.org/10.3389/fpsyg.2022.920317

Barbara-Sanchez, V., Gouveia-Rodrigues, R., & Martinez, A. M. (2022). Information and communication technology (ICT) skills and job satisfaction of primary education teachers in the context of Covid-19. Profesional De La Informacion, 31(6). https://doi.org/10.3145/epi.2022.nov.17

Brown, C. P., & Englehart, J. (2019). "Neoliberal Technological Devices and Articulations of Teaching Young Children: A Case Study of Preservice Teachers Using iPads in Their Teacher Education Programs." Journal of Early Childhood Research, 17(2), 88–103. https://doi.org/10.1177/1476718X18812214

Bryman, A. (2015). Social research methods (5th ed.). Oxford University Press.

Bulatbaeva, K., Mukhamedkhanova, A., Toibazarova, N., Maigeldiyeva, S., Nurkasymova, S., & Rezuanova, G. (2023). Analysis of the relationships between school children's technology addiction and school achievement. International Journal of Education in Mathematics, Science and Technology, 11(5), 1219-1237. http://dx.doi.org/10.46328/ijemst.3622

Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? Currents in Pharmacy Teaching and Learning, 10(6), 807–815. https://doi.org/10.1016/j.cptl.2018.03.019

Chalak, R. M. (2018). *Information and Communication Technology in Kindergarten*. Spark Repository. Retrieved from https://spark.bethel.edu/etd/118

Chandra, Y., & Shang, L. (2019). Inductive Coding. In: Qualitative Research Using R: A Systematic Approach. Springer, Singapore. https://doi.org/10.1007/978-981-13-3170-1_8

Cheng, E. Y. (2016). The Integration of ICT in Hong Kong Preschool Settings: Case Studies of Two Hong Kong Kindergartens. ProQuest Dissertations and Theses, Ann Arbor. Retrieved from https://pqdd-sinica-edu-tw.ezproxy.eduhk.hk/doc/27767300

Curriculum Development Council. (2017). Kindergarten Education Curriculum Guide. Hong Kong: Curriculum Development Council. Retrieved from https://www.edb.gov.hk/attachment/en/curriculum-development/major-level-of-edu/preprimary/ENG_KGECG_2017.pdf

Dong, C., & Mertala, P. (2021). It is a tool, but not a 'must': early childhood preservice teachers' perceptions of ICT and its affordances. Early Years, 41(5), 540–555. https://doi-org.ezproxy.eduhk.hk/10.1080/09575146.2019.1627293

Donohue, C., & R. Schomburg. (2017). "Technology and Interactive Media in Early Childhood Programs: What We've Learned from Five Years of Research, Policy, and Practice." Young Children, 72(4), 72–78.

Drigas, A., & Kokkalia, G. (2014). ICTs in kindergarten. International Journal of Emerging Technologies in Learning, 9, 52-58. doi: 10.3991/ijet.v9i2.3278

Drigas, A. S., & Ioannidou, R. E. (2013). Special education and ICTs. International Journal of Emerging Technologies in Learning, 8(2), 41–47. https://doi.org/10.3991/ijet.v8i2.2514

Dunwoodie, K., Macaulay, L., & Newman, A. (2023). Qualitative interviewing in the field of work and organisational psychology: Benefits, challenges and guidelines for researchers and reviewers. Applied Psychology, 72(2), 863-889.

Early Childhood Australia (ECA). (2018). Statement on young children and digital technologies. Canberra: ACT: ECA. Retrieved from https://www.earlychildhoodaustralia.org.au/wp-content/uploads/2018/09/Digital-policy-statement-on-young-children-and-digital-technologies.pdf

EDB Educational MultiMedia. (2024). About EDB EMM. Retrieved from https://emm.edcity.hk/about_emm

Espiritu, M. (2016). Early childhood iPad use and effects on visual spatial attention span. Scripps Senior Theses, 771. Retrieved from http://scholarship.claremont.edu/scripps_theses/771

Fayard, A. L., & Weeks, J. (2014). "Affordances for Practice." Information and Organization, 24(4), 236–249. https://doi.org/10.1016/j.infoandorg.2014.10.001.

Gibson, J. J. (1979). The Ecological Approach to Visual Perception. Boston: Houghton Miffline.

Golzar, J., Noor, S., & Tajik, O. (2022). Convenience Sampling. International Journal of Education & Language Studies, 1(2), 72-77. doi:10.22034/ijels.2022.162981

Hatzigianni, M., & Kalaitzidis, I. (2018). Early childhood educators' attitudes and beliefs around the use of touchscreen technologies by children under three years of age. British Journal of Educational Technology, 49(5), 883-895. https://doi.org/10.1111/bjet.12649

Hatzigianni, M., Stephenson, T., Harrison, L., Waniganayake, M., Li, P., Barblett, L., Hadley, F., Andrews, R., Davis, B., & Irvine, S. (2023). The role of digital technologies in supporting quality improvement in Australian early childhood education and care settings. International Journal *Child Care Education Policy*, *17*(1) 5. doi: 10.1186/s40723-023-00107-6

Hau, K. T., Wu, W. J., Chung, W. T., Chan, S. C., & Ng, M. H. (2023). Emergency remote teaching technology and pedagogy at covid outbreak: different perspectives of students, parents, and teachers in Hong kong. Education and Information Technologies, 28(7), 8815-8836.https://doi.org/10.1007/s10639-022-11526-2

Hoareau, L., Thomas, A., Tazouti, Y., Dinet, J., Luxembourger, C., & Jarlégan, A. (2021). Beliefs about digital technologies and teachers' acceptance of an educational app for

preschoolers. *Computers and Education*, *172*. https://doi.org/10.1016/j.compedu.2021.104264

Hu, X., & Yelland, N. (2017). An investigation of preservice early childhood teachers' adoption of ICT in a teaching practicum context in Hong Kong. Journal of Early Childhood Teacher Education, 38(3), 259–274. https://doi.org/10.1080/10901027.2017.1335664

Hu, X., & Yelland, N. (2019). Changing Learning Ecologies in Early Childhood Teacher Education: From Technology to stem Learning. Beijing International Review of Education, 1(2-3), 488-506. https://doi.org/10.1163/25902539-00102005

Ihmeideh, F., & Al-Maadadi, F. (2018). Towards Improving Kindergarten Teachers' Practices Regarding the Integration of ICT into Early Years Settings. The Asia-Pacific Education Researcher, 27(1), 65–78. https://doi.org/10.1007/s40299-017-0366-x

Jamir, L., Duggal, M., Nehra, R., Singh, P., & Grover, S. (2019). Epidemiology of technology addiction among school students in rural India. Asian Journal Of Psychiatry, 40, 30-38.https://doi.org/10.1016/j.ajp.2019.01.009

Leung, S. K. Y., & Choi, K. W. Y. (2024). Teachers' perceptions of technical affordances in early visual arts education. European Early Childhood Education Research Journal, 32(1), 147–166. https://doi.org/10.1080/1350293X.2023.2227367

Lomos, C., Luyten, J. W., & Tieck, S. (2023). Implementing ICT in classroom practice: what else matters besides the ICT infrastructure? Large-Scale Assessments in Education, 11(1), 1–28. https://doi.org/10.1186/s40536-022-00144-6

Li, J. (2010). Learning to self-perfect: Chinese beliefs about learning. In: Chan CKK, Rao N (eds) Revisiting the Chinese Learner. Hong Kong: Springer, pp. 35–69.

Liu, X., & Pange, J. (2015). Early childhood teachers' perceived barriers to ICT integration in teaching: A survey study in Mainland China. Journal of Computers in Education, 2(1), 61–75.

Lupu, D., & Laurenţiu, A. R. (2015). Using New Communication and Information Technologies in Preschool Education. Procedia, Social and Behavioral Sciences, 187, 206–210. https://doi.org/10.1016/j.sbspro.2015.03.039

Madigan, S., Browne, D., Racine, N., Mori, C., & Tough, S. (2019). Association between screen time and children's performance on a developmental screening test. JAMA pediatrics, 173(3), 244-250. doi:10.1001/jamapediatrics.2018.5056

Magen-Nagar, N., & Firstater, E. (2019). The Obstacles to ICT Implementation in the Kindergarten Environment: Kindergarten Teachers' Beliefs. Journal of Research in Childhood Education, 33(2), 165–179. https://doi.org/10.1080/02568543.2019.1577769

Manassakis, E. S. (2020). "Children's Participation in the Organisation of a Kindergarten Classroom." Journal of Early Childhood Research, 18(1), 18–28. https://doi.org/10.1177/1476718X19882714.

Manja, S. A., Masnan, A. H., Mustafa, C. C., & Abdullah, M. (2022). Multi-Sensory Activity in Early Childhood Education: Teachers' Perception on The Importance of Activity Implementation. Jurnal Penyelidikan Sains Sosial (JOSSR), 5(16), 9-17.

Mikelic, N., Mikelic P., Lesin, G., & Boras, D. (2017). The Role and Attitudes of Kindergarten Educators in ICT-Supported Early Childhood Education. *TEM Journal*, *9*(1), 162-172. doi: 10.18421/TEM61-24

Monteiro, R., Fernandes, S., & Rocha, N. (2022). What do preschool teachers and parents think about the influence of screen-time exposure on children's development? Challenges and opportunities. Education Sciences, 12(1), 52. doi:10.3390/educsci12010052

Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. International Journal of Qualitative Methods, 22. https://doi.org/10.1177/16094069231205789

Nikolopoulou. K. (2022). What is convenience sampling? Definition & examples. Retrieved from https://www.scribbr.com/methodology/convenience-sampling/

Norman, D. A. (2013). The Design of Everyday Things: Revised and Expanded Version. Cambridge, MA: The MIT Press.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. International Journal of Qualitative Methods, 16(1). https://doi.org/10.1177/1609406917733847

Nurdiantami, Y., & Agil, H. (2020). The Use of Technology in Early Childhood Education: A Systematic Review. doi:10.2991/ahsr.k.201125.045

Oliffe, J. L., Kelly, M. T., Gonzalez Montaner, G., & Yu Ko, W. F. (2021). Zoom Interviews: Benefits and Concessions. International Journal of Qualitative Methods, 20. https://doi.org/10.1177/16094069211053522

Outhwaite, L. A., Gulliford, A., & Pitchford, N. J. (2017). Closing the gap: Efficacy of a tablet intervention to support the development of early mathematical skills in UK primary school children. Computers & Education, 108, 43-58. https://doi.org/10.1016/j.compedu.2017.01.011

Pessoa, A. S. G., Harper, E., Santos, I. S., & Gracino, M. C. D. S. (2019). Using reflexive interviewing to foster deep understanding of research participants' perspectives. *International Journal of Qualitative Methods*, *18*. https://doi.org/10.1177/1609406918825026

Preradović, N. M., Gordana Lešin, G., & Boras, D. (2017). The role and attitudes of kindergarten educators in ICT-supported early childhood education. *Technology, Education, Management*, 6(1), 162–172.

Quality Education Fund. (2024). Objective and Scope. Retrieved from https://www.qef.org.hk/en/e_index.html

Schriever, V. (2021). The impact of digital technologies on the role of the early childhood teacher. Young Children's Rights in a Digital World: Play, design and practice, 121-132. https://doi.org/10.1007/978-3-030-65916-5_10

Simon, F., & Nemeth, K. (2012). Digital decisions: Choosing the right technology tools for early childhood education. Lewisville, N.C: Gryphon House.

Stanikzai, M. I. (2023). Critical Thinking, Collaboration, Creativity and Communication Skills among School Students: A Review Paper. European Journal of Theoretical and Applied Sciences, 1(5), 441-453. https://doi.org/10.59324/ejtas.2023.1(5).34

The Government of the Hong Kong Special Administrative Region Press Releases. (2022). *Using* information technology to facilitate learning and teaching. Retrieved from https://www.info.gov.hk/gia/general/202212/14/P2022121400226.htm?fontSize=1

The Hong Kong Jockey Club Charities Trust. (2024). Jockey club digital capacity building for kindergarten. Retrieved from https://www.jcdigitalcapacitykgproject.com/

UNESCO. (2023). UNESCO's ICT Competency Framework for Teachers. Retrieved from https://www.unesco.org/en/digital-competencies-skills/ict-cft.

Valdez, J. P., & Mendoza, N. B. (2024). Digital learning for preschools: Validation of basic ICT competence beliefs of preschool teachers in Hong Kong and the Philippines.Education and Information Technologies. https://doi.org/10.1007/s10639-024-12591-5

Walan, S., & Enochsson, A. (2022). "Affordances and Obstacles When Integrating Digital Tools Into Science Teaching in Preschools." Research in Science & Technological Education, 15(1), 1–20. https://doi.org/10.1080/02635143.2022.2116423.

Weber, A. M., & Greiff, S. (2023). ICT Skills in the Deployment of 21st Century Skills: A (Cognitive) Developmental Perspective through Early Childhood. Applied Sciences, 13(7), 4615. https://doi.org/10.3390/app13074615

Weller, S, C., Vickers, B., Bernard, H, R., Blackburn, A, M., Borgatti, S., Gravlee, C, C., & Johnson, J, C. (2018). Open-ended interview questions and saturation. PLOS ONE. 13(6). https://doi.org/10.1371/journal.pone.0198606

Wilkinson, C., Low, F., & Gluckman, P. (2021). Screen time: The effects on children's emotional, social, and cognitive development. Retrieved from https://researchspace.auckland.ac.nz/bitstream/handle/2292/58889/Screen-time-The-effects-on-childrens-emotional-social-cognitive-development.pdf?sequence=1

Yang., T., & Hong, X. (2022). Early childhood teachers' professional learning about ICT implementation in kindergarten curriculum: A qualitative exploratory study in China. Frontiers in psychology, 13, 1008372. https://doi.org/10.3389/fpsyg.2022.1008372

Yang, W., & Li, H. (2018). Cultural ideology matters in early childhood curriculum innovations: A comparative case study of Chinese kindergartens between Hong Kong and Shenzhen. Journal of Curriculum Studies, 50(4), 560-585.

Yang, W., & Li, H. (2022). The role of culture in early childhood curriculum development: A case study of curriculum innovations in Hong Kong kindergartens. *Contemporary Issues in Early Childhood*, *23*(1), 48-67. https://doi.org/10.1177/1463949119900359

Zhang, W. (2022). The Role of Technology-Based Education and Teacher Professional Development in English as a Foreign Language Classes. *Frontiers in Psychology*, *13*. Doi: 10.3389/fpsyg.2022.910315

9. Appendix A

Interview questions:

1. What is your understanding of integrating ICT into the process of learning and teaching?
2. Do you think that preschool children are able to use ICT and learn from it at this early stage?
3. What are the ICT devices used for teaching purposes and what is the frequency of usage?
4. What factors influence your decision to use or not use ICT in your teaching?
5. Have you encountered any difficulties in adapting your teaching methods to effectively integrate ICT tools? Could you please provide examples?
6. Are there any specific technical issues or limitations you have faced while incorporating ICT into your teaching practices?
7. Are there any concerns or reservations you have regarding the use of ICT in preschool education? If so, what are they?
8. What kind of resources or support do you think would be beneficial in overcoming the barriers to implementing ICT in preschool teaching?

訪談題目：

1. 請問您對資訊與傳播科技 (ICT)融入教學以及學習的理解?
2. 您認為學前兒童適合使用 ICT 設備及用 ICT 進行學習活動嗎? 請說明原因
3. 請問您會使用什麼 ICT 設備融入教學？使用頻率如何？
4. 請問什麼因素影響您使用 ICT 融入教學？不運用 ICT 融入教學？
5. 在使用 ICT 教學時您遇到困難嗎？ 請舉例
6. 您在使用 ICT 的教學過程中遇到技術問題或限制嗎？
7. 您對運用 ICT 融入學前教育有什麼顧慮或保留？
8. 請問有什麼支援在學前教學中助你使用 ICT?

10. Appendix B

THE EDUCATION UNIVERSITY OF HONG KONG
DEPARTMENT OF EARLY CHILDHOOD EDUCATION

CONSENT TO PARTICIPATE IN RESEARCH

The Factors Affecting Hong Kong Preschool Teachers Implementing ICT in Teaching

I _____ hereby consent to participate in the captioned research supervised by Dr. Zhou Yan Ling conducted by, who is a student of the department of early childhood education in The Education University of Hong Kong.

I understand that information obtained from this research may be used in future research and may be published. However, my right to privacy will be retained, i.e., my personal details will not be revealed.

The procedure as set out in the **attached** information sheet has been fully explained. I understand the benefits and risks involved. My participation in the project is voluntary.

I acknowledge that I have the right to question any part of the procedure and can withdraw at any time without negative consequences.

Name of participant _____

Signature of participant _____

Date _____

香港教育大學
幼兒教育學系

參與研究同意書

香港學前教師對於資訊與通訊科技融入教學的影響因素

本人_____同意參加由周彥玲博士負責監督，XXX 執行的研究項目。XXX 是香港教育大學幼兒教育學系的學生。

本人理解此研究所獲得的資料可用於未來的研究和學術發表。然而本人有權保護自己的隱私，本人的個人資料將不能洩漏。

研究者已將所附資料的有關步驟向本人作了充分的解釋。本人理解可能會出現的風險。本人是自願參與這項研究。

本人理解我有權在研究過程中提出問題，並在任何時候決定退出研究，更不會因此而對研究工作產生的影響負有任何責任。

參加者姓名: _____

參加者簽名: _____

日期: _____

11. Appendix C

INFORMATION SHEET

The Factors Affecting Hong Kong Preschool Teachers Implementing ICT in Teaching

You are invited to participate in a project supervised by Dr. Zhou Yan Ling and conducted by, who is a student of the department of early childhood education in The Education University of Hong Kong.

The introduction of the research

The purpose of this study is to discover views of preschool teachers integrating ICT in Hong Kong preschool education and explore the factors that contribute to Hong Kong preschool teachers' resistance to the adoption of ICT during teaching.

The methodology of the research

The data collection plan is expected from January 2024 to March 2024. It is expected to interview participants individually, the anticipated duration of the interview is between 15 and 20 minutes. I will explain the purpose of the study, inform the interview procedure, and that participation is voluntary. The participant will sign and approve a consent form declaring that all information provided will be kept confidential. Voice recording will be conducted upon approval of participants. Data analysis will be performed after the collection of information. This study does not provide personal benefits to participants, but the data collected will provide valuable information for research.

The potential risks of the research

Your participation in the project is voluntary. You have every right to withdraw from the study at any time without negative consequences. All information related to you will remain confidential and identifiable by codes known only to the researcher. The research includes no risk or discomfort.

If you would like to obtain more information about this study, please contact at telephone number or supervisor Dr. Zhou Yan Ling at telephone number

If you have any concerns about the conduct of this research study, please do not hesitate to contact the Human Research Ethics Committee by email at hrec@eduhk.hk or by mail to Research and Development Office, The Education University of Hong Kong.

Thank you for your interest in participating in this study.

Principal Investigator

有關資料
香港學前教師對於資訊與通訊科技融入教學的影響因素

誠邀閣下參加周彥玲博士負責監督， XXX 負責執行的研究計劃。XXX 是香港教育大學幼兒教育學系的學生。

研究計劃簡介

本研究目的是了解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。

研究方法

資料收集計畫預計於 2024 年 1 月至 2024 年 3 月進行。將對參與者進行單獨訪談，訪談時間約 30 分鐘。進行訪談時，我會向參與者解釋研究目的，告知訪談的流程，參與者是自願參與。參與者需簽署一份同意書，及經許可後訪談才進行錄音，聲明所提供的所有資料將保密。收集資料後將進行分析。本研究不為閣下提供個人利益，但所收集的資信將為學術研究提供有價值的資料。

說明任何風險

閣下的參與純屬自願性質。閣下享有充分的權利在任何時候決定退出這項研究，更不會因此引致任何不良後果。凡有關閣下的資料將會保密，一切資料的編碼只有研究人員得悉。參與期間不會造成不適或潛在風險。

如閣下想獲得更多有關這項研究的資料，請與 XXX 聯絡，電話 或聯絡她的導師周彥玲博士，電話

如閣下對這項研究的操守有任何意見，可隨時與香港教育大學人類實驗對象操守委員會聯絡(電郵: hrec@eduhk.hk ; 地址:香港教育大學研究與發展事務處) 。

謝謝閣下有興趣參與這項研究。

首席研究員

12. Appendix D

12.1 Teacher L

日期: 2024年2月19日

時間：晚上6:02

地點：電話訪談

受訪者：Teeacher L（TL）

采訪者：XXX（唐）

錄音長：15分鐘02秒

[00:00]

唐：你好！

TL：你好呀！

唐：好感謝你能夠參加呢個訪談，今次訪談係想瞭解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TL：哦哦好好。

唐：先想問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TL：（停頓）嗯，*[01:00]* 我覺得好多方面嘅，如果係老師工作方面咧，其實一定係會用到 ICT 呢樣嘢㗎啦，因為要整教具啊，呃教案啊，即係以上嘅嘢咧其實你已經要用到電腦啦。同埋咧喺小朋友，小朋友方面，教小朋友嘅時候其實都會用到 ICT 設備，例如用到錄音筆，去錄小朋友嗰啲對話啦，或者咧會用拍片嘅模式啦，拍攝小朋友去做一個活動嘅學習囉。同埋，由其係之前疫情就會用到 ZOOM 進行教學啦，係啦 ZOOM 啦，PowerPoint 啊嗰啲咧，其實都係嗰段時間會幫助小朋友學習啊，老師會用得更加多囉。（停頓）*[02:00]* 同埋，EVI 有 apps 都會有（停頓）遊戲 for 小朋友嘅，其實呢啲都係一個 ICT 運用。

唐：請問係咪 EVI?

TL：EDI，EDI 係。

唐：想請問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因。

TL：呃，我覺得都適合嘅，但係要睇下應用啲，係應用嘅層面要去到邊度囉，同埋咧始終都要有成人喺側邊要對小朋友有個限制囉。因為，因為其實 ICT 其實都係喺社會上，其實真係不可或缺嘅，咁小朋友咧細個其實都係需要教佢哋點樣能夠去適當友善咁樣去應用呢一個科技囉。

唐：你剛才提及到幼兒適合使用 ICT 設備 *[03:00]* 進行學習，可以分享你認為什麼 ICT 設備適合幼兒進行學習嗎？

TL：（停頓）嗯。Touch Mon，咁呢樣野係咁小朋友可以好方便咁應用啦，咁可以即係做一個校本化遊戲，一啲互動性遊戲係小朋友可以一撳就有埋個答案出嚟，如果小朋友有個反應又可以即時睇到。

唐：你剛才講。

TL：聽唔清楚聽唔清楚。

唐：宜家可以聽到嗎？

TL：嗯嗯可以啦。

唐：你剛才提及到小朋友用 ICT 會有個限度，可以再分享嗎？

TL：係係個限度（停頓）我覺得如果係 for K1嘅小朋友，可能真係 for，真係 for 播放音樂為主啦，俾 *[04:00]* 佢聽吓歌仔呀，睇少少片段呀咁樣去為主。因為我覺得 K1佢哋集中力同埋玩一啲互動嘅遊戲其實都未必理解嗰個關係。咁其實去到即係越大個嘅時間係可以延長啲，但係我覺得都不適宜過量，其實我覺得 K2，K3都係10至15分鐘都係最多㗎啦，如果話係螢幕時間。

唐：想請問10至15分鐘係只一日裏面嗎？

TL：係呀，其實我哋幼稚園小朋友一日返三個鐘，咁我覺得小朋友用 ICT 進行學習的話真係10至15分鐘係已經足夠。

唐：哦哦明白。

TL：我聽唔清楚，*[05:00]* 聽唔清楚。

唐：可能係信號問題，請等等。可以嗎？請問聽到嗎？

TL：宜家好啦。

唐：你可以再分享你點解認為幼兒適合使用 ICT 進行學習嗎？

TL：其實要睇吓裏便係啲乜嘢，（停頓）可以利用個螢幕展示圖片，加深幼兒理解。另外，老師又可以即時，即係好快 search 一啲圖片相關嘅教學內容俾幼兒睇。

唐：好好。之後請你分享你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TL：（停頓），其實都 *[06:00]* 會嘅，但係我覺得其實要限制，設備啦，配套啦，同埋唔係老師想用就用，當中其實會有啲技術上嘅限制，個運用。但係如果其實用唔到，不過 iPad 都方便嘅（停頓）或者其實一啲大嘅 screen 螢幕啊，其實小朋友睇起上嚟都，即係都係方便啲嘅。如果係話將 ICT 擺入我教學入邊（停頓）其實都會嘅。我要講我用 ICT 嘅例子嗎？

唐：可以呀隨便分享呀。

TL：即係我哋喺，我哋喺今個教學主題，交通主題，其實呢都會同小朋友去用 iPad 學習。例如巴士 app，去搜尋巴 *[07:00]* 士嘅唔同 function，其實呢一啲都係好合適嘅一啲學習經驗，日常生活中都可以用得到。我認為係要適當咁去運用 ICT 進行教學就可以。

唐：可以分享你使用 ICT 進行教學的頻率嗎？

TL：頻率啊（停頓）如果一個星期嘅話就低於30分鐘啊，低於低於，半日制的話。其實使用頻率有時候真係好少（笑聲）。我哋學校除專科老師之外，其實班主任教學過程中都甚少用, 用呢個呃，叫咩呀，ICT 呀，真係甚少用。除非，我哋都有設計呢個電腦角嘅，係俾小朋友有得睇同主題相關嘅教學影片。如果講話我最常用 *[08:00]* 嘅 ICT 去教學，我會話係電腦同 Word 啦，或者係 EVI，係咪 EVI 我突然唔記得，呃，用作播片。

唐：係咪 YouTube?

TL：YouTube 都係，我都會用，或者播片嗰個 app，E？我唔記得啦，啊唔係 app 係軟件先係，係用電腦開個軟件跟住播片，總之係播片軟件， 不過唔記得叫咩（笑聲）。

唐：明白明白。跟住想問你有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TL：學校，學校嘅資源 *[09:00]* 配套。

唐：嗯嗯。

TL：因為，因為其實如果你課室都冇一個大嘅 screen，其實你都好難用到。如果你話呃 notebook，其實對啲小朋友嚟講反而太細咯個畫面。我個人呢，如果有得選擇我會選擇用 ICT 去教學咯，唔使 print 咁多紙，可以環保啲呀（笑聲）。

唐：可以再分享其他因素影響你使用 ICT 融入教學嗎？

TL：如果唔用 ICT 融入教學，令到我，我。我覺得呢個我覺得而家呢個社會，其實真係唔係令到我唔用囉，係唔輪到你唔用囉，反而係我會咁樣諗囉，係我唔可以唔用囉（笑聲）時代變化啦，好多電子科技，*[10:00]* 其實係方便嘅。

唐：嗯嗯。之後想瞭解你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TL：呃，其實都有困難嘅，最近就係疫情嗰時，例如可能呃要剪片嗰啲啦，其實都係要一個老師去學習同嘗試咯真係，但係又要做喎，咁樣都係啊，都對於我係幾困難我覺得，專業知識唔夠啦。

唐：另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TL：限制呀，個人技術呢，個技術呢其實都係文書處理方面就會相對好，即係即係就拿捏得好啲啦。我自己技術其實都係有限，例如嗰啲，嗰啲*[11:00]* 剪片 ，或者就係真係唔係自己嘗試用嘅範疇。嗯，如果係呃（停頓）我覺得如果係上組織活動嘅，要整一啲 PPT 要俾小朋友睇其實我使用 ICT 技術都足夠嘅。

唐：嗯嗯，瞭解啦。

TL：但係如果係要整一啲遊戲啊，或者一啲可能 even 一啲 apps 同小朋友互動呢，咁我技術就真係唔足夠啦。

唐：跟住想問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TL：（停頓）呃，我覺得就適合嘅，適合嘅。因為其實小朋友可以，佢可以接觸一啲好廣泛嘅資訊啦。但係唔適合就係，因為我覺得要控制好嗰個眼睛，其實 *[12:00]* 嗰個 Mon，個 Mon 係有藍光會傷害到佢哋眼睛。可能老師真係要得閒去睇吓啲小朋友叫佢坐好，同埋叫佢哋做啲健眼操去保護返小朋友嘅眼睛，我反而最 concern 係呢一樣嘢，小朋友嘅眼睛健康。另外，我覺得小朋友對 ICT 有依賴性唔係單方面因為學校俾呢一個資源佢哋，我認為家長都係好重要角色，好重要去點樣拿捏，其實係要家校合作，唔係單方面話係學校各方面嘅問題。

唐：好好。最後想請問有什麼支援在學前教學中助你使用 ICT?

TL：（停頓）我覺得啦，可能真係要，學校要支援老師，學校資源問題啦。*[13:00]* 即係每個課室都要有 ICT 設備啦老師先可以用作教學啦，呢啲可以係（停頓）頭先所講 Touch Mon 啦，例如係 iPad，或者嗰啲白板，小朋友可以用手指控制，掂螢幕嗰啲，嗰啲叫，嗰啲叫（停頓）。

唐：你指智能白板？

TL：係啦係啦，每個課室可能都可以有智能白板。即係硬件上配置要，最緊要係要有硬件，如果冇硬件你有啲咩提議其實都係冇用，你都係冇機會用到。所以係要有咗個硬件，先可以支援老師去用呢啲 ICT 嘢去教學。（停頓）我希望，其實都可以有更多支援，例如其他設備可以係相機啦，電腦啦。

唐：*[14:00]* 係咪主要支援你認為係需要為老師提供硬件 ICT 設備呢？

TL：係啦，都係支援老師一啲嘅硬件 ICT 設備啦，課室要有我先可以上堂用，同小朋友一起上堂啦，如果課室都冇 ICT 設備，老師想用都冇得啦，我覺得主要係學校呢方面點樣去支援老師，係啦。

唐：好好。有冇啲咩補充？

TL：我諗諗先啊（停頓）冇啦大致都係咁，冇啦。

唐：好好，再次感謝你能夠參與我嘅訪談，訪談結 *[15:00]* 束啦！

[結束訪談記錄15:02]

12.2 Teacher T

日期: 2024年2月29日

時間：晚上 8:30

地點：ZOOM 線上訪談

受訪者：Teacher T（TT）

采訪者：XXX（唐）

錄音長：23分鐘40秒

[00:00]

唐：你好！

TT：Hello！

唐：好感謝你能夠參加呢個訪談，今次訪談係想了解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TT：好，明白。

唐：先想問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TT：*[01:00]* 我就覺得呃如果用 ICT 嚟融入對小朋友嘅教學同埋學習呢，其實可以提供一啲比較多元化嘅學習資源比小朋友啦。因為如果用 ICT 嘅元素嘅話，咁其實係有呃，各方面嘅一啲資源啦，例如可能係故事書啊，或者遊戲啊，或者係有啲教育程式嘅 app。咁其實都可以透過啲圖像啊或者聲音啊，或者電子嘅互動元素呢，都可以吸引小朋友嘅注意力啦，咁就令到佢哋嘅學習興趣都會提升嘅。咁同埋因為而家其實普遍科技資訊都比較普及啦，咁其實小朋友喺日常生活中，其實佢哋都會接觸到一啲電子嘅產品嘅。

唐：嗯嗯，*[02:00]* 你提及到 ICT 融入教學中學習會變得更多元化，可以再分享吓。

TT：咁同埋 ICT 其實都有好多嘅互動性，可以俾小朋友去自主咁樣探索啊，或者係參與一啲遊戲啊，或者課堂活動嘅。咁其實佢哋如果喺課堂入邊可以用到 ICT 元素嘅話呢，咁佢哋都可以主動咁樣去參與一啲問題啊，或者係一啲學習嘅活動嘅。咁同埋因為而家 ICT 嘅應用程式呢其實都有各種方面嘅一啲 app，即係可能有關於記憶啊，或者係邏輯思維等等嘅一啲遊戲啊，或者係可以運用一啲 PowerPoint 嘅元素，或老師又可以自己設計個別化嘅一啲教材啦。咁所以呢小朋友又可以即係會比較生動同埋有趣嘅形式去學習，*[03:00]* 就對比紙本方面就比較傳統啦，同埋可能難以吸引小朋友嘅注意力嘅。咁我就覺得所以融入 ICT 喺小朋友嘅學習啦，其實都可以促進佢哋唔同嗰方面嘅能力，同埋最緊要係因為比較多元化，所以可以吸引到小朋友去參與課堂。

唐：明白，之後想問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因呀。

TT：我係覺得小朋友其實都適合用 ICT 嘅設備去進行學習嘅活動嘅，因為我覺得而家 ICT 都越嚟越普及啦，咁同埋其實 ICT 即係如果適當地運用 ICT 呢，其實對小朋友係有各方面嘅好處，例如係滿足幼兒對新鮮事物嘅好奇心啦，因為 *[04:00]* 而家佢哋即係通常一講到用一啲資訊科技嘅嘢呀，或者係可能上堂用一啲 PowerPoint 呀，跟住配合一啲聲效呢，其實都好容易吸引佢哋嘅注意力嘅。同埋佢哋呢（停頓）即係比較互動嘅元素多啲啦，跟住同埋老師都會可以好方便咁樣就用一啲互動嘅元素啦。咁其實都可以滿足佢哋對一啲事物嘅好奇心啦咁，就會令到佢哋更加能夠參與課堂嘅。其實同埋呢，我都覺得即係 ICT 其實都可以帶畀小朋友啲視覺啊，同埋聽覺嘅刺激嘅，咁都符合幼兒學習嘅一啲嘅需要啦。咁因為（停頓）如果用 ICT 嘅話呢，其實 show 一啲圖像呀，或者 *[05:00]* 聲音呀，其實係比較方便嘅。咁就對比可能傳統嘅教材啦，就可能老師手作嘅一啲圖卡呀，或者係一啲工作紙呀，其實就比較沉悶嘅。咁如果用 ICT 嘅設備呢，其實就可以更加好咁樣呈現老師嘅教學內容啦，咁小朋友都可以更加容易理解，或者係記到老師教緊嘅一啲內容嘅。咁其實同埋早前都提及過啦，其實用 ICT 都可以令到小朋友用一啲遊戲呀，或者一啲比較有創意嘅一啲活動呢去令佢哋主動參與學習嘅。咁因為都係個互動性質比較強啦，咁佢哋都可以容易咁樣吸收新知識嘅，咁同埋 *[06:00]* 因為我就覺得 ICT 其實係一個好好嘅途徑啦，咁去發展佢哋可能一啲認知能力呀，或者係創造力嘅。

唐：聽到你提及到 ICT 都有助提升幼兒多方面嘅能力啦，可以分享多啲。

TT：咁同埋因為而家即係其實幼稚園都開始強調 STEM 嘅元素啦，咁其實如果配合埋 ICT 嘅元素呢，就可能佢哋可以學一啲 coding 呀，咁樣其實都可以激發佢哋一啲創作力同埋思考能力嘅，係啦。又或者其實用 ICT 都可以培養佢哋語言啦，同埋溝通嘅能力嘅，即係因為而家有好多唔同嘅一啲嘅教材啦 *[07:00]*，咁佢哋都可以例如可能用一啲故事書呀，跟住佢哋又可以錄製一下自己嘅聲音，加入故事書，咁就（停頓）比較生動啲嘅，就會比較容易願意去表達自己呀，或者係嘗試自己創作一啲故事書，咁其實佢哋語言呀，溝通能力都會可以提升。咁當然啦，因為小朋友其實佢哋都年紀比較細啦，咁所以老師都要適當咁樣運用啦，又唔可以過分咁樣即係個比重唔可以太高嘅。因為如果唔係就會令到小朋友比較依賴電子嘅產品啦，咁同埋佢哋個專注力可能都會下降，咁就令到本身 ICT 所有嘅好處呀，咁就會 *[08:00]* 就會咁（停頓）無咁好囉，係啦。

唐：好好，你可以分享你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TT：其實我而家係幼稚園入邊呢用 ICT 設備都比較少嘅，正如我用班主任嚟講嘅話，因為我哋嘅課堂組織活動都係比較傳統嘅，咁小朋友就坐定定聽老師介紹功課啊，又或者係聽一啲故事書啦，咁都係一啲實體嘅書嘅。咁都好需要靠老師可能影印好多嘅一啲教材啊，或者圖片呢去吸引小朋友嘅注意力嘅。咁至於可能專科老師呢佢哋就會用一啲（停頓）互動嘅一啲螢幕啦，咁就可以 show 一啲 PowerPoint 啦，同小朋友一齊去互動或者 *[09:00]* 係玩一啲小遊戲，又或者係 show 一啲教材咁樣啦。咁而，我哋都會有時都會用到一部電腦去展示一啲影片嘅，但係我自己個人嘅使用頻率就比較少嘅，因為學校嘅設備都唔係好夠啦，頭先講到話有一部細嘅電腦啦，咁其實我都會覺得即係嗰部電腦其實係唔夠吸引力嘅。因為通常要 show 嘅話就係10幾個小朋友一齊睇啦，但係嗰個手提電腦呢嗰個 size 實在太細啦，我都覺得小朋友其實好難睇到嘅。咁而且又冇一啲互動嘅白

板啦，咁其實都好難用到一啲 PowerPoint 嘅元素啊，或者係玩一啲小遊戲嘅，咁所以我嗰個使用頻率都比較少嘅。半日制一個星期，K1，5分鐘，K2 10分鐘，K3 15分鐘係啦。

唐：*[10:00]* 可以分享一下你使用 ICT 進行教學嘅頻率。

TT：咁嗰使用頻率可能就係，每星期一次啦，咁可能就係星期五放學嘅時候俾小朋友可能睇一啲有關主題嘅影片啊，咁樣做一啲小總結咁樣嘅。

唐：嗯嗯，想問你有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TT：咁因為其實我本身個人嘅理念，就係我都好想用多啲 ICT 元素去融入我嘅教學嘅，不過奈於就係因為學校嘅設備不足啦，又或者係教學嘅時間都唔夠啦，所以就令到我難啲去用 ICT 嘅元素嘅。咁而且因為我哋學校都比較傳統，真係 *[11:00]* 都係想可能老師用多啲紙本啊，或者係自製嘅教材啦。咁佢哋都冇話真係鼓勵我哋多啲要用資訊科技㗎，咁樣所以其實都影響到我就係跟隨其他老師一齊整一啲現成嘅教材多過諗一啲 ICT 元素融入我課堂。咁而，係啦咁我如果有更加多嘅資源嘅話我相信我係會想用多啲資訊科技嘅元素融入教學。

唐：好好明白，之後想瞭解你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TT：如果要講到 ICT 教學嘅時候有啲困難呢，我就覺得最大嘅因素就係嗰個設備不足嘅問題啦，因為其實可能有時老師都製作咗一啲 PowerPoint 啊 *[12:00]*，想同小朋友進行互動啊，咁其實都因為嗰個設備比較簡陋啦，只得一部手提電腦啦，咁都難啲展示自己想要嘅效果嘅。因為可能有啲小朋友真係佢哋又睇唔到啦，容易比其他事物分心嘅。

唐：嗯嗯瞭解，仲有冇其他困難呢？可以隨意分享。

TT：咁至於第二個困難就係嗰個支援不足啦，因為其實我係一個新入職嘅老師嚟嘅，咁因為學校都比較少話佢鼓勵我哋用 ICT 去融入課堂嘅，同埋佢哋都比較少，就係可能舉行一啲工作坊教我哋點樣用一啲資訊科技去提升小朋友喺課堂上面嘅參與啦。咁有時就要需要自己去研習一下，即係 *[13:00]* 例如可能搵吓有啲咩嘅 app 啊啱小朋友玩。咁我最近都嘗試喺最新嘅交通主題入邊就去融入 ICT 元素啦，就係要自行帶可能 iPad 啊，或者用老師自己嘅電話呢去幫手叫小朋友去搵一啲巴士嘅路線啦，咁樣都係我一個嘗試嚟嘅。我遇到嘅困難就係真係可能學校嘅支援未係好夠啦，所以就令到我難啲喺課堂入邊用 ICT。

唐：明白到老師你最大困難係學校設備支援不足，令你好難將 ICT 融入你教學中，另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？*[14:00]*

TT：其實同上面嘅回答都相近嘅，咁頭先講過啦就係話學校嗰個設備不足啦，咁就限制咗老師嘅一啲課堂嘅設計啦。咁而且如果，如果講到技術問題呢，咁就係覺得有時設計課堂嘅時候都會想加入一啲 ICT 元素喎，不過可能因為先前真係學校嘅（停頓）即係可能之前喺大學嗰度其實都有學到一啲 ICT app 啊，或者係一啲 coding 嘅一啲教具啦，咁其實都可以幫到小朋友嘅。咁喺可能大學嘅課程其實都會學到一啲 ICT 啲技巧，咁但係至於學校呢，就比較少講相關嘅資源，又或者佢哋都未係話覺得 ICT 好好必須咁樣喺學校推行啦。咁所以 *[15:00]* 其實對自己嘅教學理念都有少少衝突。其實可能我自己都好想試吓用資訊科技啦，始終都比較現代嘅一啲嘅科技啦，咁但可能學校因為都比較傳統，都係行傳統教學啦，咁所以都影響同埋限制到我自己想進行呢一個 ICT 教學

嘅。同埋學校都冇相關嘅培訓或者工作方案嘅，因為工作坊內容都係偏向就可能設計一啲傳統嘅一啲教材啊，又或者係講關於 lesson plan 嘅一啲嘅課程或者會議，但係如果講 ICT 真係近乎可以話係冇嘅。

唐：明白，跟住想問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TT：咁我就覺得因為其實學前教育嘅小朋友都比較，年紀比較細 *[16:00]*，其實佢哋對於啲電子產品呢其實佢哋好容易過到沉迷嘅。咁其實都，都會有啲顧慮嘅就係因為佢哋個年紀真係偏細啦，其實都未係話非常適合融入，如果老師嗰個加入課堂，ICT 加入課堂嘅比例如過重嘅話，其實對小朋友都會有影響嘅。咁就係因為小朋友始終佢哋嗰個專注力都比較有限啦，如果佢哋長時間都用資訊科技嘅設備其實都會影響到佢哋嘅集中力同埋專注力嘅。咁同埋因為其實都觀察到一啲小朋友啦，如果佢哋喺屋企其實佢哋用相關嘅設備比較多嘅話，其實佢哋都會過到依賴啦。同埋佢哋都真係可能對一啲傳統嘅一啲教材其實 *[17:00]* 嗰個興趣性就唔大囉，可能就會令到佢哋對平時嘅課堂嗰個興趣都又會下降啦，咁其實都會影響佢哋嘅學習成效嘅。不過我就覺得如果老師可以取得個平衡呢，相信嗰個即係帶嚟嘅負面影響呢都唔會話好大嘅。

唐：可以講講你認為適合幼兒使用 ICT 進行學習的時長。

TT：咁我就覺得其實都未係話學前嘅小朋友就一定唔可以用 ICT，咁我就覺得可以慢慢滲入一啲 ICT 嘅元素啦，咁又唔好一個禮拜用可能堂堂都用，咁都取得個平衡就係一邊用嗰啲傳統嘅教材之餘都可以適當運用一啲科技資訊嘅軟件啦，咁樣呢就可以令到小朋友可以提升佢哋嘅 *[18:00]* 集中力之餘呢，佢哋嗰個課堂興趣又可以提升咁樣。咁同埋因為如果真係過度使用 ICT 嘅設備呢，其實可能對佢哋嗰個視力啊，都會令到佢哋有啲負面嘅影響嘅。咁係呀，咁同埋（停頓）係啦就係佢哋嗰個年紀嘅問題啦，咁但係都好強調就係如果佢哋，真係老師可以取得平衡相信到係唔會有太大嘅影響嘅。

唐：最後想請問有什麼支援在學前教學中助你使用 ICT?

TT：我覺得其實各界即係都可以提供多啲支援俾我哋老師啦，無論係學校呀政府或者社會各界，其實佢哋都可以幫助我哋幼稚園老師去用多啲 ICT 嘅元素。*[19:00]* 首先就係學校方面呢，其實我本身最重要嘅就係一定要靠佢哋提供一啲必要嘅設備，同埋一啲技術支援嘅。咁可能因為頭先講過學校嘅設備真係相當有限啦，其實學校應該都要提供多啲唔同嘅設備同埋資源嘅，例如一定要有嘅電腦啦，同埋一啲平板電腦嘅，例如我頭先講過，其實雖然有電腦啦，但係嗰個螢幕螢幕嘅 size 實在太細喇，如果可以提供一啲比較大嘅一啲互動白板呀，咁又可以投影電腦嘅內容啦咁，其實我覺得對小朋友嚟講，其實佢哋都會覺得新奇呀，同埋有趣。同埋老師都可以喺互動白板上面教佢哋寫字呀，咁其實就會好過淨係喺普通嘅一塊白板嗰度用一支白板筆寫呢就比較枯燥乏味啦。

唐：*[20:00]* 仲有冇其他你認為適合支援？

TT：咁至於支援方面呢，咁其實我覺得其實學校都可以提供一啲（停頓）資訊科技嘅一啲培訓呢，咁其實因為我哋學校都有 IT 組嘅老師嘅，咁但係因為人手都不足，佢都要處理好多各方面嘅一啲嘅事情啦，即係可能佢要負責幫學校剪片啦咁，其實即係淨係得一個老師呢去搵咗其實就唔夠嘅，咁就好難有時畀到一啲 IT 嘅 support 畀班主任嘅。我就覺得所以學校其實應該係畀多啲嘅技術支援老師嘅，即係可能當老師遇到一啲 ICT 嘅問題呀，即係可能唔知點樣用 ICT 去融入課堂呀，或者

係可能想用一啲 app，但係又用唔到嘅時候，即係都 *[21:00]* 可以搵到一個專業人士幫手呢，我相信都可以提升老師喺用 ICT 嘅方面嘅質素嘅。同埋，培訓都好重要啦，因為其實我哋都好欠缺一個專業人士，話畀我哋知點樣先可以有效咁樣融入 ICT 係學前教育嘅，又或者係教我哋一啲教材設計呀，又或者係如果可以畀多啲我哋即係同其他學校嘅老師有研討會呀，或者工作坊呢，我諗我哋都可以更加了解點樣可以適當地用資訊科技元素啦。至於政府支援方面呢，其實我就覺得可能佢哋可以畀多啲一啲政策呀，或者係指導文件，即係都可以講返，話返畀佢全港嘅幼稚園時知道，其實原來用 ICT 有啲咩嘅好處嘅，咁就 *[22:00]* 可以令到一啲行傳統課程嘅學校呢都可以慢慢咁樣加入資訊科技嘅元素啦。同埋政府一啲經費嘅支援其實都好重要嘅，即係可能佢都資助一啲學券嘅學校買下一啲 ICT 嘅設備呀，咁其實都可以幫助我哋去（停頓）即係起碼有基本嘅設備其實都已經好重要嘅。咁至於社會嘅資源啦，咁其實希望都可以一啲，例如可能社區組織呀，咁其實佢哋都可以同學校合作啦，咁佢哋都可以支援返我哋係教學方面各種嘅需求嘅，例如可能一啲專業嘅支援呀，或者一啲好專業嘅技術人員呢，都可以話畀我哋知 *[23:00]* 點樣可以應用 ICT 喺課堂入面呀，又或者係個比重到底點樣取得平衡呀等等呢。我相信如果有專業人士提供意見呢，咁我哋老師就會比較冇咁迷茫，同埋喺用 ICT 嘅時候都比較得心應手，係喇嗯。

唐：仲有冇其補充呢？

TT：冇啦。

唐：好吖，再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄23:40]

12.3 Teacher C

日期: 2024年2月17日

時間：晚上7:00

地點：電話訪談

受訪者：Teacher C（TC）

采訪者：XXX（唐）

錄音長：19分鐘17秒

[00:00]

唐：你好！

TC：你好！

唐：好感謝你能夠參加呢個訪談，今次訪談係想了解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TC：哦哦 OK！

唐：先想問問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TC：呃，上堂就係用 PowerPoint 嘅形式去上堂咯，咁啊用電腦同埋電視，咁樣俾小朋友睇我哋平時上堂啲 Powerpoint 咁樣咯 *[01:00]*，係啊就有時有音樂啊，有歌唱啊咁樣咯。

唐：嗯嗯。

TC：啊！有圖畫睇啦，仲有圖畫睇啦，係啊。

唐：上堂同埋你設計課堂嘅時候都會用到 ICT？

TC：係都會用到。

唐：咁你最常用嘅一種 ICT 係？

TC：電視同埋電腦用 PowerPoint。

唐：好好，想問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因。

TC：嗯都適合嘅 *[02:00]*，因為始終而家呢個年代大家都會用到電腦，啊 iPad 啊嗰啲咁樣，咁佢哋就算我哋學校唔用，即係可能自己喺屋企佢哋都會睇下 YouTube 啊咁。所以我都覺得係囉，而家都係適合嘅，不過就唔好過量囉，係啦係啦。

唐：你頭先提及到幼兒適合用 ICT 設備進行學習，可唔可以列出你認為適合嘅 ICT 設備呢？

TC：嗯，電子書電子書嗰啲啦，同埋，有時佢哋嗰啲獨筆啦，點讀筆啦，嗰啲我都覺得 OK 嘅，係啦咁佢可以一路自己聽故事，又或者一路聽拼音嘅時候都可以用到 *[03:00]*。

唐：嗯嗯。

TC：我覺得點讀筆可以幫助佢哋學習啊認識啊係啊，可以自己認識或重溫生字。呃我教書時等我諗下先（停頓），教書最常用就 PowerPoint 咯，PowerPoint 教學時學生會更專注係課堂上啦，因為學生可以睇影像，有影像嘅時候就好啲咯，都會話幫助學生學習得快啲，係呀係呀都會理解多啲。

唐：好好，之後你可以分享你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TC：*[04:00]* 我基本上就係一個星期最少都有大概2日用到電腦去教嘅，就用 PowerPoint 嘅形式咁樣去上堂囉係啦，展示圖片啦生字啦呃係啦，都會播影片啊播啲歌啊俾佢哋睇。

唐：跟住想問你有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TC：嗯會用就係喇，因為基本上會每個星期最少3日都會用到嘛，咁呃上堂就容易用到 ICT 教學，因為我哋課室嚟講就係因為有部電視喺度啦咁就，所以就方便啲可以等佢哋睇到啲動畫啦，同埋睇到啲相講解課堂內容係啦，*[05:00]* 等佢地更容易知道我地做緊啲乜嘢啦係啦。我都會用 ICT 進行短時間教學呃，咁如果唔用嘅時候就係可能喺即係都會夾雜住都會用少少或者之後就再同學生進行互動，有啲我會整一啲呃實物嘅嘢出嚟同佢哋一齊上堂，上堂用啊，上堂做啊咁樣囉。係囉，我唔用 ICT 教學嘅時候會用實物上堂。係啦係啦，教學時我有時都會用實物代替 ICT。*[06:00]* 可能呃講故事啦，咁講故事我都會用唔係淨係用本圖書，或者網站，唔係喺嗰個 Powerpoint 度睇，睇圖畫嘅。即係可能會用一啲同故事有關嘅真實嘅嘢俾佢哋去試下，咁等佢有個 interaction 咁樣大家有個互動咯，因為有時 ICT 俾唔到小朋友個互動咁就係用實物啦。

唐：嗯嗯，瞭解啦。

TC：我個人覺得如果教學中有 ICT 就當然都 OK，即係都好嘅，（停頓）最起碼平時上堂都會可以準備一啲呃 PowerPoint，佢哋可以睇得清楚啲課堂內容啦，例如單詞同圖片。同埋唔係話啲圖畫可能喺本書上面有嘅，*[07:00]* 就算放大都可能好細啊。咁你，你有電視嘅時候，可以運用大熒幕放大圖片，佢放大咗就容易學生佢地哋睇得多。

唐：嗯嗯。

TC：我多數都係直接運電視熒幕展示係囉，直接俾佢哋睇喇，因為通常上嚟嘅時候即係上堂嘅時候，多數都係十幾個小朋友嘛，係啦係啦咁所以都係直接俾佢哋睇會比較好。

唐：好好明白，之後想瞭解你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TC：嗯，有時就係呃 *[08:00]*，可能講故事咁計啦，即係唔係所有圖書都可以喺嗰個呃熒幕上面可以 show 出嚟俾小朋友睇啦，有啲圖書如果我哋用到嘅時候要用實體書，就未必可以放大得到俾佢哋睇，同埋有時呃可能有啲技術嘅問題，或者係突然間電視壞咗冇咗個電視，出現故障問題你就冇得睇啦，就唔知點算啦咁樣咯，係啦。即係一啲，即係突然間斷電啊，或者一啲係啦，一啲電

視技術嘅問題 *[09:00]* 啦係啦。我平時都好容易就可以將 ICT 融入係我教學中，即係可能每次課堂都已經會用到添啊係啦係啦。

唐：好好，另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TC：都會有限制同技術問題嘅係啦，即係有時可能就係電視嘅時候，嗰個電視有都壞壞地嘅時候咧咁，你未必可以好順暢咁諗上到堂啦，又或者係啦上唔到網啊，咁如果有時你想網 show 一啲影片出嚟嘅時候 *[10:00]* 突然斷網嘅話，你就用唔到，係啦咁呢啲都係環境因素限制咗，係啦係啦。仲有就係諗下先啊，有啲有時啲音樂啦，你未必可以咁快，即係你就算喺 prepare 嘅時候，你都未必可以咁快搵得到合適音樂，咁你課堂上就播唔到，咁所以有時就係咁樣，即係總之就係頭先所講環境因素啊。

唐：嗯嗯，仲有其他嗎？

TC：呃，學校有冇提供 ICT 俾老師進行教學都會影響我課堂用唔用 ICT 教學，即係 *[11:00]*如果佢冇俾電腦，我更加用做唔到啦，係啦係啦，或者係（停頓）我哋冇得用 iPad 咁我哋如果用 iPad 教學嘅時候，有 iPad 嘅時候可能都會吸引到小朋友同你一齊上堂，但係我哋如果冇嘅話，可能就要自己呃，即係 print 一啲大嘅圖案出嚟同佢哋玩遊戲啊，或者係呃講生字啊之類咁樣係啊。

唐：嗯嗯。

TC：*[12:00]* 我覺得個人方面咁要自己首先要真係識得用嗰部機啦，你識得用啦，操控電腦啦，即係有時有啲未必所有嘅，佢除咗唔用 PowerPoint 可能有其他技巧嘅咁，如果唔識嘅話就整唔到咯咁樣係啦。咁所以要自己即係學下點樣用。我 ICT 技術都係一般般，我都係自己學下學下咯，都所以淨係識得用 PowerPoint 囉，或者係啊，有時播下啲歌啊咁樣咯。我都儘量啦，有時候教 Phonics 咧有時教得悶咧，佢哋都會悶㗎。跟住所以就係中間加插一啲動畫啊，歌啊 *[13:00]*，等課堂變得更有趣，或者等佢哋 share 下講下嘢啊，咁佢哋就會開心啲咯，係啦係啦。同埋生活化嘅啲嘅圖案啦，可能動物嘅都好，我都會揀一啲真實嘅動物多啲咯，多過卡通相咁樣嘅，係咯。

唐：嗯嗯瞭解，跟住想問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TC：嗯，其實我覺得其實 K2我教 K2嘅話都 OK 嘅，即係都適合嘅，因為 K2佢哋始終都有個認知去點樣做，即係 *[14:00]* 可能拎住個 iPad，佢哋仲叻過你㗎啦，係啦咁咁呃都我覺得都適合係啦。

TC：同埋就算我哋上課堂嘅時候，即係可能20分鐘咧，可能一個星期一次，俾佢哋用下嗰啲，即係大家一齊喺個 iPad 度玩遊戲之類，我覺得都幾好。

唐：頭先你有分享 K2年齡層，可以分享埋對其他年齡層嘅睇法嗎？

TC：好吖好吖，如果 K1嘅話，我覺得就太細，暫時真係太細個啲係啦。係啦，我覺得未必淨係俾個 iPad，佢哋可能淨係播下音樂啊 *[15:00]*，我覺得唔一定係係影像嘅，即係可能聽聽歌嘅都可以咯，但係如果係 show 影像嘅話，就 K2好啲咯。即係始終 K1唔好太長咯如果展示影像，即係可能十五分鐘咯，或者係咯，即係始終太長時間，佢哋就會好似當咗翻屋企，自己喺度睇手機係啊咁。K2同 K3佢哋可以睇嗰個形象嘅時間呢呃（停頓）我覺得二十分鐘都好夠㗎啦，如果真係喺課堂上面嚟講，半日制課堂係啦，但係我覺得呃，如果我哋可以睇完影像之餘，*[16:00]* 仲喺裡邊同佢哋

玩到遊戲學到嘢，即係可能十分鐘左右已經好夠啦嗰度，係啦係啦，即係可能十分鐘，我哋喺嗰個 iPad 度用緊之後，另外嗰10分鐘，我哋就自己同小朋友傾，傾下一啲遊戲啊點樣囉，即係用其他方式就唔好淨係用影像係。

唐：好好。咁最後想請問有什麼支援在學前教學中助你使用 ICT?

TC：呃，學校俾設備係好啊，如果即係最能夠有足夠嘅設備俾每個老師都能夠用到 *[17:00]*，同埋呃即係嗰啲培訓，或者有啲專業人士嚟教你哋，等老師知道哦可以點樣去運用啊，用電腦去呃教學嘅咁都係好囉。

唐：你提及到培訓啦。

TC：嗯嗯。

唐：你作為老師希望得到咩類型培訓呢？

TC：（停頓）到校培訓啊，學校老師可以一齊學啊嘛（笑聲）。

唐：嗯嗯。

TC：其實政府可以贊助啊（笑聲）

唐：贊助啊？*[18:00]*

TC：即係佢可能啊，即係贊助一啲機，即係可能嗰啲 iPad 啊，或者一啲機咁樣，每個學校校可能有唔知幾多部咁樣啦佢，有個 quota，起碼多啲接觸，可以俾小孩真係用到囉。即係如果你話學一間學校，你得三部嘅你一級一部你都玩唔到幾多嘅。

唐：係嘅係嘅，仲有冇補充呢？*[19:00]*

TC：（停頓）都冇啦！

唐：好吖好吖，再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄19:17]

12.4 Teacher B

日期: 2024年2月24日

時間：下午12:42

地點：電話訪談

受訪者：Teacher B（TB）

采訪者：XXX（唐）

錄音長：16分鐘34秒

[00:00]

唐：你好！

TB：你好！

唐：好感謝你能夠參加呢個訪談，今次訪談係想了解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TB：哦哦好的。

唐：先想問問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TB：*[01:00]*（停頓）主要係呃，有一啲小朋友佢哋第一次接觸嘅一啲概念啦，咁我哋就會播放一啲影片俾佢哋睇，咁令到佢哋可以最直接地去有個初步嘅概念先囉。咁之後咧就會再用其他嘅方法去，去同小朋友去探討嗰樣嘢。即係例如之前我哋一個主題係關於橋嘅，咁我哋我哋（停頓）喺啱啱開始講橋嘅時候咧，我哋就會播影片俾佢哋睇下香港唔同嘅建橋啊，例如青馬大橋啊，港珠澳大橋啊等等。咁樣佢（停頓）親眼睇到先，咁之後先再開展其他嘅課堂咁樣囉。

唐：好明白。*[02:00]* 可以再分享多啲你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因。

TB：嗯，其實都可以㗎！因為呃，即係視乎學校俾到嘅資源啦咁。其實如果呃小朋友可以喺課室，課室裏面有一部可以俾佢哋操作嘅 iPad 嘅話呢，咁我哋老師嘅發揮空間會大好多嘅。咁即係有時候，例如一啲（停頓）有一啲想佢哋畫一啲圖畫啊，又或者去錄音講一啲，講一啲說話跟住播翻出嚟啊咁樣，咁依啲都係 ICT，例如一部 iPad 可以發揮到優勢。咁佢哋畫完嘅圖畫可以即刻擦咗佢，*[03:00]* 跟住再畫過。咁錄音亦都可以反覆地，容易操作啦咁樣，咁都係佢哋佢哋平時喺屋企有嘗試去做嘅一啲操作動作啦。咁佢哋亦都會對於學習嘅興趣會提高咗咁樣囉。

唐：嗯嗯明白，可以再分享多啲相關 ICT 設備嗎？

TB：嗯，我最近有留意到一啲好便攜式嘅投影機啊，咁嗰啲投機。因為我哋而家學校咧，即係最近依幾年啦，俾啲小朋友睇影片都係透過一部手提電腦。咁手提電腦個 monitor 咧其實都比較細咁

樣啦，咁所以 *[04:00]* 我理解到坊間咧有一啲投影設備係可以細細部一部，係無線裝置嚟嘅，咁投射落一部白色牆上面，咁佢哋會容易啲睇得到相關嘅資訊啊咁樣囉。咁又或者，呃我知道有朋友嘅課室係會用電子白板啦，咁電子白板就會就會係好似一部可以移動得到嘅螢幕咁樣，咁小朋友都可以喺上面睇到 PowerPoint 呀，可以操作到嗰部電腦上面功能咁樣囉。咁依啲都係可以考慮喺學前同個教學裏面去應用到嘅 ICT 設備。

唐：明白明白。咁另外想你可以分享 *[05:00]* 你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TB：會用咩 ICT 設備？就正如頭先所講嘅，我哋學校就通常都係用電腦囉，咁就會係播放影片嘅時候就會用電腦啦。咁有時候會擺喺電腦角裏邊會有老師去設計一啲 PowerPoint 係可以操作嘅，咁可以聽錄音啊，撳個掣去下一頁啊咁樣，咁同小朋友有一啲唔同嘅元素，咁都係以電腦，即係老師嘅工作以用電腦為主啦。咁（停頓）我唔確定你所講嘅 ICT 設備包唔包括埋一啲喺禮堂嗰度嘅一啲錄影設備咁，但係呢啲 *[06:00]* 就同教學就唔算話太大關係嘅咁。如果講運用 ICT 教學時長，其實又好難講到實際話每日會用幾耐 ICT 進行教學，咁用嘅時候咧，就大概都係10分鐘以內囉。咁用咗10分鐘之後，就大概就會開始係老師開始去再講解啊，咁就唔會話小朋友成堂都睇住個熒幕。如果用一個月嚟計，我會有4日係用電腦進行教學，包括播影片。

唐：咁即係每1日就係會用 *[07:00]* 大概10分鐘左右播影片？

TB：係啦，1日就係大概10分鐘左右播影片，如果一日教學時數係3個鐘。

唐：好好。又想問你有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TB：其實用同唔用嘅原因呢，就要視乎我想介紹嘅個一樣嘢係有冇一個好好嘅電子教材啦。咁即係，例如頭先所講話我哋之前係播放一啲青馬大橋嘅影片去讓小朋友呢好似搭車經過依道青馬大橋咁樣，咁依個呢一個影片嘅體驗呢就可以，即係對老師嚟講啦就係比起就咁睇圖片更加優勝囉。咁如果 *[08:00]* 有呢一個資源嘅話，我哋就會選擇去用資訊科技啦。咁如果相反網上面嘅資源係，影片上面係冇呢一樣嘢㗎喎，咁即係例如我哋最近講緊一啲關於可能係林村許願樹，咁樣網上面啲關於林村許願樹嘅影片咧都已經刪除曬，或者個質素好模糊啦咁樣，咁我哋就會選擇去用實物啊，又或者圖片去呈現咁樣囉。咁所以，好處同唔好處都係似乎網上有冇相應嘅資源啦。咁就，我用 ICT 融入去教學中的話，對我個人嚟講就同我個人教育理念冇乜關係嘅。話要將 ICT 融入我教學中，我認為 *[09:00]* 唔困難呀，十分分簡單。

唐：明白明白。咁另外想瞭解你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TB：比較少嘅，因為（停頓）喺幼稚園裏面嘅資訊科技設備呢都比較簡單。咁最大嘅問題可能有時候係啲設備問題，例如喇叭冇電咁樣囉，喇叭冇電就即刻叉電，咁其他都唔算太大問題。

唐：另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TB：ICT 技術或限制（停頓）有冇一啲例子啊？我一時諗唔到有啲咩。

唐：*[10:00]* 可以係個人方面嘅，可以話係個人 ICT 技術，識唔識得運用 ICT 設備進行教學，或學校 ICT 設備有冇限制老師你運用 ICT 進行教學等等。

TB：咁我就少啲嘅，因為都，我哋主要都係播片啊，播 PowerPoint 啊咁樣，咁所以都唔會話太大技術困難嘅， 我都識得操作。而學校方面（停頓）提供俾老師使用 ICT 去進行教學嘅資源係足夠嘅，都足夠，但係可以再更進一層樓，有更多 ICT 設備讓老師進行教學。學校提供俾老師進行教學嘅 ICT 設備有電腦啦，同喇叭啦，冇啦。同埋正如頭先所講，佢哋睇電腦可能個 monitor 太細，咁我會即係，即係足夠佢哋睇嘅，*[11:00]* 但係如果更加好嘅話呢，可以俾一個投影設備啊，又或者係大啲嘅熒幕啊俾佢哋睇得清楚少少嗯。

唐：之後又想問問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TB：嗯，以我嘅觀察咧，應該去到 K3嘅幼兒會比較適合去自行去操作呢一啲 ICT 嘅設備囉，即係例如 iPad 啊，電腦咁樣。咁佢哋就去到 K3嘅時候咧，開始識得用滑鼠，識得控制個鼠標撳去邊個掣度。又或者 iPad 嘅話咧，佢哋 *[12:00]* 開始熟手知道點樣撳啲咩掣係會有啲咩反應啊咁樣。咁我觀察到 K1至到 K2幼兒呢，暫時未係好適合去自己操作啦，咁反而係老師去用俾佢哋睇，又或者係（停頓）去好似平時咁樣去播片俾小朋友睇，咁樣就會合適啲囉。咁如果小朋友你會講話自己睇 ICT 設備用幾耐咁樣，咁大概1日都係唔超過15分鐘為比較理想，嗯。如果一日三個鐘教學，一個星期的話，而我諗 K1小朋友睇影片時間為5分鐘左右啦，K2 小朋友10分鐘左右，因為始終佢哋專注力都有限，咁如果播放太耐嘅話，一嚟對眼睛又未必 *[13:00]* 好啦，擔心幼兒健康方面。二嚟佢哋其實都會未必專心到影片當中。

唐：頭先你有分享過話可以讓 K3 小朋友自行去使用 ICT 設備進行學習，唔需要老師成時喺隔離咁樣睇住佢哋啦。

TB：係係。

唐：可以分享埋你認為 K3 小朋友一日可以使用 ICT 設備進行學習幾耐呢？

TB：一日如果教學時數係3個鐘，我認為都唔超過15分鐘啦。

唐：最後想請問有什麼支援在學前教學中助你使用 ICT?

TB：*[14:00]* 學校可以提供咩支援？（停頓）

唐：嗯嗯，作為老師你希望學校提供咩支援讓你去使用 ICT？

TB：係用作教學上？定係其它？

唐：沒錯，老師教學上。

TB：咁啊，學校買多啲先進啲嘅器材囉，或者數量多少少嘅一啲 ICT 嘅設備囉。咁令到佢哋，即係教學上其實又冇話呃，好難話要去到咩程度先至可以支援得到嘅。咁但係主要係主要係目前嘅設備有少少開始舊啦，比較細小啦，*[15:00]* 數量唔算太多啦。咁如果可以增添一啲硬件上嘅設施啊，咁又或者睇下會唔會有其他其他資助啊，咁樣會可以申請得到囉。因為我知道賽馬會咧，其實對於中小幼3個（停頓）教育，即係三方面嘅教育機構咧都會有一啲資助計劃嘅，咁其實隻要向賽馬會申請一啲撥款嘅話咧，咁其實就會有一啲比較條件好啲嘅硬件設備啦，無論係電腦啊，影音器材啊等等都可以。如果話 *[16:00]* 係準備課堂嘅內容嘅時候，學校提供俾老師用 ICT 設備暫時都足夠嘅，都係用電腦整 PowerPoint 嘅啫。

唐：明白，好好。仲有冇其補充呢？

TB：諗唔到有啲咩啦。

唐：好好，再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄16:34]

12.5 Teacher A

日期: 2024年2月26日

時間：晚上9:40

地點：ZOOM 線上訪談

受訪者：Teacher A（TA）

采訪者：XXX（唐）

錄音長：32分鐘09秒

[00:00]

唐：你好！

TA：你好！

唐：好感謝你能夠參加呢個訪談，今次訪談係想了解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TA：哦哦。

唐：首先想請問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TA：理解呀，可能 *[01:00]* 有時以前舊嗰套係會係比較偏向就係用書啊，一啲繪本啊咁樣啦。咁但係而家嗰啲書啊，繪本都有用嘅，但係我會覺得有陣時呢啲所謂 ICT 嘅策略就會係呃，可能幫佢哋更加現實地讓小朋友睇到日常生活。例如我呢本故事書教 K2，係講運輸嘅交通嘅，我可能會要用一啲 ICT，例如可能上網，當場去搜尋一啲相關嘅圖片俾小朋友，咁我覺得嗰個 connection 會大咗囉俾小朋友。

唐：想請問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因。

TA：我覺得 *[02:00]* 適合嘅，我自己就覺得適合嘅。即係其實呃，嗰陣時我讀書嘅時候都有，即係都係一個好 debatable 嘅嘅題目，啊其實你個 screen time 啊，小朋友應唔應該用 ICT？我覺得其實佢應該嘅，因為始終成個社會去接收訊息傳遞信息，或者係接收一啲知識上面嘅嘢，嗰個嘅方式成個結構都係轉變緊嘅，都會好依賴一啲嘅所謂 digital 上面嘅嘢啦。咁我覺得其實都需要，佢有一個可取之處，但係係一定要有一啲適合嘅 guidance 啦，一啲 guidelines 啦係啦。咁大家都知道，其實啊上到去互聯網，或者 *[03:00]* 上到去例如好簡單 YouTube 咁樣啦，咁其實我自己嘅教學經驗都不乏就係，家長就係當佢係一個電子奶嘴 rather than 係一樣學習嘅工具啦。咁變咗小朋友其實佢自己瀏覽嘅時候，小朋友就係一張白紙咁樣，咁佢見到一啲好同唔好嘅嘢咧都係學得好快。再加上可能有屋企都冇管制小朋友用 ICT ，例如即係講手提電話啦。咁所以你問我適唔適合？適合，不過就要需要配合好多嘅教育，好多嘅 guidance 俾小朋友啊。

唐：剛才你提及到幼兒適合 *[04:00]* 使用 ICT 設備進行學習，可以再分享有關唔同年齡層適合使用嘅程度嗎？

TA：我自己我會覺得反而呢 K1使用 ICT 進行學習時間會短啲，都可以咁講嘅。因為其實如果你問我啊 K1， K2，K3 我自己會覺得 K3會比較適合用 ICT 係啦。另外嗰2個級別 K1，K2 我就唔會話唔準用，但係我自己如果教學上邊尤其係 K1我就可能佔嘅百分比會少啲。因為我自己通常會同小朋友上主題堂啊，去傾嘅時候咁傾到去有一啲尤其是一啲延展嘅部分，好老實主題活動，咁其實主題係一啲罐頭野。但係講緊就係呃我哋延展嘅時候係點樣去 extend 嗰個 topic 嘅時候，咁好 *[05:00]* 多時我會用到嘅，例如話我哋而家講緊理財，哇原來10蚊，50蚊，20蚊，500蚊，1000蚊，原來都有幾個樣㗎喎，咁樣咁可能上金管局嗰度真係有啲網頁俾佢睇㗎。相反，如果你哋講係 K1嘅時候，佢哋個腦仔啊，即係智力發展未去到可以同你去呃按照一個 topic 之後再去 further 同你去講咁多嘢嘅時候呢，咁可能就係呃 K1用呃，可能講完故事書純粹言語，或者係交通，我哋有啲咩交通工具呀？除咗把口講，咁我會係呃即係搵下啲圖啊，小巴，巴士，地鐵咁樣囉，係啦。咁呃嗰個幅度作為老師嘅角度嚟講呢，用 ICT 個幅度 *[06:00]* 係 K1就會少啲囉。（停頓）如果係咁啊，係咪老師使用 ICT 進行教學時候都可以講？

唐：嗯嗯，有關老師運用 ICT 進行教學，而幼兒會通過 ICT 例如一啲設備進行學習都可以。

TA：如果話係讓幼兒自行使用 ICT 進行學習，我教學入面就未有，我嗰間學校就未有呢個機會嘅。嗯，如果係老師主導呢，例如 K1， K3咁樣比啦，咁呃如果你話我，我可能20分鐘或者25分鐘嘅課堂入邊用 ICT 教學的話，K1可能頂盡係5分鐘啦，因為即係好似你話都係重溫一啲字，或者字配圖嘅嘢啦。*[07:00]* 咁但係 K3嘅話我自己會覺得15或者20分鐘，15啦15啦。咁可能如果你問呃，講到呢個位，咁可能就係我可能會播啲片（停頓）一啲例如可能係交通主題，咁我會播放關於交通嘅片，之後可能問翻佢哋一啲嘢，即係同小朋友 recap 翻係啦，究竟啊嗰段片講到啲咩呢？你有啲咩感受？咁可能半日制一星期就係 K1 5分鐘咁樣啦，如果喺我主題堂裏面。咁如果係 K2咧（停頓）咁就可能10分鐘囉，如果真係 K2係啦係啦。

唐：可以再分享有關你使用 ICT 進行教學嗎？

TA：好坦白講方便我啦。首先其實以前我哋嘅字卡，咁你又要搵個位收埋佢，然後你講呢個你又要 prepare，咁其實有少少係我自己懶惰嘅咁樣。咁但係我亦都有一個 *[08:00]* 我自己用完覺得幾 valid 嘅理由就係呃，小朋友其實而家嘅小朋友呢，例如講話“啊你仲見過啲咩嘅交通工具？”可能佢哋隨時可以講啲香港冇嘅交通工具嘅係啦，假設啊咁樣。咁我自己覺得呃，如果用 ICT 我會有一部電腦喺度，如果有個電視俾我 project 出嚟俾大家一齊分享嘅時候，咁我就，我個 flexibility 會好高囉。我可能會諗其他地方，可能其他地方嘅電車原來唔係香港嗰個樣喎，咁樣係啦。咁我自己會覺得教學上邊會呃多好多嘅，多元化啲囉，係啦。咁都可以分享多一個就係，我哋啱啱放完 *[09:00]* 新年假啦，咁我班有個小朋友就係，佢去咗滑雪咁樣啦，咁翻到嚟佢就話“啊可唔可以分享？”因為我都知道佢滑雪，咁媽媽都 send 咗啲相嘅，小朋友自己都話“我可唔可以同同學分享下？”其實放完長假期我都會邀請小朋友分享，分享去咗邊度玩，咁小朋友佢就好搞笑，佢就話“我舅父帶我去㗎！”我就話“好啦，我喺你個呃，我要搵翻條片出嚟，咁小朋友等我一陣。”小朋友就話“唔使搵㗎啦，你上 YouTube 就打乜乜乜乜呢就係我舅父嗰個嘅 YouTube channel 嚟啊。”原來佢舅父係一個滑雪嘅教練，咁呢啲位我就可以 *[10:00]* 好快咁樣去呃俾小朋友分享。其

實成件事就已經同我哋之前純粹叫佢哋嘴巴分享，成件事就，佢哋睇到啦，又會開心啲啦，咁又會個歸宿感會大啲嘅我自己覺得，咁小朋友自己都開心啲，我自己會有呢一個嘅想法咯，係啦。

唐：好好啊呢個小朋友啲片係 YouTube 度，老師好快可以搜索然後讓小朋友進行分享。

TA：係啦係啦係啦。咁因為嗰次係，其實個小朋友佢背景都 OK 嘅，咁佢就其實經常去旅行。原來其實佢舅父個 YouTube channel 其實都有返佢之前去旅行嘅影片，咁小朋友又可以睇到。咁其實佢嗰下當然啦，佢就梗係爽啦，咁佢就一路係度介紹啊，呢度邊度邊度。咁但係其實其他小朋友 *[11:00]* 都開心嘅係啦，見到佢開心嘅。咁如果你話我得堆字卡，冇電腦嘅時候，咁我一定做唔到呢一啲嘢㗎啦，係囉，我一定做唔到呢啲嘢，咁所以就係我課堂入面都多用呢啲 ICT 設備嘢去進行教學，係啦。

唐：好好。之後請你分享你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TA：如果你話即係一個頻率啊，咁我每日都會用嘅。因為其實我哋主題其實就係 PowerPoint 嘅，係啦。我哋就唔係話主題書咁樣嘅係啦，呢間學校，我哋嗰間學校係咁啦，我唔知出面其它學校係點啦。但係有好時候就係老師，例如做主題嗰個，好似 *[12:00]* 我聽日嗰個咁樣啦，咁都係例如（停頓）即係我頭先講嘅例子，其實聽日教案就係關於銀紙，咁唔同嘅銀紙唔同發鈔銀行，佢嗰個樣係點啊？原來就算同一間發鈔銀行佢個係列係點？咁我就已經 upload 咗一啲，copy and paste 咗啲 links 喺個 PowerPoint，咁到時老師就係去，即係 suppose 老師要跟個教案進行教學，就係 copy 嗰條 link 咁就去睇囉咁樣，咁呃我會咁樣使用囉，係啦係啦。呃（停頓）可以再補充少少，就係我其實之前咧我都有教過非華語，NCS 嘅小朋友。咁嗰陣時 *[13:00]* 你知啦咁走課室，好難帶住一部電視，我就有用電腦，咁嗰陣時我仲有用 iPad 嘅，係啦我有用 iPad。咁一啲 PowerPoint 有少少，呃，即係嗰啲 effect 咁樣啦，咁可能就係出咗個圖片先再出個字，而個字係唔同顏色啊係啦。咁我覺得如果你係冇電腦嘅話呢，我諗你做呢啲句子同生字又要唔同顏色啦，又要佢認到部首咧，你真係做到死嘅係啦，好大功夫。但係如果你話呃，電腦有呢啲咁我就好簡單囉，會即係相對地簡單得多。同埋，即係我覺得我唔知啦，可能我覺得可能 NCS 嘅小朋友啦，可能佢哋 *[14:00]* 對中文，尤其係對中文啊冇咁呃敏感嘅小朋友，咁一啲顏色嘅區別啦，咁其實我自己會覺得真係一定用電腦㗎啦，一定係用電腦 PowerPoint 嗰啲整教材囉，係啦係啦係啦。

唐：嗯嗯。你剛才提及到會使用 PowerPoint 進行教學，請問你一日運用 PowerPoint 教學時長係？

TA：我教 K3嘅，我諗如果25分鐘一堂主題堂，咁我都用咗15至20分鐘㗎啦。咁剩翻就係會同小朋友做 reflection 囉，係啦，即係講翻啊，依個我哋頭先學到啲咩咁樣類似，係啦。

唐：跟住想問你有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TA：我自己就偏向，我自己都係一個幾偏向用呢啲電子嘢嘅人嚟嘅。我又唔係真係電子嘢好叻，係啦。*[15:00]* 咁但係呃，我自己覺得個世界係咁嘅時候，電子時代，咁其實有時小朋友都仲叻過我哋嘅，係啦。咁呃，即係舉個例啦，我哋理財咁樣呢個主題啦，咁有講過話電子貨幣，咁電子貨幣會諗到八達通啦。咁但係其實有同事有講過啊，不如嗰啲支付寶嗰就算啦咁樣，但係我話唔係喎，呃小朋友其實佢哋對於呢啲嘅電子支付嘅工具都好好好好，個反應好大嘅，佢哋都認知得好多嘅。咁我正正就係因為喺呢個位，其實就更加要，唔好以為我哋嘅角度覺得好似好深喎，或者我直接，我連轉數快個標誌我都有介紹嘅呢個主題。咁我我，我就會覺得唔好因為自己可能覺

得好深，其實 *[16:00]* 小朋友可能到知啊，唔好睇少小朋友係啦。我又冇乜點樣抗拒去用 ICT 去教學，但係純粹有時學校電視壞咗佢又唔整，咁咁我咪唔用住囉，係啦，例如設備故障問題，我就覺得有呢一樣嘢麻煩囉。其餘嘅其實我都好多時會俾一啲片啊，甚至乎係，我都好（停頓）我都好 open 例如有陣時真係嗰啲生日會，成日真係要攝時間，你要俾啲片佢睇。咁咁我真係自己 log in 自己，例如係一啲平臺啊，Disney 呃 Disney Plus 啊咁樣，咁有陣時會播放卡通片啊，咁但係如果真係教學嘅，我就真係會播放有關主題嘅片，可能播放一啲動物片，咁其實我自己覺得嗰啲佢哋都會學到嘢嘅。

唐：*[17:00]* 好好。之後想瞭解你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TA：困難啊（停頓）咁又冇乜喎，真係冇乜喎。因為其實如果你例如要準備嗰啲教材嘢，你嗰啲 link，其實你 check 過曬冇問題，咁都大致上係 OK 嘅，即係在我嗰度係啦，我嗰度我覺得 OK 嘅。有時都會擔心，會驚開唔著個電視，可能係故障問題，但係有時只要確保準備好教材同 ICT 設備，例如開好個電視總掣咁就 OK 啦。有啲同事試過開唔到個電視，但係點知原來未拍總掣，咁樣嗰啲咁嗰啲另計啦。咁但係我自己就 OK 嘅，即係其實同普通同一樣囉，即係即係你 make sure 嗰條 link 係 OK 嘅咁，*[18:00]* 其實我都覺得 so far 冇有問題嘅，係啊。

唐：有冇其它使用 ICT 進行教學時遇到困難嘅例子？

TA：嗯（停頓）例如話我準備好當日上堂嘅 PowerPoint，但係電視開唔到，IT 問題啦，我都會擔心嘅，都會啦，嗰一刻點都會擔心嘅係啦。咁但係我自己又覺得，咁你 suppose 都有兩手準備嘅。咁同埋呃，最傳統嘅字卡都應該係有喺課室嘅，咁所以其實就算真係 touch wood 嗰日個電視唔得嘅，咁其實教學都應該冇問題，係啦老師應該有兩手準備，都應該冇問題嘅。

唐：明白。另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TA：呃，學校（停頓）*[19:00]* 限制呀（停頓）可能會有啲老師覺得，呃即係可能佢，嗱我自己就，因為我教學年資都係3年啦，都算 green teacher 啦。咁但係可能有啲同事都會覺得啊，其實呃學習就唔係好應該要一個，例如一人一部平板電腦啦好 extreme 咁樣啦，咁我知有啲小學會咁啦。咁但係其實我自己覺得一人一部平板啲電腦都可以學習到嘅，係啦。咁但係喺幼稚園嘅層面就真係好初階咯，好初階咯。我唔係話所有人都要有，但係暫時呃幼稚園嗰個教法咧，我又未見到有好多會俾小朋友佢自己哋真係落手去用一啲 ICT 嘅設備咯，係啦。咁我學校 *[20:00]* 為例啦，咁我第一年，我教書3年啦，咁第一年入去咧都係有個 IT 嘅同事，咁樣咁但係佢做咗一年就走咗啦，係啦。咁但係其實（停頓）當中咧其實呃我哋學校都有安排佢去講 talk。其實我諗佢都冇諗過佢自己要講 talk 啦，咁就係安排佢同我哋講例如點樣用一啲 Excel 啊去配合 Word 去使用，例如咩合併列印啊，類似咁樣嘅 function 啊。咁學校係為老師提供呢啲嘅 ICT 支援，咁但係嗰個 IT 同事做咗一年就冇啦，之後就都冇啦，冇咗呢支歌仔唱。你話宜家如果我課室嘅 ICT 設備突然唔 work，我哋就係冇 IT 同事協助，一般 *[21:00]* 都係搵主任咯係啦，我哋搵主任。其實我自己覺得 ICT 無論係，我自己覺得小朋友啦，咁但係其實大人嗰個層面其實都好需要嘅。因為其實嗰個 IT 同事喺嗰一年咧係做咗都幾多嘢嘅。例如個 IT 同事佢係駁通咗每個課室，即係我喺課室如果要 print 嘅，就喺課室個電腦撳，跟住就落去收我 print 嘅嘢就得啦。咁但係原來之前唔係嘅，之前就係每個老師如果你要 print 嘅嘢咧，就係要 save 係自己隻手指到，之後落到樓下嗰部電腦係啦，唯一一部電腦有連個 printer 嘅，咁就要喺嗰部電腦插入你隻手指先可以 print 啦。咁同埋之前嗰啲文件啊咁樣，咁就

[22:00] 係喺一個電腦度啦，咁就係四散，咁你知其實學校係好多嘅文件啦要去 save 啦。尤其我哋今年啱啱評核完啦，咁呃（停頓）咁我都記得其中一個讚我哋學校嘅，就係啊我哋個嗰個 filing 存檔都幾好，咁就係靠個嗰個 IT 同事整咗個 drive 啊，直接係一部，即係雪櫃咁大部嘅 server 啊咁樣喺我哋學校。咁我哋就每個課室嘅電腦都可以連到個 server 度，咁其實呢啲種種嘅嘢，其實雖然唔係直接關小朋友學習事，但係喺老師嘅文書上面，同埋協助老師教學方面，協助老師點樣計劃佢嘅教學咧，我覺得都好有幫助，嗯。

唐：可以再分享有關老師使用 ICT 教學會唔會遇到限制嗎？

TA：呃（停頓）其實我學校為老師提供嘅 ICT 設備都，都係有限，其實 *[23:00]* 真係得電腦同電視係啦。咁每一個課室都有一部電腦加一部電視，電視就係上堂嗰陣時用，係喇。咁都有一個，我哋有一個嘅電子黑板，咁嗰陣時電子黑板咧咁哇，又要叫啲老師出去上堂去學啊。咁但係其實之後就翻咗嚟，嗰塊黑板咧我相信都幾 high tech 嘅，但係咧就呃冇人接觸，因為其實冇機會啊。因為你諗下其實佢嗰啲黑板係好高嘅，係啦，好高嘅，咁呃小朋友睇唔到啦。咁同埋其實你要諗下我我間學校係有3層嘅3層嘅，咁你諗下要推住嗰個咁樣嘅插電嘅黑板同你走課室，咁樣係根本係冇可能嘅，係啦。咁所以而家最後嗰個黑板就係終於有個用途，就係擺咗喺學校 *[24:00]* 門口當一個電子告示板，即係話俾人聽今日有啲乜嘢，今個禮拜有啲咩，幾時放假啊，係啦，類似咁樣咯。學校有呢啲 IT 設備嘢嘅，但係好似，大家都仲係或者主流啦，都係以中學同小學，或者大學，作為一個受眾，係啦。有呢啲乜嘢俾幼稚園嘅我相信，我相信都有呢啲 programme。但係咁你一塊咁樣嘅黑板嚟到，咁我用又唔係唔用又唔係咯，係啦係啦。

唐：好好明白。跟住想問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TA：呃（停頓）ICT 如果對我嘅保留咧，其實我自己覺得只要用得好咧，我對佢係冇乜保留嘅。但係作為呃班主任啦，咁你出得到嚟，你要交代啦，除咗 *[25:00]* 佢同小朋友交代啦，同上司交代，你仲要同佢哋嘅家長交代，係啦。咁呃我自己會覺得有陣時，呃，會唔會你嘅抱負同佢哋嘅期望，佢哋嘅擔心係有衝突喎，係啦。咁因為可能佢哋嗰輩都會話，啊咁細個用咁多電子產品，咁樣係啦。咁我自己覺得當然啦，我唔係話，啊你用得啱啱俾你用8個鐘都得，我又唔係咁。但係會有一個少少嘅包袱喺度，就係啊我用咗例如我呢一堂我真係假設，真係我可以有機會我俾一部平板電腦佢哋用啦，咁究竟家長嘅反應會係點咧？Given that 我係用得啱，唔係睇啲唔適當 *[26:00]* 嘅嘢，個時間亦都係受控制嘅，但係其實我都有壓力，就係家長唔知點樣諗嘅，係啦家長唔知點樣啦。尤其今日小朋友啱啱驗完眼啦，係啦，第一樣嘢最 concern 就係小朋友嘅眼睛啊，健康問題。咁所以就，對呢樣嘢有冇用，我覺得 ICT 教學上係有用，但係我執行上就會有呢啲嘅擔心。

唐：明白明白。咁最後想請問有什麼支援在學前教學中助你使用 ICT?

TA：嗯嗯。呃，我自己覺得呢，如果係（停頓）ICT 呢。其實我覺得我學校，如果係 ICT 方面個 support 都係足夠嘅。呃呃，我哋首先教學上頭先講咗有啲電腦 *[27:00]* 同電視啦，其實我哋學校自己有一個嘅 app 啦，係啦，有個 app 嘅。咁通告啊，一啲嘅校園生活嘅照片啦，都會經個 app 度發佈嘅，咁我自己覺得呢個都係一個善用 ICT 嘅例子啦。咁之後我哋每個班主任都係有一部嘅手提電話嘅係啦。

唐：請問部手提電話係限制老師係學校使用嗎？

TA：係係，部手提電話只係 for 學校用。呢個學校係源自於嗰陣時疫情，因為要話俾佢聽個 zoom 係幾時點點點，咁樣一個內線電話，其實我哋講緊我哋有13班啊，係啦咁你就唔會夠用嘅。咁所以，我嗰陣時，我都未入去做，嗰陣時就出 *[28:00]* 咗老師電話，咁延續個傳統去到而家咁樣係啦。咁但係我覺得，講翻學校點樣 support 老師用 ICT 教學先，學校我自己覺得咧，即係都做得好啦。但係例如一啲文書處理上嘅嘢啦，即係例如我之前講合併列印啊，我覺得呢啲其實都係好慳時間嘅，即係你一個掣其實幫你成班學生嘅名就全部 copy 翻曬落嗰個工作紙嗰個位嗰度啦咁樣，咁我就覺得呢啲係都好用嘅咁樣。咁同埋我自己覺得反而咧，有陣時要，我覺得如果可以再好啲咧，就係保障翻老師呀。我自己覺得，即係做老師就係為老師講嘢㗎啦，就係可能學校鼓勵老師用 ICT，但係亦都要鼓勵嗰啲 *[29:00]* 老師點樣用，或者咩時間用。例如，即係辦公嘅時間，老師就可能唔接電話啊，唔會用 WhatsApp 啊咁樣。咁我覺得如果學校，噢 given that 我哋學校呢個問題，我自己冇好嚴重嘅，係啦，冇家長投訴過我嘅。咁但係因為呢件事啊，咁但係呃我自己覺得有啲，你知有啲家長其實都好 aggressive 㗎嘛。咁其實我自己覺得如果有一部電話嘅話，咁學個校係，即係你一個龍頭角色咁樣啦，咁校長話乜就冇乜㗎嘛，咁就會係多少少保障，我自己覺得會好啲，係啦。因為始終你跟咗部電話翻屋企，你就其實好 *[30:00]* 似冇放工咁樣囉，有時候係啦係啦。

唐：明白明白。仲有冇話其它支援可以有助你用 ICT 進行教學？

TA：（停頓）一啲，呃可能係一啲 app 囉，一啲教學 app。不過對小朋友就（停頓）嗰陣時我哋有玩過 Kahoot 嘅，Kahoot 係啦，咁但係就都，我又覺得未必適合我哋嗰年齡咯。係啦。咁但係呃，整體上呃，我自己覺得 ICT 喺教學方面又（停頓）我嗰個環境又真係教到小朋友嗰啲都冇乜點樣嘅花神可以做得出，因為佢係電視啦，電腦啊，係啦。咁極其量就可能你點樣剪接啊，剪片啊，我覺得我覺得呢啲 workshop 都可以嘅，係啦。*[31:00]* 不過相對上剪片 workshop 嗰個嘅要求又會少翻啲啦，因為以前疫情就要剪好多片啦，咁而家會係例如畢業禮歌，剪歌啊係啊，用呢段搏呢段咁樣點樣剪咧？咁樣，咁依樣嘢咯係啦。咁反而我覺得培訓方面就係可能係有啲捷徑方法教老師係啦，點樣幫到老師文書方面去輕鬆啲嘅，咁我自己都會覺得好啲咯，或者用咩 ICT 設備教學啊，相關一啲教學 app，係啊係啊喺呢方面嘅支援。

唐：明白。仲有冇其補充呢？

TA：我就冇啦。

唐：好好，*[32:00]* 再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄32:09]

12.6 Teacher H

日期: 2024年2月24日

時間：晚上8:00

地點：電話訪談

受訪者：Teacher H（TH）

采訪者：XXX（唐）

錄音長：25分鐘19秒

[00:00]

唐：你好！

TH：你好呀！

唐：好感謝你能夠參加呢個訪談，今次訪談係想瞭解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TH：好呀好呀。

唐：先想問問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TH：我覺得 *[01:00]* 喺課堂度如果應用咗 ICT 其實係可以加深到小朋友個學習興趣嘅。因為平時我哋只係用嗰啲繪本教學啊，或者一啲我哋實體嘅實物去教學咧，相比之下咧，我覺得 ICT 做到嘅變化咧係會比較多。因為融入咗一啲嘅高科技，同埋入邊可能有時有啲嘅動畫啊，或者片段啊，或者係例如你透過學校嘅一啲大嘅電子熒幕，咁可能 touch Mon 嘅，咁可以令到小朋友同嗰部電視入邊嘅一啲啲活動啊，有啲互動啊，咁其實我覺得個趣味性係增加咗，所以我覺得係其實 *[02:00]* 係提高咗佢哋學習嘅興趣。同埋我覺得你透過呢一啲嘅科技啦，去製造一啲嘅教材去提供俾學習啦，我覺得令到老師喺製作教材嘅時候係靈活度係提高咗嘅，因為喺網上會有好多唔同嘅素材啊，可以去應用啊，去擺落呢一啲嘅教材度。所以我覺得整體嚟講，我覺得 ICT 呢一套應用喺教學上面，我覺得對小朋友嘅學習興趣係提高咗好多嘅。

唐：好好。

TH：我自己最常用嘅 ICT 進行教學 *[03:00]* 就會係我課室入邊一部大電視嘅 touch Mon。而準備課堂嘅時候，例如我整好個教材，我之後就會利用我學校個大電視 touch Mon 度播出嚟啦。咁我之前我就會預先去玩一次先嘅，我就會去備課，利用嗰部嘅大電視就會係備課一次嘅，我只係會咁樣去應用，因為其他都會喺電腦整完先到時再係投射喺嗰部大電視度。

唐：哦，明白即係你多數都係喺自己嘅電腦度做教材。

TH：係啦係啦，但係呈現就係利用呢一部嘅大電視 touch Mon 嘅大電視係俾小朋友嘅。

唐：好明白明白。*[04:00]* 想問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講嚇原因。

TH：我覺得其實係要睇年齡，因為我以往咧，其實 K1至 K3嘅小朋友我都接觸過嘅，我都擔過班嘅呢咁多級。我之前返過以往嘅幼稚園啦，咁我有接觸N班嘅小朋友，當時我間學校係有提供iPad俾佢哋玩嘅，iPad 係玩啲嘅填色遊戲，俾一啲 N 班嘅小朋友啊咁樣嘅。咁我發現其實有時 N 班嘅小朋友佢手指仔其實並唔係咁靈活啊，咁變咗咧其實佢用 iPad 有時佢去油顏色咧，佢要去喺個填色盤度搵個粉紅色油落 *[05:00]* 個小朋友件衫度，咁其實對佢哋嚟講因為佢手指可能發展得未係咁成熟啊，咁佢用呢個 touch Mon 去學習啊，玩遊戲嘅時候其實係有啲阻滯嘅。好多時候唔係唔好用嘅，我覺得，我覺得老師如果係在旁協助呢一個小朋友咧，咁其實我覺得個過程好玩嘅。但係如果你淨係俾小朋友自己主導曬，俾個 iPad 俾佢玩咧，我覺得其實有時佢哋喺應用上面佢有少少困難。咁好啦去到可能係大啲 K1至到 K3 小朋友，咁我覺得整體，即係 ICT 呢一個學習模，式無論係 iPad 又好，又或者可能係 touch Mon 嘅 screen 又好，咁我覺得佢哋嘅應用程度係提高咗嘅 *[06:00]*，我覺得操作嘅能力亦都係提高咗。所以其實好多時候佢哋就唔使咁多老師主導啦，就放手俾佢哋做多啲。咁亦都會見到呃，其實佢哋都係中意做呢樣嘢，同埋佢哋係個操作性大咗，係啦呢個就我，即係呢幾年咁樣觀察到嘅咯係啦。

唐：明白，你一提先有提及到 K1到 K3小朋友都適合用一啲 ICT 設備進行學習，可唔可以列一出一啲嘅例子呢？

TH：係，例如可能咧，即係正如我而家呢間學校啦，咁我哋係主打學校係，都係鼓勵我哋係用 touchMon 嘅。咁我哋係一部係大電視咁樣啦，係跟住我哋咧就會放一啲嘅 PowerPoint 嘅小遊戲係啦，咁咧就入邊係根據我哋嘅主題啦 *[07:00]* 去整呢啲嘅小遊戲嘅，咁可能小朋友就可以有一啲嘅 multiple choice 去玩啦，一啲嘅連線遊戲，一啲嘅配對啊，或者係拼 puzzle 啊，拼 puzzle 認生字啊呢啲遊戲。咁小朋友咧就可以學完呢啲知識之後，咁佢就可以係老師發問完啦，佢哋就可以舉手出嚟就去玩呢啲遊戲，咁睇佢有冇掌握到呢一啲嘅知識，咁或者係一路玩就一路去認識一啲嘅新嘅概念咁樣咯。

唐：明白。頭先你講到年齡適合同唔適合啦，可以再分享多啲嗎？

TH：嗯，因為年齡差異，我覺得 K1 到 K3 小朋友用 ICT 時間都有唔同。首先我覺得小朋友專注力呢，年紀越細嘅小朋友，佢專注力嗰個時間 *[08:00]* 係唔同嘅。例如 K1嘅小朋友，佢專注力可能係得15分鐘，10分鐘度嘅啫。咁去到 K2又慢慢多翻啲，K3又再多啲啦。咁所以我覺得都要根據翻佢嗰個年齡層嘅專注時間，就去進行呢一啲嘅電子教學，我覺得係啦係啦。咁如果以 K3嚟講咧，我覺得20至25分鐘我覺得係冇問題，即係至少而家我呢一班小朋友嚟講咧，K3小朋友佢冇問題嘅。咁當然你前提係你呢個 ICT 呢一個嘅教材入邊係必須係豐富啊有趣，即係有一個吸引性嘅，咁都會更加令佢哋容易係可以投入，同埋專注到，我覺得係啦。咁如果可能問我 K2嘅話，我覺得 *[09:00]* K2可能呃 around 我覺得可能呃20分鐘到啦我覺得係啦。跟住 K3我覺得就係，呃 K1啦，K1我覺得可能係10分鐘至15分鐘一日咁嘅啫around我覺得係啦，講話全日制班，因為我覺得小朋友，其實如果話呃 ICT 呢樣嘢，我覺得我都唔鼓勵小朋友望住個 Mon 太耐嘅，因為我覺得始終佢哋嘅呃（停頓）視覺發展都係未完全成熟，所以我都唔鼓勵完全係用呢一個 ICT 去做曬全套嘅學習。我覺得對佢哋嘅眼睛嚟講其實都係真係會攰咯，佢哋嘅健康啦，傷害到佢身體發展。我覺得可能即係都要換下其他嘅教材我覺得，係啦。

唐：你剛才所講換其他教材，如果唔用 ICT 進行教學時會係用啲咩教材呢？

TH：*[10:00]* 換其他教材我就可能換翻啲平時我哋課堂，就一啲傳統嘅一啲嘅教材啦。即係可能係攞繪本啊，又或者攞一啲實體嘅教具啊，又或者係教具呢一啲去介紹啊，去（停頓）連貫翻個主題我覺得就會係比較好咯，係啊。

唐：你可以分享你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TH：嗯，我我我即係，我覺得使用頻率係中啦。因為通常呃一星期嚟講咧，我諗我大概，一星期佢哋翻5日學，我諗大概2日啦係啦，1至2日啦用到 ICT 進行教學。咁如果多嘅話可能係3日嘅，咁但係大部分我覺得係2日度咯，係啦。*[11:00]* 如果2日嘅話，即係可能有時呃例如今日主題係認識呃我哋人體嘅消化係統，咁其實如果睇繪本嘅話，咁小朋友淨係可能睇到圖啊，睇到老師嘅解說，咁其實咧佢印象未必係好深刻嘅。因為始終你嘅繪本係真係實體係平板嘅，咁我有時我就覺得，（停頓）呃我就會利用 ICT 啦。即係我唔知影片播放都算唔算係 ICT 其中一種啦，但我就會運用埋可能一啲嘅動畫影片啊，又話一啲係啦其他關於係我哋人體消化影片。咁喺佢哋實體咁樣去瞭解，睇埋我哋呃身體入邊個消化系統每個部位啊，個消化過程，咁我就覺得透過 ICT 學習咧就具體咗咯，令到佢哋除咗喺繪本學習到之外，*[12:00]* 咁就更加具體去瞭解到呢一啲嘅知識。

唐：明白。剛才你分享你運用 ICT 進行教學嘅頻率，一星期的話大概2日會使用 ICT 教學，想瞭解你一日教學時長係？

TH：我係全日制嘅。呃，我係全日制入面會有20分鐘運用 ICT 進行教學。

唐：明白明白。跟住想問你有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TH：因為首先我自己係好支持教學多元化呢一樣呢樣嘢嘅。即係我覺得小朋友學習其實都需要接觸到好多唔同嘅教材啊，媒體，咁一來咧會令到佢哋呃對學習就趣味性提高。同埋我覺得會令到佢多啲新鮮感啊。即係 *[13:00]* 正如我哋大人嘅其實真係成日睇住啲白紙黑字啊，又話真係淨係去睇呃故事書都好啦，其實我覺得有時都會有一個嘅呃沉悶咁樣嘅，沉悶嘅感覺。所以我覺得有時適當啦，適當咁加 ICT 啦，喺唔傷害到佢哋即係視覺嘅視覺發展嘅前提之下啦，我覺得其實係真係睇到小朋友用 ICT 佢哋嘅反應係開心嘅，活躍嘅。咁同埋佢哋都係好 enjoy 去透過一啲嘅遊戲學習啦。咁所以我，我都係呢一樣嘢亦都係令我促成用 ICT 嘅一個因素。即係係啦，即係我覺得令到自己教學其實係真係豐富咗嘅。咁老師呃，可能用完呢一啲 ICT 之後，咁再做 *[14:00]* 一啲延展活動啊，其實我覺得都係好合適嘅。咁而我唔支持嘅原因咧我覺得就係呃，係有條件性嚟唔支持。就係一來就係我覺得呃如果利用呢個 ICT 去進行教學啦，我認為就係首先我覺得老師可能要俾一個嘅時數嘅呃限制啊控制咁樣啦。例如小朋友即係仲細，咁可能係要控制住佢嘅時數，可能會唔會唔好超過半個鐘啊，咁樣即係令到唔會影響到小朋友嘅視覺發展啦。同埋，我覺得如果即係用嘅頻率太高咧，咁我又覺得失去咗，呃失去咗書本嘅意義。即係你又唔可以完全係可能我係一至五我日日我都用半個鍾 ICT 啦。我就捨棄咗繪本啊，捨棄咗其他嘅教材啦咁。*[15:00]* 咁我就覺得就呃（停頓）咁樣嚟講咧小朋友學習就真係狹窄咗啦，以後都可能睇都唔睇。因為其實好多小朋友咧，佢一日到黑都接觸到好多電子產品，可能有時翻屋企爸爸媽媽其實都俾緊部 iPad 佢玩嘅喎，但係學校咧佢又再係咁去去接觸 ICT 嘅話咧，咁其實對佢嚟講呢個學習好單一，同埋第二就係傷害到佢視覺發展。所以我覺得利用 ICT 嘅時候都係要加入埋其他嘅媒介，即係例如啱先，正如我講到嘅繪本啊，同埋一啲教教具啊，呢啲係有好操作性嘅意義嘅，係實體嘅。咁同埋 *[16:00]* 我覺

得對佢哋嘅觸感發展得比較好，因為有時好多教具係有好多唔同嘅質感啊，佢哋係可以多元化體驗。但係 ICT 你好多時候你都係一啲平板，即係一啲嘅電子產品啦，其實你係摸唔到個質感，你都問唔到個氣味，所以我覺得對佢哋五官發展呢唔係太好。相對之下，佢就資訊啲喇，呃只喺你個視覺上面係令到佢係有衝擊，同埋吸引啫我覺得係啦。

唐：明白明白。之後想瞭解你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TH：嗯！其實都有，因為其實 ICT 教學始終咧佢係屬於一啲係電子科技上面嘅層面啊，咁所以有時咧你用實體嘢，其實你又少啲有 *[17:00]* 啲突發嘅情況喎。即係例如可能你用 ICT 有時可能係電子故障，以往突然間哎呀部機死機啊，或者一啲事務問題，咁令到喺呢個教學會突然間終止咗。咁變咗你要，可能要小朋友要去等候啊，安排去做其他嘢，等老師處理翻呢件事之後再重新再帶領翻佢哋入主題。咁我覺得會有呢一啲電子科技嘅問題存在係啦，同埋第二就係使用 ICT 嘅時候，小朋友佢個呃操作嘅熟練度就未必好高嘅。即係因為你每次你玩嘅嘢唔同啊，係可能，係呃同埋有時呃可能會有啲，例如有啲新嘅 ICT 產品咁可能老師都需要去玩熟佢，跟住再教小朋友。咁所以我覺得係啦，都係呢啲方面。

唐：*[18:00]* 瞭解啦。另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TH：嗯（停頓）如果係講緊技術應用上面，我覺得其實大部分都係順暢嘅，因為喺應用 ICT 技術之前就正如啱先提過老師都必須要熟悉，咁所以喺我真係對小朋友應用嘅時候其實我已經確保我係熟悉㗎啦，因為我都唔想自己個課堂，因為我自己對科技上面技術嘅應用掌握唔到，導致呢一個課堂係要中斷，或者要癱瘓一陣，呢個係唔希望見到，所以事先我就自己係會摸熟咗呢一套係統。上一次我摸熟咗之後，中途有啲突發意外，咁我哋 *[19:00]* 學校都有，呃校務處一啲 IT 部嘅同事嘅，咁可以即刻打電話，佢哋就會過嚟去處理嘅。咁同埋 IT 同事佢哋都係專業嘅，佢對呢一啲嘅 ICT 呢方面啊，咁或者當中嘅 IT 技術，其實佢哋都係好熟悉噶啦，咁所以佢哋可以用好短嘅時間處理咗呢啲技術嘅問題。咁所以我覺得整體而言，就算遇到呢一啲技術嘅問題，無論老師熟唔熟悉處唔處理到，咁因為有呢一啲額外嘅 support 啊，所以我覺得係可以好短時間之內係解決到呢一啲嘅問題，咁都唔會係影響到課堂嘅進度嘅，係啦啊。

唐：*[20:00]* 明白。可以再分享多啲有關你使用 ICT 教學嗎？

TH：我覺得我學校有提供足夠 ICT 資源讓老師進行教學嘅。

唐：可以分享學校提供咩 ICT 資源讓老師進行教學嗎？

TH：每年學校佢都會出一份嘅問卷，問我哋可能課室想添置一啲乜嘢嘅教材啊，又或一啲係嘅電子產品，咁佢哋都會問我哋嘅。咁例如我哋，如果係，因為我哋之前咧就試過反映過可以使用 iPad 嘅教學。咁校長當時都試過係每一班加入一部嘅 iPad 俾我哋嘅係啦，咁所以都係有呢啲嘅支援係啦。另外話 ICT 資源俾老師教學呢，就每個課室都有就係啱先講嘅 iPad 啊，點讀筆啊，電子 touch Mon 嘅 screen 啊，*[21:00]* 係啦係啦大概係咁。

唐：跟住想問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TH：嗯，正如頭先所講小朋友健康啦，視覺啦，傷害到佢身體發展。我我成日覺得呃你用 ICT 去進行教學嘅時候，咁我覺得呃就會呃令到咧，即係可能我哋會用 ICT 我哋都會叫1至2位小朋友咁

出嚟去進行呢個活動啦。咁我其實我覺得咧，由於你係用緊呢個 ICT 進行教學，所以變咗活動嘅人數會受到限制。因為如果你係可能傳統嘅教學，你可能用繪本啊，用其他嘅教材啊。咁例如我可能會用呢一啲嘅傳統教材，我想整一場關於主題嘅戲劇 drama 教學喎，*[22:00]*咁我可以即刻用到好多小朋友，咁我哋可以出嚟去合作啦。咁但係如果 ICT 嘅話，因為只係用緊嗰啲電子產品，咁所以你通常都係1個起2個止，小朋友嘅互動性我覺得唔夠強。最多係反而係小朋友同 ICT 嘅互動變咗，咁小朋友之間嘅互動，佢嗰個社交發展互動我覺得係少咗嘅。所以我覺得呢一方面係喺 ICT 方面係不足嘅，即係對於小朋友社交發展方面我覺得。因為佢哋玩 ICT 嘅時候亦都唔會互相討論啊嗰啲啦，算係老師促成佢哋討論，但係其實佢哋最終做其實佢喺 ICT 嗰度做出嚟㗎嘛。其實好多時候佢哋都會係，只係一個個體去做，或者係2個去做，所以呢一個互動嘅層面我覺得唔高咯，係啦。

唐：*[23:00]*明白明白。咁最後想請問有什麼支援在學前教學中助你使用 ICT?

TH：嗯，我覺得，即係可能學校提供一啲有關 ICT 講座啊、教師培訓，同埋我覺得學校都真係可以定期都係，即係可能每一年都會問下老師，即係正如話啱先提過每年問下老師有啲咩嘅 ICT 嘅設備想增加啊。因為其實有時有好多老師咧佢哋都出邊有進修啊，同埋識得好多嘅同學，咁其實佢哋其實內心，自己都係有諗過咩科技啊係最適合小朋友嘅，所以我覺得可以詢問下佢哋。同埋而家係好流行（停頓）一啲嘅科學上面嘅教學，例如行 STEM 咁樣啦係啦，*[24:00]*咁我覺得其實 STEM 咧都係一個好嘅方法可以配合埋 ICT 嘅。因為其其實咧，兩者都係屬於科學科技層面，都好好相似，我覺得佢相輔相成。所以我覺得呢一方面都可以，例如校方可唔可以會整關於一啲又融合咗 STEM 同 ICT 呢一啲嘅技術啊，呢一啲嘅課程俾老師，係啦俾老師。然之後再請啲專業嘅相關人員，係去提供呢一方面嘅知識啊，同埋一啲嘅技術俾老師咧。然之後，學校覺得可行嘅話就可以嘗試去引入呢一啲嘅設備啊，咁你讓到老師可以應用喺小朋友身上，係啦，學校可以提供更多 ICT 資源啊設備啊，讓到老師可以更好地運用 ICT 進行教學。

唐：*[25:00]*嗯，好好呀。仲有冇其補充呢？

TH：係呢啲啦。

唐：好好，再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄25:19]

12.7 Teacher Z

日期: 2024年2月21日

時間：晚上8:24

地點：電話訪談

受訪者：Teacher Z（TZ）

采訪者：XXX（唐）

錄音長：31分鐘18秒

[00:00]

唐：你好！

TZ：Hello！

唐：好感謝你能夠參加呢個訪談，今次訪談係想瞭解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TZ：哦哦好好。

唐：先想問問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TZ：嗯（停頓）*[01:00]* 小朋友係教學過程之中可能運用一啲科技啦，可能一啲媒體上邊嘅嘢去幫助佢哋去學習，咁其實係可以提升佢哋嘅學習效益，係咯。因為，因為始終而家即係科技嘅時代啦，咁跟住小朋友接觸呢個電子嘅嘢亦都多咗，咁我哋都唔會再係即係好傳統嗰啲方法去教學囉。咁如果淨係用呢一個 ICT 嘅話就會，係啦，就會突破上就會可能（停頓），會用咗一啲 for 小朋友有興趣嘅嘢，去令到佢哋更加投入嗰個課堂，去刺激佢哋興趣咁樣。

唐：嗯嗯好好，可以再分享多啲有關你對 ICT 融入教學以及學習理解呀。

TZ：課堂上 *[02:00]* 我哋都會因應即係某一啲，即係即係一啲課題啦，如果真係適合嘅，咁我哋都會運用 ICT 進行教學，咁就唔係話成日，即係以我哋學校嚟講就間唔中啦。咁例如有個例子好似我哋嘅交通主題啦，咁交通主題可能咧啲小朋友我哋會講到可能由學校去到地鐵站，即係嚟到我哋學校嘅距離有幾多啦，用嗰啲咩方法去嚟啦，或者沿途會見到有啲咩建築物啦。咁如果淨係，淨係好抽象咁樣同小朋友講咧，其實佢哋就會即係好空泛，好似冇乜嘢可以（停頓）。即係可能以前嚟講，*[03:00]* 可能就係運用啲圖片，但係我哋嗰次咧就用咗即係 iPad 咧上網直接去用過個 Google map，跟住小朋友係有興趣囉。佢哋因為有啲爸爸媽媽可能有揸車，佢哋有經驗，有生活經驗就佢好開心話“啊係啊！我哋都有用 Google map 去 search 點樣行邊條路啊!”咁變咗佢哋就有呢個投入參與呢個討論。跟住之後咧咁我哋播俾佢睇，咁可能咧你 Google map 除咗文字之外，咁我哋都去變翻實景圖啊嘛，咁變翻實景圖俾佢哋睇，咁佢哋即時就，即係好有好有個種投入感啊。因為佢哋見到佢哋學校附近嗰啲建築物啊，啲設置啊，包括天橋啊，*[04:00]* 可能學校對面嘅公園

啊，由地鐵站行過嚟可能見到啲交通燈啊，或者即係佢哋熟悉嗰條過馬路嗰條路呢，佢哋都會好興奮囉，即係佢哋就會講好多嘢俾我哋聽。

唐：嗯嗯，聽到學生好投入課堂。

TZ：係啊，就會好投入啦。跟住哋亦都會再主動啲去分享佢哋自己生活經驗囉。咁有小朋友講“呃，我爸爸蕩失路啊都會用 Google 嘅。”（笑聲）係啊，就即係融入到喺呢度，係啊，咁所以佢哋都好好開心。同埋我哋都有另外一個呃課題咧，係講即係可能係一啲視像人士。視像人士咧去餐廳，咁佢 *[05:00]* 要點餐喎，咁就問佢哋咁佢哋睇唔到喎，咁即係話傳統嗰啲餐牌嚟講佢哋睇唔到啦，點唔到嘢食啦，咁點算呢咁樣？咁啲小朋友係諗咗好多其他嘅方法啦，佢哋會真係會講到“啊可能即係叫侍應啦!”“問侍應啊!”但係有啲有生活經驗幼兒就會講話“我用電話點餐囉。”係呀，好醒呀！跟住跟住我哋就再引申落去，就係話可能啲視像人士佢用電話但係佢睇唔到喎，咁樣點樣點呢？咁我哋就再畀多少少，即係鷹架佢哋啦，即係話睇唔到，但電話會唔會有啲錄音嘅功能呢？咁我哋就真係又係即時咧 download 一啲 apps 咧，跟住開俾佢哋睇點擊嘅時候，*[06:00]* 咁跟住原來咧例如 A 餐係咩？B 餐係咩？原來佢真係會讀嗰一版俾你聽㗎喎，咁跟住個視障人士就可以即係點到餐囉。咁小朋友就，咁佢哋嗰一堂嚟講就對佢哋嚟講就真係好似真係學咗好多嘢咁，係佢哋已有知識上面再學習咁樣囉。咁就我覺得呢一啲就係一啲可能傳統一啲方法，可能只係去輸入圖片係唔能夠做到嘅即時效果。

唐：嗯嗯，呢一堂課好有趣啊！

TZ：係呀係呀！

唐：嗯，好好。咁想請問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因。

TZ：嗯，咁幼稚園嚟講，即係 *[07:00]* 作為家長或者係老師都會覺得呃細個就唔好接觸咁多電子嘅野。當然即係融入教學嗰方面咧，我覺得都要即係老師都要適切地去用啦，同埋要掌握個時間段啦。咁我哋始終小朋友返去實體嘅學校度學習嗰樣嘢咧，其實都係即係去學下點樣社交啊，點樣同人相處，呢樣嘢好重要嘅。咁但係你話佢哋係咪都可以用一啲 ICT 去即係去學習咧，我都覺得其實如果適時嘅，即係可能老師可能會喺側邊度即係可能設定可能20分鐘咁，即係時間控制得好嘅話咁 *[08:00]* 其實小朋友都係可以自己去運用呢一個 ICT。因為，因為我哋即係有一啲實際嘅例子都覺得小朋友係，我哋擺咗電腦角咧係個課室入面，咁就會播放一啲例如有一啲可能關於個主題嘅一啲片段啦，咁可能都係短短嘅10分鐘或者咩，咁就讓小朋友去輪流佢哋去自己會去操作，可以睇啦。咁其實小朋友係，係另一個，即係因為有啲小朋友係中意即係可能（停頓）圖片啊，或者音樂啊，或者有啲聲音吸引佢地去學習，咁又係有啲小朋友係會咁樣學得特別快嘅。咁所以就因應唔同個小朋友，咁其中一個角係電腦角，咁我覺得都係 *[09:00]* 因材施教囉，係咯，有啲小朋友。咁我哋有個例子咧就係，我哋有時候咧都會錄低小朋友，可能即係做訪問咧，我哋會讓小朋友扮記者啦，即係我哋都想發展佢哋嘅語言發展。咁所以咧我哋就 set 定一啲情境嘅題問啦，咁佢哋真係會咧會講話“啊如果發生，例如你去想去遊樂場玩，咁但係你突然間落雨喎，咁你嘅心情係點呀？”咁啲小朋友就會答翻佢，可能我覺得好傷心，或者咩，咁我哋就錄低佢哋嘅對話。錄低佢哋對話之後擺喺電腦角嗰度咧，就俾小朋友自己去 Play 囉。

唐：即係俾佢哋自己聽翻同伴嘅對話？

TZ：*[10:00]* 係呀，聽同伴訪問。因為咧佢哋，即係我哋會揀啲咧可能說話好叻嘅小朋友，即係訪問嘅內容好豐富嘅小朋友做一個 model，啊佢哋好值得你去學習睇下佢哋識問問題喎，佢哋會咧識得點樣用啲咩嘢會去問喎，佢哋會問你嘅心情係點樣喎，又要識得運用啲情境，你哋又可以去互相學習。咁啲小朋友睇完之後咧，佢係會即刻好有興趣就自己翻去角落嗰度咧扮記者咁樣咯。

唐：咁可以激發到佢哋學習興趣？

TZ：係喇！*[11:00]* 咁所以都係一個同儕互相去學習，互相激勵學習。咁所以我覺得即係老師，即係可能係運用 ICT 上邊都係適切地，適時啦（笑聲）去運用，咁就其實都 OK。咁小朋友其實，即係有一啲因素其實你唔會即係話放佢喺嗰度，但係控制得好嘅話都係一個好好嘅媒體囉，係囉。

唐：你剛才提及到適切使用 ICT 進行教學，可以再分享嗎？

TZ：（停頓）我睇過咧，即係如果你話 for 啲小朋友睇一啲電子嘅嘢啦，或者運用 ICT 啦，有一啲研究就講過你最好就係即係20分鐘之內一定要叫佢哋休息咯，係啊要叫佢望向遠嘢，或者咩。如果 K1嘅話，可能時間就 *[12:00]* 再短啲啦，可能10分鐘啦，係囉。咁可能都即係，咁你可能叫佢休一休息，咁去玩下其他角落啊，去同人哋即係玩下，一齊即係面對面講嘢啊，玩下其他積木啊，學與人相處啊，跟住再去返角落度，我都覺得即係好 OK 嘅。又或者有時候老師播一啲影片，其實都係會揀嗰啲通常唔會太長嘅片段俾佢哋睇囉，我諗10分鐘以內嘅會適合啲係囉。

唐：想問你只播放10分鐘的影片係一日入邊計算嗎？

TZ：一日裏面（停頓）啊我諗係一個，一日裡邊你話即係如果3個鐘頭喺學校裡邊，10分鐘睇影片就差唔多咯。

唐：好好。

TZ：咁半日制一個星期，我覺得 K2用 ICT 嘅時間 *[13:00]* 可以長啲。（停頓）我諗如果 K2，K3如果3個鐘頭裏邊，K2 可以係20分鐘啦，K3 最好係30分鐘之內啦，太長啦，好長㗎啦其實（笑聲）。

唐：好呀好呀。跟住之後你可以分享你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TZ：我哋都會，係啦。如果你以為使用個頻率，每個星啦係囉，每個星期，例如如話係一啲 set 場地嘅活動嘅話可能，可能係一節啦，一節啦平均係囉。即係平均一個星期嘅話就會有20分鐘 *[14:00]* 運用到 ICT 進行教學。20分鐘入面可能會用電腦啦，一啲影音啦，係啦係啦，一啲可能一啲錄音呀，錄影嘅器材都有。

唐：可以分享使用 ICT 進行教學的方式嗎？

TZ：呃小組咧都會嘅係啦，咁老師即係播放俾小朋友睇亦都會啦。咁但係如果你話小組裏邊咧播畀小朋友咧我哋都會係即係擺喺個角落裡面，咁佢哋就自己去撳囉，自己個輪流，係啦。咁呢一個如果你講恆常嘅電腦角，咁我哋就會講話嗰個主題裡面都會擺，咁但係小朋友入去嘅頻率就睇翻佢哋中意嘅程度，*[15:00]* 有啲就好中意就成日入囉，但係有啲就係囉，有啲都要鼓勵之下先入。

唐：好，明白。跟住想問有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TZ：嗯，我覺得都會運用嘅係啦。咁個原因就係真係一啲可能啲動畫，或者係一啲聲音上面，其實係會吸引到小朋友專注嘅。咁因為咧其實係嗰個，嗰陣時疫情之下呢我哋咪會上網課嘅，你上網課嘅時候呢我哋就成日都會用到呢一個，呢一個即係上網呢用一啲 PowerPoint 嘅形式做一啲動畫，同埋一啲聲音呢去講故事。咁小朋友呢，動畫上面呢佢，即係我哋設計到佢哋有動畫會識郁啊，加埋 *[16:00]* 老師配音配音落去，即係當場去演繹呢個效果，其實你會見到係生動過你就咁樣用即係可能係書本咁樣。咁所以都覺得睇情況啦，有時候係可以借用 ICT 我覺得都可以係運用到嘅，同埋特別係一啲唔同嘅遊戲，咁其實小朋友即係如果用 ICT 去幫佢，咁其實佢有令到佢有學習興趣，有吸引到佢哋專注力，又可以令到佢哋即係提升佢哋嘅學習效益嘅話，咁我覺得呢個都未嘗不可嘅。嗯，所以我個人都好支持用 ICT 去教學。

唐：嗯嗯。教學時你有什麼情況下唔選擇用 ICT 進行教學？

TZ：唔用 ICT 嘅話（停頓）*[17:00]* 我覺得用實物囉，實物係囉。如果用一啲實物可以展示到可能做，即係小朋友俾佢摸啊，可以俾佢聞到啊，咁可以甚至乎可以操作到去做一啲實驗嘅話，咁就當然好過即係淨係用 ICT 呢啲去運用。因為佢哋真係可以親身去操弄到啊，係囉，去觸，去體驗到，咁其實呢啲係即係現實裏面佢哋可以用到嘅囉。咁幼稚園階段係真係需要呢啲多啲嘅，因為多感官學習啊嘛，係咯。我話抗唔抗拒用 ICT，我覺得唔抗拒嘅，我覺得呢個都係時代嘅進步嘅，有時候你就運用呢啲嘢囉，係囉。

唐：另外想問 *[18:00]* 你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

T3：嗯，咁都會有嘅，係喇。咁就可能係一啲學校一啲電子器材上面（笑聲）係囉，唔係好足夠咯。咁同埋，又唔係運用好多 ICT 嘅。咁自己去製作嘅時候就覺得真係喺時間上邊花費嘅心力咧，各樣嘢都有。同埋咧，你自己可能一啲 IT 嘅知識都唔係話好足夠，咁所以嗰陣時就真係花好多時間去研究，嗰啲咁嘅嘢係囉。遇到一啲困難咯，即係但係，但係可能相反就係嗰個階段就自己熟咗就識下識下咁又識啲喎，又識啲效果喎，又識得運用點樣喎。

唐：嗯，自己 *[19:00]* 進行摸索 IT 技術？

TZ：係啊摸索咗啲技巧，咁就會又好似幾好係囉。如果話將 ICT 擺入去我教學嘅課堂入邊，又唔會話好難。其實學校都好彈性俾老師嘅，咁有啲老師即係可能會熟悉 ICT 可能去運用，即係你包括可能係一啲影音器材都得㗎嘛，係囉。咁可能運用得好好嘅話，其實嗰一節嘅課堂同小朋友嘅，即係氣氛啊，學習氣氛啊，佢啲呃佢一啲投入感其實真係會多啲。例如我哋啲音樂課呢，其實佢哋會用咗ICT係播放一啲視覺上邊呢，即係有隻公仔可能跳低高低高低音咁樣呢，咁小朋友 *[20:00]* 就視覺上邊加埋個個音響器材，就有啲有啲聽覺上邊嘅刺激呢，咁佢哋拍嗰啲節奏又會準好多好喎，佢哋真係會係會係呀，係一個好好嘅即係運用囉。所以你話運用上面有冇啲話即係好需要用，但係又自己遇到啲咩困難，（停頓）就就只係事前嘅準備囉，就真係事前準備係啦。但係如果你話事前計劃得好嘅話，其實運用 ICT 其實我反而見到好多，即係見到好多益處，見到都幾好呀，個效果又好過傳統嗰啲就咁樣嚟打拍子啊，咁樣用啲嗰啲 *[21:00]* 樂器咁樣就咁打，咁又好唔同囉。但係你如果即係現場播翻啲，用翻啲即係可能個 screen 又俾佢哋睇到一齊打到拍子，一啲韻律俾佢哋摸到，咁其實咧成個氣氛係好好嘅。我覺得 ICT 比嘅視覺提示，同埋佢啲動畫可以幫小朋友有效地學習。佢哋係嗰種感覺上邊係抓得到更加好音樂堂打拍子，整體投入嘅氣氛都好好嗯。

唐：瞭解啦。另外想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TZ：啊（停頓）可能 *[22:00]* 喺嗰個，即係試過係個音量上面控制啦，例如有時候呢啲儀器會失靈啦（笑聲）。呢啲特別嘅情況都試過係囉。同埋可能疫情之下我哋都試過即係用，即係上網課嘅時候咧，遇到嘅困難可能就會多少少。即係可能咧你要分享畫面啦，跟住會俾佢哋睇到你嘅動作啦，跟住睇到你嘅表情啦，咁係囉咁就係個操作上邊咧，老師係會即係要慢慢摸熟囉，又係由初初唔係好識到後尾就要熟悉咁囉。而學校方面咧會為老師提供電腦啦，每個課室都有一部係啦，咁跟住 *[23:00]* 錄音器材，係攞啲錄音筆，每個課室都有嘅係囉，啲擴音器咧就少啲啦，所以有時候播嘢俾小朋友聽嘅時候可能真係會太細聲，咁所以我哋都要借，即係可能要自己自備囉，可能自己自備嚟音器啊，咁樣俾小朋友聽到係啊。同埋有時候可能有時候要小朋友操作得好啲，咁學校暫時就唔係個個課室都有 iPad 嘅咁，可能我哋又亦都試過自己借 iPad 俾小朋友，即係咁囉。

唐：哦，因為學校提 *[24:00]* 供俾老師進行教學嘅器材不足夠，所以老師自己自備一啲 ICT 嘅器材？

TZ：係係係。

唐：明白。跟住想請問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TZ：嗯，顧慮小朋友健康嘅影響啦，眼睛啦，所以會限制下佢用嘅時間。咁你話仲有冇啲嘅顧慮，可能係一啲家長咯係呀。咁因為例如呢有時候呢，你會運用一啲即係我哋叫做視訊學習啦，有小朋友話“我媽咪唔畀我睇電視㗎，我媽咪話唔可以睇。”係呀咁，咁可能就係佢哋喺屋企可能 *[25:00]* 有啲家長，即係可能如果返屋企聽到小朋友返屋企分享話“我哋今日有網上學習，咁我有睇電視。”咁可能家長會話啊“點解老師會畀呢啲你睇㗎？” 咁可能呢個就係嚟自於家長接受嘅程度啦，咁我覺得即係有顧慮嘅，即係可能有家長唔係好接受呢樣野。

唐：有冇話其他顧慮或保留？

TZ：（停頓）有啲咩顧慮啊？唔係咁明白。

唐：如果你係教學中使用 ICT 一啲 *[26:00]* 設備進行教學，你有冇顧慮或保留，可以係幼兒方面或教學也可以。

TZ：呃，係啊係啊，所以頭先就係講話喺課堂上面有啲咩嘅，融入 ICT 嘅時候要顧慮啲咩就係老師要控制個時間咯，係咯係啊。所以都係頭先我講嘅，要安排得適宜同適切，咁就係咯。咁學校嘅，即係喺個學校一個實體去即係一啲，即係去面對面去學習，或者係去互相交流去學習，討論去學習，其實呢一個係幼稚園需要嘅嘢囉。咁你用 ICT 就忽略咗囉，係咯。但係 *[27:00]* 你話完全唔用，我都覺得係呢個社會冇可能咯係咯，因為時代嘅變化。

唐：最後想請問有什麼支援在學前教學中助你使用 ICT?

TZ：嗯，咁我覺得講緊可能係學校，即係可以支援多啲 ICT 設備啦。咁都知道咧教育局都會有一啲即係可能一啲撥款 for 你去買電腦器材啊，影音器材啊，係真係有啲係 for 你去發展呢一啲 ICT 教學嘅係咯。咁我覺得，但係佢做嘅咧，佢係每間學校都有即係分類型去資助嘛，按你 *[28:00]* 即係小朋友嘅人數去做，咁我覺得有時候有啲細校咧，細校你仔少，咁所以佢分到嘅資源就少咯。所以老師遇到嘅咧就係，即係可能需要自己去借出啲器材咯，係啊。即係好似我地學校咁樣，即係仔好多啦，但係可能佢都會分配得都唔平均㗎，可能因為，佢會可能有啲高班嘅可能佢用嘅電腦器材會多啲喎，但係幼兒班唔係，即係會咁樣。呃，個電視可能真係一個即係，幼兒 *[29:00]* 班

可能係幾班先可以有一部咁樣囉，係呀咁呢個就係囉，就係所講嘅即係政府學校可能都需要社會大眾去支持同資助。

唐：你剛才提及到技術上的問題，咁你有冇話想係呢一方面得到咩支援？

TZ：我會希望學校可以提供一啲相關 ICT 培訓俾老師，其實我覺得係絕對需要啊。因為始終我哋專業唔係 IT 出身，好多 IT 上邊嘅嘢，甚至乎係唔係 for 教學可能係 for 你自己，可能 for 我哋 *[30:00]* 自己備課呀，或者係呢學生 portfolio 啊，其實我哋都係好需要用到呢啲 IT 技術。但係我哋啲，即係需要我哋嘅 IT 技術呀，我哋啲個人嘅 IT 知識真係唔係好夠，所以真係有培訓會好好多囉。甚至可以係為老師提供到校培訓，到校培訓就全校都得益啦，係啦（笑聲）。

唐：嗯嗯。

TZ：如果到個別機構培訓，咁就彈性啲囉，邊個老師得閒啲就可以去囉，係囉，就彈性。即係 *[31:00]* 如果話方便老師就梗係到校培訓啦，因為老師教學都好繁忙。

唐：嗯嗯，明白明白。仲有冇其補充呢？

TZ：冇啦。

唐：好好，再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄31:18]

12.8 Teacher G

日期: 2024年3月3日

時間：下午4:44

地點：ZOOM 線上訪談

受訪者：Teacher G（TG）

采訪者：XXX（唐）

錄音長：29分鐘09秒

[00:00]

唐：你好！

TG：你好！

唐：好感謝你能夠參加呢個訪談，今次訪談係想了解香港學前教師在教學中融入科技教學的看法，以及降低教師實施融入資訊通訊科技教學的因素。訪談中會提及到 ICT 呢個單詞，係訪談中 ICT 被定為任何資訊通訊科技支持學前教師在課室裏進行教學以及促進幼兒的學習。

TG：嗯嗯。

唐：先想問你對資訊與傳播科技 ICT 融入教學以及學習的理解係？

TG：我諗係個支援嘅狀態嚟嘅 *[01:00]* ，我諗係讓到可能喺幼兒方面可能有啲嘢我哋唔喺課室裡面成日都見嘅，可能係源自係一啲呃海外嘅物品啦，或者一啲現實嘅圖片嘅時候，我諗係讓小朋友可以同呢啲物品去挂偶，讓佢哋呈現到喺面前之後咧，讓佢有更加多嘅理解同埋引起佢地嘅興趣。

唐：咁之後再想問你認為學前兒童適唔適合使用 ICT 設備，以及用 ICT 進行學習活動？可以講吓原因。

TG：適唔適用同埋適唔適合係咪？

唐：係。

TG：適唔適用，喺疫情過後應該都好適用㗎喇，咁係喇我都覺得，咁只不過係反而係因為點讀筆呀，iPad 呀嗰啲嘢啦，咁但係可能有啲再穩固啲可能有啲投影嘅器材嘅時候，就可能要老師幫手設置囉，就可能係一啲 sensor 有嗰啲感應器嗰啲 *[02:00]*，咁嗰啲我都覺得佢哋唔會陌生嘅呢樣嘢。而適唔適合呢，呢個哲學問題嚟㗎喎（笑聲）。呃（停頓）適唔適合，我，我覺得呃好考個老師嗰個嘅功力，或者嗰種嘅應用嘅，即係嗰個 percentage 嚟講。啱啱我開頭都講嗰個係一個支援嘅狀態，呃（停頓）引起動機為主。即係我諗老師可能喺無論係教學上邊，特別喺我地幼稚園啦，即係人們教育裡邊啦，佢哋好因應小朋友佢哋嘅回答而去做啲反應，而嗰啲回答可能通常都會唔係事先已經知道咗或準備好嘅。咁所以，我覺得佢哋適合去用，但係老師拿捏或者佢哋去同佢哋去

嗰個叫咩嘢咧（停頓），預先去話俾佢聽呢個 *[03:00]* 通途係乜嘢嘅時候，唔好令到佢哋沉迷咗落去咯，我諗呢個係最難拿捏嘅地方。適合嘅適合嘅，只不過就係點樣用係功能同功力之下咯。

唐：明白，咁聽到你頭先講話佢哋都適合用呢啲 ICT 嘅設備去進行一啲學習嘅活動啦，但係老師拿捏道都好重要，可以再分享下嗎？俾小朋友用 ICT 設備去進行學習嘅時候老師又係一個咩角色？

TG：呃好睇嗰個性質所在啦，即係呃可能簡單到啊唔係喎，我哋可能係幼兒班嘅時候淨係俾佢用一啲相機嘅操弄，或者將一啲嘅呃已有認知嘅，佢 multiple choice 俾佢揀， 咁呢啲就係一啲簡單嘅操弄度。可能去到高班，咁佢時間可能喺角落上面，或者可能喺組織活動有少少嘅分享，我覺得都 OK 嘅。咁而高班嘅層面，就係可能佢哋可以用 AR 嘅設備啊，*[04:00]* 佢 sense 嘅，可能佢要跟住佢 scan，scan 嗰間房嘅一啲位置咧，我諗呢個位佢哋操控都容易嘅。而且可能 iPad，可能都有啲重量，佢要拎佢重量嗰個安全性啦，呃部機嘅安全同埋小朋友嘅安全都係重要。

唐：嗯嗯。

TG：咁呢啲位我諗可以慢慢遞增上去，係啦係啦。但係可能呢個位老師要做多一步嘅，就係個拿捏就係要同學校，校方或者同家長去表明度，呢件事我哋用呢個資訊科技設備嘅時候，我哋嘅用意，同埋佢地可能之後家校嘅合作咯，呢個可能要去睇一睇就要。

唐：你可唔可以分享下你會使用咩類型 ICT 設備融入教學以及使用頻率係？

TG：*[05:00]* 嗱我之前都有睇，兩年前我都有試過一啲唔算好 update 嘅嘢嘅。咁呃如果要用嘅話嗰陣時真係可能用 AR 去整咗一啲嘅，嗰啲叫咩咧？（停頓）睇翻環境上面有啲咩轉變，可能將嗰個實物可能將你學緊嘅魚啊，或者啲建築物咧投影出嚟，佢哋揸住部 iPad 咧就可以見到喺現場見到，啊好似好得意咁樣喎。而當時我哋都有 proposal 過，不過呢個冇用過，就係一啲揸鐵路啦，交通主題，又或者係體能活動嘅時候去加入一啲呢啲可能好似 play room 嗰啲咧，掉波波佢會中咗嗰啲位 ，咁呢啲都係喺，呢兩個係之前有傾過但係最後冇實行到，因為硬件嘅問題咁樣。*[06:00]* 咁呢啲元素啦，咁最簡單就可能係 circle time 嘅時候，當日組織活動可能講咗一啲 topic，可能老師都唔肯定或者老師扮唔肯定嘅時候，唔識嘅時候，我哋點樣共同去去學習，用 Google 啊，用其他嘅軟件去搵出答案，讓佢哋搵出真正解題嘅方法囉。即係佢哋有好多唔同嘅問題，但係你係咪下下都要問到老師或者問家長呢，定係要有個 Google search engine 嘅時候，你都能夠用到呢件事咧。咁可能到到好似我仔仔咁樣，佢知道咗，即係我仔仔好中意玩呢啲嘢嘅，咁呃但係但係要點樣玩得多，就係可能佢自己開始可以設計一啲，佢成時出 IQ 題或數學題考人哋。咁不如預期咁樣 *[07:00]* 就不如你自己 create 一啲遊戲，打出 multiple choice 問人地4加4等於幾多呀？可以 A 係乜嘢。咁打完之後，佢去畀人哋玩，咁呢個都係一個互動性，咁呢個教學就變咗我同我仔仔嘅教學啦，就係我唔係個仔班主任咁，反而呢啲位就讓佢哋都好似好成功咁咁樣，同埋呃唔需要佢哋嗰種操弄同埋邏輯思維，起碼上面係會高啲。又喺另一方面，佢喺問人哋啊，同人哋社交方面都多咗個技巧囉，係囉就係咁樣。

唐：咁一個星期入邊你試用 ICT 教學，有冇話大概幾耐？

TG：（停頓）我諗我諗呢個好唔同，但係我諗呃次數咧，因為我哋有組織活動同 circle time，我諗一個禮拜可能都有（停頓）四五次 *[08:00]*，我諗四五次，但係喺個唔係話好 on purpose，即係唔係一個組織活動入邊一定要用嗰樣嘢嘅。只不過係因為佢哋嘅回答，佢哋角落都玩，所以先有，所

以呢個位係4至5 次咯係咯。可能1日仲有2至3次，因為就有個 circle time 同組織活動都會掛鈎到係啦。一日反而唔算太多，我諗係引起咗個動機或者教方法之後呢，有時我都會引領翻去個白板度，因為始終用電子產品唔算話最耐，我諗我諗5分鐘係最多係啦。呃咁呢個要撇除翻體能活動啦，因為體能活動係25分鐘，我諗20分鐘內佢都會有用 ICT 咁係啦，包括 LED wall 展示場景， 另外老師會用 iPad 播歌。*[09:00]* 所以基本上平時就用5分鐘內啦，嗯。

唐：剛才你提及到運用 ICT 設備進行教學，可以分下最常用嘅一啲 ICT 設備。

TG：iPad 我諗都走唔到啦，咁樣 iPad 都比較便携性，同埋通用性大啲。呃（停頓）點讀筆咧，嗰陣時咧我哋本身咪有啲 Longman 嗰啲書，我哋可以用嘅，咁高班級用都多嘅。咁之後就發現咗啊，原來認字卡都可以去使用，我哋就自己 tailor made 校本認字卡，認字卡上設計一個角，喺度咁樣就嘟番落去聽番。咁又或者啲音樂書，故事書，佢自己錄完之後自己設計返，咁呢啲啲都係點讀筆同 iPad 係最，對佢哋通用性或者 *[10:00]* 係佢哋操弄性嚟講係比較高啲。

唐：明白明白。咁我想問下有啲咩因素會影響你使用 ICT 融入教學？以及唔用 ICT 融入教學？

TG：（停頓）用呢就一定係，呢個趨勢，時代都變緊喇。即係我諗好普遍地而家連小學都用電子書，書都用 iPad 嘅時候，或者係更多嘅比較高科技嘅資訊嘅時候。呃我諗嗰個學習模式變咗，唔會好似以前咁樣去死記爛背，已經係另一代嘅一種學習嚟嘅。真係，所以用嘅時候，我諗係喺幼兒方面係讓佢哋去貼近呢個社會，因為佢嚟緊呢個未來嘅趨勢。 但係日後 *[11:00]* 我哋究竟點樣鋪排佢哋嘅思維呢？係咪唔識操弄就唔得呢？咁而家 AI 都轉埋可能你淨係講就得啦，咁但係嗰種嘅原理，可能佢哋都需要或者解難能力，其實啊有時我都教小朋友 Google map 好緊要㗎，咁但係其實原來以前我哋係有 map㗎喎，即係我哋要搵地圖先揸喺度車㗎嘛，咁但係呢樣嘢就係（停頓）有啲矛盾就係唔用啦，呢個就係。因為書，書其實係有一種對眼睛冇咁大傷害，而佢懂得可以再繼續批判思考用嘅嘢。因為，因為 AI 或者訊科技啦好方便，但係如果有人錯誤或誤用，或者係佢哋唔識篩選嘅話咧，呢個都好大件事，呢個都。*[12:00]* 咁所以唔用都係咁嘅原因，我成日都，我自己都會好鼓勵小朋友睇書，我自己都會有本書係身係啦，而佢地都會有模仿咯。咁所以，如果諗係教學上面就引起興趣咯，同埋與時代接軌係最主要個 point。咁而唔用就係，我諗暫時書本都係我自己最好嘅朋友，咁所以希望佢哋都可以延續呢件事囉，嗯係啦係啦。我嘅立場（停頓），我諗我會用資訊科技並要融入去教學嗰邊，因為時代一定係咁轉㗎啦，咁只不過老師嘅拿捏，由頭到尾都係呢樣嘢，家長同老師嘅拿捏，你係咪鷹架緊佢？定係你其實係想有啲 me time 時間，或者你想唔想佢騷擾住你，咁呢樣嘢就係另一回嘅事囉，係啦。

唐：*[13:00]* 明白明白。咁即係你唔用 ICT 去進行教學嘅時候，你就會比較想一啲實物？即係好似實體書啊咁樣，因為 ICT 替代唔到呢實體書俾小朋友帶嚟嘅好處？

TG：係你啱嘅，係呢個方向。我諗緊可以點樣去再概括（停頓）可能始終幼兒嘅教育，我哋好多時都會喺一件事上面分析更多你嘅觀點，或者你哋會唔會係以生命影響生命，而呢樣嘢反而我覺得係最未能夠去取代到。即係如果佢淨係對住部電腦去學習嘅時候，究竟呢件事嘅分析係咪有更多元化嘅解決方法呢？呢個就要靠老師嘅本質咯。我諗我諗生命影響生命，反而係我係教學上面嗰個理念上面係比較重要，*[14:00]* 如果我唔選擇用 ICT 嘅時候，呢個係一個最大嘅因素咯。

唐：明白明白。咁我想問下你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TG：一定一定有，即係我諗係你要點樣同唔同年代嘅，即係唔同資歷嘅老師去去分享呢件事情，同埋教佢哋運用咯。即係一個老師可能有唔同嘅咧，可能你有你嘅叻處，我有我嘅叻處，咁但係運用資訊科技唔一定係所有人都好叻。咁而資金一定係好好好現實嘅嘢嚟㗎啦，學校有冇呢個 funding 去用，喺學券嘅，我哋資助學校啦，咁究竟係咪真係可以用得其所呢？雖然有好多分 funding 嚟講。咁同埋要說服一啲老師去運用，同埋要拿捏嗰個嘅平衡 *[15:00]*，我諗呢樣嘢係反而係比較困難啲咯。唔好意思我唔記得條問題。

唐：你使用 ICT 教學時會唔會遇到困難啊？可以舉例子。

TG：操弄就少啲嘅，因為其實係好多支援嘅，即係上網已經搵到好多唔同嘅操弄方法。只不過係要準備，準備俾全級嘅老師嘅時候，嗰種嘅嘢咯。嗰陣時因為我推出嘅時候都未係好普及喺幾年前咁，所以都係我自己用為主。咁隔籬嗰個見到，即係你自己用完之後，隔籬個老師都見到啊都好似幾好喎，咁就慢慢去分享咯。我諗嗰個傳遞上面如果比喺年資較深嘅老師嚟講咧，*[16:00]* 佢哋我諗嗰個方法會比較花時間啲。但係你話可能新一代老師啦，已經好熟悉嘅時候咧，我諗嗰個火花會大啲同埋比較會快啲有功效咁樣咯。始終學校都喺個小社會，你都要將佢慢慢融入。

唐：嗯嗯。咁我想問你使用 ICT 教學過程中會唔會遇到技術問題或限制？

TG：遇到嘅技術困難呢，真係好多時都會搵唔到，不過係時間。我諗我諗比較花時，我諗呢個 point 就係比較花時間去做前期嘅組織。例如話你因應今次學習帝王蟹嘅，即係可能動物主題，你點樣喺一個，你要你要好快地篩選邊啲 apps *[17:00]* 或者邊啲用具佢係可以幫到你入去。咁而如果當你會揀選咗之後，你仲要 tailor made 一個帝王蟹嘅一個身體結構啊，或者一個環境當中，或者做一啲 questionnaire 啊去引佢哋去玩小遊戲嘅，呢個工序都比較花時。而如果係可能係一班或者級裏面一個人做嘅話呢，就可能會吃力啲，咁所以如果好似話，有更多人會認識呢樣嘢嘅時候，慢慢慢慢長遠落去呢，我諗花嘅時間可能冇咁吃力，因為大家已經好上手，同埋多啲人合作囉。我諗如果喺我哋學校，學校個成個氣氛，氛圍同認識多啲咯。如果講培訓啦，或者係資源嚟講唔算高嘅我自己覺得。*[18:00]* 因為如果如果我記得嘅話，我幾年開始都用緊自己設備去做，因為自己中意，咁但係學校慢慢慢慢接受緊嘅我都覺得。因為我諗喺政府啦，日後學院啦，或者係後輩啦，後輩嗰種嘅投放嘅心力都多咗好多，咁讓大家都見到啊真係好啲喎。但係我諗多啲 assembly 或者成功嘅例子分享，大家去 share 多啲咧，我諗佢哋會即係大家都會接受得好啲咯，同埋都會事半功倍咯。

唐：嗯嗯。仲想了解下你會唔會有運用 ICT 教學時唔順利嘅例子？

TG：都有運用 ICT 教學而唔順利嘅例子，即係可能佢更新完之後就企咗喺度嗰啲都會有。所以其實比較花時，其實就係你唔能夠完全依賴佢咯係啊。即係我哋要彈性咯，同埋你有個 A and B plan 咯，即係呢個 A and B plan 其實你係做多咗㗎。你要用 ICT 呢樣嘢你 plan 好曬所有嘢 *[19:00]*，但係其實你個 B plan 就係原本嘅嗰種教學，你仲要有實體嘅 materials。咁所以呃，點解我成日都講緊係引起動機，或者係去解決問題方法？因為呃你係最實在嘅資產，即係老師係一個實在嘅資產，嗰個靈活性，又或者好好彩我哋學校嘅，就因為我哋一班最少都要2個老師。我即使試唔到啦，俾另一個老師試嘅時候，我哋都可以繼續去做個課堂先。即係可能 A 老師同埋 B 老師呢個狀態，即係讓到你可以 smooth 啲，但係呢個人手比例我諗唔係間間學校都係有啦係啦。咁同埋，係咯呢個呢

個位反而係你要叉夠電，或者嗰啲器材叉電器嘢真係啱呢部機嘅時候，呢啲位都要都要去面對呢啲嘅事。

唐：*[20:00]* 瞭解啦。咁之後就想問你對運用 ICT 融入去學前教育會唔會有顧慮或保留？

TG：顧慮（停頓）顧慮係佢眼睛，我好我好著意佢嘅眼睛嘅，係啦係啦健康問題。又或者佢會唔會依賴咗，甚至係有個藉口沉迷咗。我諗 addition 呢件事都係比較喺現時會比較普及啲，係啦係啦。咁呢個嘅位同埋家長配唔配合啦。我諗係學校同家長配合呢件事都會遇到（停頓）反而都會係顧慮嘅嘢係喇，所以 parent education 都可以係一個呃，一個議題嚟嘅我自己覺得。即係你嘅成功例子之後，你分享俾家長，你再 provide 一啲方法讓喺屋企繼續鞏固你學咗嘅動物知識啊 *[21:00]*，交通知識啊嘅時候呢。即係你如果呢個 apps 可以 share 就更加好添，但係呢個好客觀做法。同埋唔係個個屋企資源狀況都好好嚟講，so far 我哋學校就好啲，佢哋大家嘅資源上面都係 OK 嘅。咁但係如果去到一啲某啲嘅學校嚟講，你知道配套係唔一定唔足嘅時候，咁嗰啲時候就可能會變成個障礙咯。好，好受環境因素影響呢個都會係啦。但係我自己覺得你播咗種囉，即係小朋友我哋成日都話有問題我哋就可以嘗試喺書本，或者喺網絡上面搵答案嘅時候咁呢個解難嘅種子就攞咗去佢度咯。即使佢可能真係好似冇呢個資源喺屋企嘅時候，我諗升小學後或者中學佢都會緊記 *[22:00]* 老師教嘅嘢囉。咁呢個反而就係（停頓）有另一種嘅阿 Q 精神啲嘅講法咯（笑聲）。但係好現實嘅嘢嚟嘅，播種呢樣嘢。

唐：嗯嗯。剛才你提及到幼兒使用 ICT 進行學習時你會對佢地健康有顧慮，可以再分享下嗎？

T2：我諗如果半日制一星期的話，K1用 ICT 進行學習活動，我5分鐘都都算係一個比較我自己嘅尺度嚟嘅，我諗高班時間上面佢哋可能會多少少，5至8分鐘。因為如果喺一個組織活動25分鐘啦當佢，又或者角落活動入面，佢可以多過5分鐘用住一部機嘅話呢，我自己覺得係會比較多嘅，如果 over 呢個時間嚟講。因為佢仲有好多嘢，因為如果入咗去一個電腦產品，佢好吸引佢 *[23:00]*，無論係顏色呀動畫呀，或者其他嘅佢都好吸引。但係就會忽略咗同人同人之間嗰種嘅相處，即係我不斷成日強調就係生命影響生命，佢可唔可以喺佢玩完之後佢再附帶一啲嘅活動，係要同朋友分享嘅。我諗呢個係有少少係規定，特別係幼兒班。即幼兒班點樣操弄，可能佢可以熟習操弄點樣用相機去錄低，或者影低，可能錄低朋友分享嘅成果都可以。例如，你試下認字，我錄低你咁樣。呢啲位就係好短嘅認字，你讀5個字6個字，你唔需要好長時間，我諗呢啲就係讓佢引起個興趣咗，同埋對部機唔會太過陌生，或者唔識操作住先囉，係。*[24:00]* 而高班就可以多啲嘅變數囉，但係一定要去捆綁住，係個課程裏面老師要諗得再仔細啲，係咪真係完善地運用到？定係俾佢玩咗就算咧？咁呢樣嘢就要去試下咯。可能有龍虎榜嘅，可能係遊戲嘅時候去到計分，噢你答啱咗邊幾條呀？呢條我錯咗呀！佢又得喺 circle time 裏面勾番個重點出嚟，讓老師可以再 elaborate 咗落去嘅，咁呢個反而係教學嘅最主要囉。所以成日強調就係資訊科技係輔助，同埋引起興趣，呢個係我諗係我自己比較大嘅重點。

唐：明白明白。咁最後想請問有什麼支援在學前教學中助你使用 ICT?

TG：哇好闊呢件事！喺學校我諗係對老師嘅硬件同軟件嘅支援都需要嘅。即係好似 *[25:00]*，講得唔係可能個個都有呢啲電子產品佢可以做到一啲教學，即係可能你話呀一級有一部，你可以自己去用咁樣，咁但係係咪真係擺喺度就即刻整到呢，都要啲時間用。咁所以喺，其實喺我哋學校都係㗎，我點喺幾年前已經不斷講緊，係咪真係需要老師每人一部機呢？呢部機嗰個 quality 係點樣

呢？係咪真係淨係學校宜家學校用緊嘅電腦型號呢？等係可以更加好小小呢？咁呢個就變咗硬件啦，軟件就係多啲唔同去聽出邊嘅講座啊，或者出邊嘅成功例子。即係要零開始其實好難起步，因為大家都好忙，但係如果有一啲成功例子上面 *[26:00]* 我哋再擺係校本課程咧，呢個位就靠行政人員或者係一啲互相，可能係較大啊或者其他教育嘅團隊咧，互相去分享宣傳囉，係啦係啦。咁而啱啱講學校嘅支援啦，跟住仲有以政府同埋社會。政府我諗如果（停頓）嗱最大嘅感受就係啱啱我哋攞到個50萬 funding，就係喺賽馬會度俾我哋嘅，雖然好多手續，但係我哋都買咗好多唔同嘅嘢。咁賽馬會係一個慈善隊啦，咁但係政府都可以呃，宜家都有智能校園啦，8萬蚊嘅智能校園，咁但係佢係俾行政用途嘅啫，咁而教學用途係未涉及到嘅咁。*[27:00]* 所以，可能佢都有銜接但係唔算好直接囉。咁所以呢個位置，我諗政府可以再有多啲嘅分享會，seminar ，同埋一啲資助俾一啲唔係私立嘅學校。私立學校其實佢哋嘅資源一定係好多，肯定係好多嘅資源㗎啦。即係例如話 3D 打印，去教佢哋用3D 打印去解決生活上嘅問題。啊呢個成日都跌嗝！我有冇啲嘢可以 tailor made for 佢呢樣嘢咧？或者我哋啲，我哋宜家主題係中華文化，玩陀螺，我哋用紙嚟做陀螺嘅時候，咁我哋可以設計一個陀螺，之後打印出嚟攞翻屋企咧？嗱呢啲位 *[28:00]* 就係再讓佢延伸咁多咯。但係一部3D 打印機平極嘅你都要幾千蚊，即係都要5000到6000蚊，但係好入門級嗰啲，咁未計材料費，咁呢啲位就係好難去 step forward 去做一部，因為我校就咁多資源咁樣咯。咁而社會上面，我諗就係講緊我屋企裡面嗰種狀態，佢哋有冇設備去繼續 follow up 你學校咁好嘅設計？你個 apps 有冇得用啊？有冇一啲共用嘅設施可以去用？或者係有漂書角，有冇一啲漂機角咧咁樣？即係可能有啲舊機嘅時候，可唔可以去回贈或可以交換咁樣咧？嗱啲位可能都可以重視多啲咯喺社會上邊。

唐：明白明白。仲有冇其補充呢？

TG：嗯，冇啦。

唐：好好，*[29:00]* 再次感謝你能夠參與我嘅訪談，訪談結束啦！

[結束訪談記錄29:09]