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Use of Digital Tools by English Language Schoolteachers

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Abstract: The present study explored the use of digital tools by English language schoolteachers in Hong Kong. Using a qualitative-dominant sequential mixed-methods design, wherein an online mixed-methods survey of primary and secondary school English language teachers (N = 83) and follow-up in-depth interviews (N = 22) were employed, this study collectively explored which digital tools the participants used, why the participants used these tools, and how the participants used them. Fourteen categories of tools utilized by teachers in their professional practice were identified. These were further categorized into core, additional, and remote digital tools based on their mode and frequency of use. Affordances of the core digital tools for language teaching were identified, with examples of teachers' pedagogical uses of the tools presented. By providing an overview of digital tool use, teachers, school leadership, and professional development providers can better understand how teachers should be prepared for the digital realities of schools. In addition, this study provides a model for understanding the context and subject-specific bidirectional relationship between tools, their affordances, and teachers' professional tasks.

Keywords: digital tools; professional digital competence; Hong Kong; technology; schoolteachers; English language teaching

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1. Introduction

Digital tools, defined herein as "Software, programs, applications, platforms, and (online or offline) resources that can be used with computers, mobile devices or other digital devices" that help people complete a task [1] (p. 254), have become a feature of classroom-based English language teaching around the world. The digitization of education has been occurring over the last decade, specifically with the invention of the tablet computer and the widespread availability of high-speed internet. These developments have made it possible for every student to have a digital device and access to an array of digital tools. Indeed, most language classrooms include an Internet-enabled computer and a projector. In contrast, well-resourced classrooms may include a suite of personal devices, such as tablets, while others may have bring-your-own-device (BYOD) schemes [2]. These technologies mean teachers now have a "Digital Disneyland" [3] (p. 56) of tools they can utilize to help them achieve their pedagogical goals. Kessler states that "language teachers today are faced with so many fascinating options for using technology to enhance language learning that it can be overwhelming" [4] (p. 205).

Having examined the findings of previous studies (e.g., [5]), we are aware that teachers have been utilizing various digital tools in their classrooms. However, in the pre-pandemic classroom in Hong Kong (the context of this study) [6] and internationally [7], their use has been piecemeal and limited. Word-processing and presentation software are standardized [5]. However, other kinds of tools have often been implemented as 'add-ons' used for special lessons and are less likely to have been part of a teacher's regular "toolkit". This situation seems to have changed in the post-pandemic era [8]. The COVID-19 pandemic forced many teachers to reconceptualize their teaching towards online teaching; therefore, they have been required to utilize digital tools to continue their instruction [9,10]. This means the teaching landscape has irrefutably changed, so we must examine which digital

tools teachers are using, why they are using these tools, and how they are using them in the post-pandemic English language classroom. In addition, the role of tools in facilitating classroom practices is an area that is often under-explored and neglected. Yet, tools are essential to classroom activities and shape how teachers and learners engage in their respective tasks [11].

The study reported herein attempts to fill these gaps in our understanding. Using a qualitative-dominant sequential mixed-methods design, it collectively investigated the digital tools Hong Kong English language schoolteachers use, the pedagogical affordances of using these specific tools, and the pedagogical tasks the tools are used for. This study addresses the following questions:

(1) What digital tools are English language schoolteachers using?
(2) Why are English language schoolteachers using these specific digital tools?
(3) How are English language schoolteachers using these specific digital tools as part of their pedagogical practices?

The study has implications for English language schoolteachers' preparation, development, and support. By providing an overview of the what, why, and how of digital tool use for English language teaching, teachers, school leadership, and professional development providers can develop a better level of awareness of how to prepare teachers with the tools they need for the digital realities of schools. Therefore, ensuring they have the competencies required for teaching with technology. In addition, this study provides a model for understanding the context and subject-specific bidirectional relationship between tools, their affordances, and teachers' professional tasks.

1.1. Digital Tools and English Language Teaching

It has long been argued that technology can revolutionize language teaching and learning [12]. Indeed, there is growing evidence of the utility of technology with respect to supporting language learning inside and outside of classrooms [2]. In the classroom, English language teachers' technology use has been found to offer various benefits, including skill development [13], increasing participation and engagement [8], catering for diversity [14], increasing student motivation [15], the development of bilingualism [16], increasing academic performance [17], and enhancing parental engagement [18].

Digital tools such as word-processing software and presentation software have been used by teachers to guide and support their instruction and develop or adapt materials for their students for several years [5]. Tools such as these, and indeed most tools used by teachers until the 2010s, were originally developed for commercial or other uses and adapted by teachers who recognized their pedagogical affordances. However, recent advancements have led to growth in the development of digital tools specifically designed for education, such as those for learning management, quizzes, and interactive presentation [12]. In partnership with the development of these digital tools has been the conceptualization of new pedagogical models for integrating technology in teaching, such as game-based learning, blended learning, and flipped classrooms [19].

Understandably, scholars have been exploring how language schoolteachers use these tools in the classroom. For instance, Li, in a study of mainland Chinese secondary school teachers' use of technology in language teaching, found that the participants used Microsoft PowerPoint at every stage of a lesson (lead-in, presentation, practice, consolidation, and conclusion) and to address different skills (phonics, vocabulary, grammar, and discourse) [5]. Li suggested that teachers value PowerPoint because it allows for the multimodal presentation of content (including text, pictures, charts, etc.). Cancion and Panes explored how teachers use Google Translate in secondary school lessons in Chili [13]. The teachers taught their students some of the functions of Google Translate, discussed its strengths and weaknesses and strategies for its use, and allowed students to use it to support their writing tasks. Hsieh examined how robots can be used as a presentation mode for students' storytelling. Using a commercially available robot called the Kebbi Air robot, the teachers instructed students to choose a storybook and create a presentation using an application

designed for the robot. This application allowed them to upload digital images, subtitles, and corresponding dubbing (i.e., a recording of their voices) and design movements for each page of the story [20].

Most studies explore teachers' use of only one digital tool, are often performed over a short period, and use experimental or quasi-experimental designs. Therefore, previous research findings may not necessarily reflect the types of digital tools teachers frequently use, their reasons for selecting and using specific tools, or how they use them in their pedagogical practices.

At this point, it is important to note that a wide variety of variables have been found to affect teachers' use of technology for teaching. Common factors include teachers' digital competence, positive beliefs in technology, the availability of resources, incentives to change, school support, school and national policies, and the availability of and commitment to professional learning [6,21,22]. Although we recognize these factors, this study primarily focuses on the relationship between digital tools, their affordances for language teaching, and teachers' pedagogical tasks.

1.2. Affordances of Digital Tools for English Language Teaching

There are many kinds of tools that mediate people's actions. Some are physical objects, such as computers and mobile phones, while others are abstract codes or systems of meaning, such as languages, counting systems, or computer code. Tools are used to complete a task, express oneself, and/or create and maintain relationships. Vygotsky argues that physical objects and abstract tools such as language are connected, as they both serve a mediating function [23].

The ability to use tools, Vygotsky argues, is what makes humankind unique. Tools can even be considered an extension of ourselves [24]. Throughout history, the invention of new tools and various adaptations of existing tools have affected how we perform certain tasks, think about reality, relate to one another, identify ourselves and others, and understand the world. Indeed, tools do not merely 'allow us to do new things, but they come to define us in some basic ways' [25] (p. 3). No tool is inherently beneficial, and all come with different affordances and constraints. Affordances refer to the 'possibilities for action that a tool allows,' while constraints refer to 'possibilities for action excluded by that tool' [26] (p. 904). While a digital tool may have been designed with a specific social and professional task in mind, an individual or community may recognize the tool's affordances and adapt it to their needs, thus creating "cultures-of-use", i.e., the commonly shared norms and forms of activity adopted by members of a group or community when using specific digital tools [27]. These adaptations are context- and subject-specific and constantly changing. Tools can also 'control' teachers' and students' behavior, as they may only permit specific actions or demand attention [11]. McDonald et al. provide the example of an English textbook (a tool) used in a language classroom [11]. They suggest a textbook informs the readers with regard to what topics must be discussed and what language they must use, and it arranges this discussion by providing questions that need to be answered.

In order for a cultural group to learn the tools required by their group, it first needs to become aware of the tools used within these groups, the affordances that the tools offer the group, and how they are used. Therefore, it is important to understand the bidirectional relationship between what specific tools are used within a group (e.g., Hong Kong English language schoolteachers), why these particular tools are selected by the group (their identified affordances by the group), and how they are used (the tasks) (see Figure 1 for a representation of this relationship).

The tool	← Identified affordances of the tool →	The task
What	Why	How

Figure 1. The bi-directional relationship between tools, identified affordances, and professional tasks.

2. Methods

2.1. Research Model

As previously stated, the study, part of a larger study exploring Hong Kong English-language teachers' professional digital competence, adopted a qualitative-dominant sequential design. The use of digital tools can be diverse, and the reasons for the use of specific tools can be complex- and context-specific [25]; therefore, this approach was deemed appropriate. The use of an online survey with qualitative and quantitative items in the first stage allowed the researchers to provide a scoping overview of teachers' use of digital tools and for the acquirement of "rich and complex accounts of the type of sense-making of participants" [28] (p. 1). The use of in-depth, semi-structured interviews in the second stage allowed the researchers to gain a greater depth of understanding. Therefore, using these two methods provided a more holistic understanding of the phenomenon than one single method could achieve [29,30]. See Figure 2 for an overview of the data collection process.

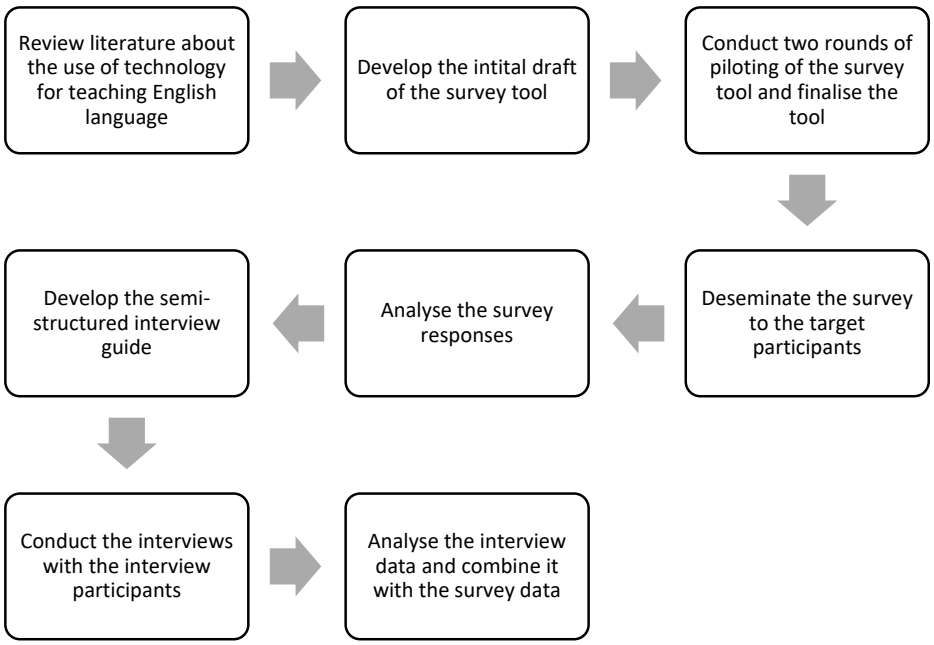


Figure 2. Data collection process.

2.2. Participants

The participants were recruited through convenient and snowball sampling techniques. Given the need for a purposeful sample, namely, English language teachers working in primary and secondary schools in Hong Kong, the use of these techniques was appropriate [31]. First, a list of English language teachers who were known to the researchers was generated. These contacts were sent messages through social messaging or e-mail that asked them whether they would be willing to complete the online survey and invited them to share the survey with other English language teachers they knew. The survey was distributed in late April 2022 and remained active for one month. In total, 83 English language teachers completed the survey. At the end of the survey, respondents could nominate themselves for a follow-up interview. In total, 38 respondents nominated themselves for follow-up interviews. All 38 respondents were contacted and invited to participate in the interview, with 22 accepting the invitation.

The survey respondents included 29 teachers who identified as male and 54 who identified as female. A total of 19 had more than 15 years of experience, 17 had 11–15 years of experience, 19 had 5–10 years of experience, and the remaining 28 teachers had less than 5 years of experience. Forty-three respondents taught in schools in the New Territories; twenty-three of these taught in Kowloon, and twenty on Hong Kong Island. Forty-eight

were primary school teachers, while thirty-five were secondary school teachers. The dataset broadly represents English language teachers in Hong Kong [32].

The Interview respondents had between two and twenty-five years of teaching experience and represented the three main regions in Hong Kong. Fifteen identified as female, and seven as male. Ten were primary school language teachers, and twelve were secondary school language teachers.

Ethical approval was granted by the Hong Kong Baptist University Human Research Ethics Committee (REC/20-21/0218). Participants were informed of the purpose of the study, its procedures, and their rights through a statement at the beginning of the survey and an interview consent form. Active consent was provided at each stage. All participants are referred to by codes (Survey participant = S/Interview participant = I, e.g., S1, S2, I1, and I2).

2.3. Data Collection Tools and Procedures

The first stage involved a survey that was purposefully developed for the project. It included several closed items with which to gather participants' biographical and contextual information, as well as one other closed item and five open-ended items relevant to this study to gather specific information about the digital tools the teachers use, their rationale for using these tools, and the ways in which they use these tools in their language teaching (see Figure 3 for the relevant closed and open-ended survey items).

Closed item.

1. I _____ use digital tools in my English language teaching (always, sometimes, rarely, never)

Open-ended items

1. What digital tools (apps, resources, websites, etc.) do you find useful for helping you teach the English language? Please list all those you find useful.
2. Why do you find the digital tools listed above useful?
3. Can you describe how you typically use digital tools in your English language lessons?
4. Can you describe how you use digital tools to support students' out-of-class English language learning (e.g., homework?)
5. How do you use digital tools as part of your English language formative or summative assessment practices?

Figure 3. Mixed-methods online survey items.

The survey underwent two rounds of piloting. In the first round, six teacher educators familiar with the topic and context were invited to review the survey items and provide feedback on the content, clarity, and comprehensiveness of the items and the survey's design [33]. In the second round, ten English language teachers were invited to complete the survey. The researchers analyzed their responses and adjusted several items so that they were better aligned with the intended purposes. The piloting process helped strengthen the content and face validity of the survey and, therefore, the reliability of the data gathered [34].

The second stage involved follow-up interviews. An interview guide was developed for the study, which drew on the findings from the survey. Interviewees were invited to provide specific examples of how, when, and why they use specific digital tools as well as specific and general factors affecting their use of digital tools as a teaching resource in their language classrooms. The interviews were conducted either face-to-face or via video-conferencing software according to the preferences of the interviewees. The interviews lasted between 30–55 min and were audio-recorded and transcribed.

2.4. Data Analysis

To address the first research question, various standard statistical and qualitative analysis processes were conducted on the responses to the survey items [33]. For the closed item, "I use ___ digital tools in my English language teaching", the frequency and

percentage of each response option were calculated (see Table 1). This item allowed the researchers to verify whether the respondents were indeed using digital tools, and that their responses to the subsequent questions were about their actual uses. All respondents indicated they used digital tools (42% always/54% sometimes/4% rarely/0% never).

Table 1. Regularity of the use of digital tools for English language teaching.

	Frequency (Percentage)
Always	35 (42%)
Sometimes	45 (54%)
Rarely	3 (4%)
Never	0 (0%)

For the item, "What digital tools (apps, resources, websites etc.) do you find useful in helping you teach the English language?", the following analyses were conducted: the total number of unique tools reported, frequency of occurrence of each tool, categorization into primary and secondary contexts, and the coding and categorization of the tools by functionality type coupled with the listing of example brands of the tools. The results of these processes were further classified into 'core' (used most frequently), 'additional' (used less frequently), and 'remote' (used for online or hybrid teaching) tools. To conduct the coding and categorization processes, the websites of the digital tools (e.g., Kahoot.com) were visited and reviewed, and their relevant functions were identified. In addition, the relevant literature (e.g., technology reviews in English language and teaching journals such as RELC journal) were reviewed to determine the tools' functionality with respect to language teaching (e.g., [35,36]). Relevant interview data were analyzed following content analysis procedures and compared to the survey data.

The relevant survey questions were analyzed using content analysis procedures to address the second and third research questions. First, the researchers read and re-read the responses; then, codes were allocated to the various responses, and these were compared and consolidated with the trends and themes identified. The process was then repeated with the interview dataset. Both sets were compared and combined with illustrative extracts of each theme identified. To increase the reliability of the coding process, the researchers independently coded the data set and then discussed their analysis. Any discrepancies were discussed, and a consensus was reached [37].

3. Findings

3.1. Digital Tools Used by English Language Schoolteachers

Data analysis revealed 98 unique digital tools that English language teachers in Hong Kong find useful in their teaching practices. The frequency of each tool was calculated. The ten most common tools mentioned were Kahoot! (n = 52), Padlet (n = 32), Google Classroom (n = 29), YouTube (n = 25), Nearpod (n = 24), Quizizz (n = 23), Mentimeter (n = 18), Quizlet (n = 18), EPIC! (n = 13), and Google Forms (n = 13) (see Table 2).

All the digital tools were then coded according to their main functions for language teaching. We noted that some tools have multiple functions; in these cases, we coded them under their primary functions identified during data analysis but detailed these multifunctional tools in response to RQ1 and RQ2 when applicable. A total of fourteen categories of digital tools were identified (see Table 3).

Table 2. Ten most common digital tools mentioned.

Digital Tool	Frequency (n=)
1. Kahoot	52
2. Padlet	32
3. Google classroom	29
4. YouTube	25
5. Nearpod	24
6. Quizizz	23
7. Mentimeter	18
8. Quizlet	18
9. EPIC	13
10. Google Form	13

Table 3. Digital tools categorized by main function.

Categories of Tools		Example Digital Tools
1.	Learning management	Seesaw, Google Classroom
2.	Interactive presentation	Nearpod
3.	Quiz	Kahoot!, Quizizz
4.	Printable and digital material and resource archive/maker	MES English
5.	Assessment and feedback	Formative, Classkick
6.	Collaboration	Padlet, Google docs, Flipgrid
7.	Online library	EPIC!, Raz-kids
8.	Websites and online reference	BBC, Word Hippo
9.	Video maker/editor	Screencast-o-matic
10.	Video hosting	YouTube, Edpuzzle
11.	Textbook e-resource	Oxford Ready!
12.	Authoring	Book creator, Canvas
13.	Synchronous communication	Zoom, Gathertown
14.	Asynchronous communication	WhatsApp

To explore any differences between the tools used by primary and secondary school English language teachers, the dataset was split into two groups (primary and secondary). These were further categorized into core tools (most frequently used by teachers), additional tools (only used by a few teachers), and remote (used for online or hybrid teaching when some or all students cannot attend face-to-face classes) (see Table 4). The only noticeable

difference between the tools used by primary and secondary school teachers was the use of 'online library' tools by primary teachers, which was not a tool reportedly used by secondary school teachers.

Table 4. Digital tools categorized by school level, frequency of use, and mode.

	Primary Teachers	Secondary Teachers
Core	Learning management	Learning management
	Interactive presentation	Interactive presentation
	Quiz	Quiz
	Collaboration	Collaboration
	Video hosting	Video hosting
	Websites and online reference	Websites and online reference
	Online library	
Additional	Printable and digital material and resource archive/maker	Printable and digital material and resource archive/maker
	Assessment and feedback	Assessment and feedback
	Video maker/editor	Video maker/editor
	Textbook publisher	Textbook publisher
	Authoring	Authoring
Remote	Synchronous communication	Synchronous communication
	Asynchronous communication	Asynchronous communication

3.2. Pedagogical Affordances of Digital Tools and Their Pedagogical Uses

Given the greater prevalence of the 'core' tools within the data set, which reflects a more significant number of teachers finding them useful, the pedagogical affordances for the core digital tool categories and their identified uses warranted further analysis. Importantly, not all digital tools within a category may offer all the affordances mentioned. For ease of presentation, they are shown in an aggregate form. However, data have been extracted in each section below pertaining to specific features of specific digital tools when appropriate and salient within the dataset. The key pedagogical affordances of each category of digital tools identified during data analysis are presented in Table 5. Below are the findings on the affordance of each type of digital tool and their pedagogical uses.

Table 5. Identified pedagogical affordances of the digital tools.

Core Tools	Pedagogical Affordances
Learning management	Enables the use of multiple communication channels Create, organize, and share materials and activities Enables the management of multimodal materials, instructions, and responses Accessible in both class and home contexts Assigns tasks to participants
Interactive presentation	Features multimodal presentation slides Compatible with other digital tools Possesses interactive game features Allows for simultaneous participation Provides annotation features

Table 5. *Cont.*

Core Tools	Pedagogical Affordances
Quiz	Facilities instant responses and results Allows for simultaneous participation Offers group and self-paced options Auto-grading Consists of pre-made materials Offers an engaging interface
Collaboration	Provides instant responses and results Allows for anonymous contributions Allows for simultaneous participation Enables monitoring of progress and participation
Online library	Consists of authentic reading materials Provides support features (e.g., read aloud) Accessible in both class and home contexts Provides leveled input
Video hosting	Offers multimodal resources Accessible in both class and home contexts
Websites and online reference	Accessible in both class and home contexts Offer authentic resources Promote skill development (e.g., spelling)

3.3. Learning Management

The survey data suggest that learning-management-orientated digital tools, such as Google Classroom, Seesaw, and ClassDojo, offer various affordances for English language teachers. Specifically, they provide multiple communication channels; a space for creating, organizing, and sharing materials and activities with students directly; ways to personalize and support activities with multimodal materials; are accessible in class and home contexts; and have features that allow teachers to assign tasks to students.

These affordances were confirmed by the interview participants. The teachers mentioned that as most platforms provide a personal digital space for each learner and a 'class' space, they offer a great deal of utility with respect to supporting daily teaching routines. One primary school teacher (I1) mentioned, "all our teaching activities feed through Google Classroom". Activities and materials produced using other tools can be shared with learners through learning management tools. This means students only have one digital space they need to access in and out of the classroom when needed.

The responses suggest that language teachers use learning-management-oriented digital tools to facilitate out-of-class learning activities (e.g., homework). One secondary teacher wrote (S1), "Google classroom is a good platform for me to give homework and feedback as well as relevant materials to students. I can also post useful videos so they can always refer to the videos if they forget the concept I taught in class". As learning-management-oriented digital tools have an archive function, they can serve as an archive and space to store materials for students and teachers to use at a later date. One interviewee, a secondary school teacher (I2), also used a learning-management-oriented digital tool for students' digital portfolios. During process-writing lessons, she asked her students to upload their work to their folder; she would then directly provide written feedback on the work submitted. Students would then have a digital record of their drafts and feedback.

3.4. Interactive Presentation

Digital tools developed for interactive presentation delivery, such as Nearpod, Explain Everything, and Pear Deck, are used by teachers because they offer several pedagogical affordances. The affordances identified from the survey data include the use of multimodal presentation slides, interactive and game-like features, compatibility with other digital

tools, the provision of annotation features, and the facilitation of simultaneous participation by the users.

The teachers' responses during the survey and interviews showed the effects that the identified affordances of interactive presentation digital tools had on their professional tasks. They commented that these tools helped them structure their lesson delivery. In addition, embedding interactive games and activity slides, e.g., 'drawing', could allow them to render lessons more interactive than would be possible without the tool. In the extract below, a primary schoolteacher (I3) discusses how she capitalizes on the affordances of Nearpod:

> I like using Nearpod as it has functions that allow students to draw pictures and tap their answers immediately. For example, we can create tasks that involve some drawing and students can share them on the class screen, and we can appreciate each other's work instantly. This is something the traditional ways of teaching cannot offer. For example, without the tool, I can only give them a piece of paper to do some drawing. But it is not the same. It cannot give us that kind of instant feedback, and we cannot showcase all of their work like a gallery on the screen. (I3)

In the extract, the teacher describes how she embeds interactive slides into her presentations, allowing her students to share their responses with the whole class instantly on the class screen. She compares this to her practices without the tool, arguing that the affordance of the tool enhances the task. When describing the same tool, a secondary school teacher (I7) shared how she uses it to create out-of-class learning materials for her students. The tool allows her to embed videos with questions. She then distributes the presentations through a learning management tool for students as a "pre-task" to complete before a class. The built-in analytics allow her to monitor whether the students have engaged with the materials "before they come to a lesson." Below, she provides an example of her use of the tool:

> For example, I gave a pre-task on a grammar point using Nearpod. It was on the future tense. I used Nearpod for the pre-task because I think students can handle it. Second, I think the video was clear enough. Third, I wanted to save my lesson time for more sentence-building activities. I don't want to waste time on teaching the grammar point again because I assume that it's students' prior knowledge they should have learned it. However, I want them to revise their knowledge before class. (I7)

By providing students with a video before a lesson on Nearpod, the teacher felt she could prioritize class time for the application of knowledge. The tool enabled her to use out-of-class time and in-class time strategically.

3.5. Quiz

Table 2 shows that various quiz-style digital tools, such as Kahoot! and Quizizz, are the most frequently reported useful digital tools from the survey respondents. The teachers identified several pedagogical affordances of quiz-style digital tools: they provide instant responses and results, allow for simultaneous participation, have whole-class and self-paced modes, have auto-grading functions, provide a library of pre-made quizzes, and have an engaging interface.

The interviewees mentioned that most quiz-style digital tools have easy-to-use interfaces; thus, it is relatively quick and simple to create fun and interactive activities or exercises for use in language classes or for out-of-class assignments. These quizzes tend to be used by teachers for motivation, to determine their students' comprehension of a topic or language point, or for formative assessments. A primary school teacher (I4) mentioned, "I use Kahoot to check students' current knowledge. For example, see if they get the gist of some grammar points. Kahoot is very interesting to kids". Similarly, a secondary school teacher (I8) stated the following:

> Kahoot is a nice and useful little software that I use to check student understanding when I'm starting a new topic. For example, on a unit about food, we can see how much food vocabulary they know already by playing a Kahoot! Quiz. By seeing how much they get correct, it gives me a better idea of how much they know and I need to teach. (I8)

Quiz tools enable teachers to assess students' linguistic and conceptual knowledge quickly and efficiently. The instant responses provide teachers with an overview of the whole class's performance and enables them to provide targeted feedback.

3.6. Collaboration

While many of the digital tools that the teachers reported they found helpful have features that support collaboration, several digital tools have been specifically developed to facilitate digital collaboration. These tools include Padlet and Google Docs. The affordances for teaching identified from the survey include instant responses and results, which allow for anonymous contributions and simultaneous participation, with some tools allowing for the monitoring of progress and participation (e.g., Google Docs). These tools are different from quiz tools as they allow for more extended responses, often in different modes (drawing, photos, and file sharing), and can be archived for future use.

The interviews confirmed the pedagogical affordances of these tools for language teaching. As all students can respond to teachers' prompts or questions simultaneously and anonymously, teachers can involve all students in a given class at the same time. In the interviews, a primary schoolteacher (I5) described how she used Padlet to conduct a KWL (know already, want to know, and learned) activity while reading a text about carbon footprints:

> I use Padlet to conduct a KWL activity for my reading lesson on carbon footprints. I asked them to respond to two questions before we read the book, "What do you know about carbon footprints" and "What do you want to know?" then, after, I asked them "What did you learn?" Padlet lets them all type and share; we can see their ideas and talk about them. (I5)

The teachers commented that the tool allows students to work together to solve problems or answer a question. Therefore, students feel collective ownership over their combined work. The contributions students make to a lesson via the tool can be used to help facilitate oral discussions, as the extract above demonstrates.

3.7. Video Hosting

The teachers who completed the survey mentioned that they utilize YouTube and other video-hosting digital tools as they provide a bank of authentic multimodal resources, specific language-learning resources (e.g., phonics videos), and teacher-created resources. The responses to the survey suggest that participants use video-hosting digital tools because the platforms and resources can be accessed in different environments, such as at home or school. Some specific platforms, such as Edpuzzle, allow teachers to embed questions into videos. This can help teachers monitor progress and assess students' comprehension of the content and language in the video.

The interviewees mentioned that video-hosting sites provide a rich source of materials for language learning. One primary school teacher (I4) mentioned how he started his lessons by playing a song or story on YouTube to facilitate his students' assumption of an adequate mood for learning English. Others use video clips on video-hosting sites as models of specific spoken genres. A secondary school teacher (I9) mentioned how she would design an activity where her students were instructed to watch a TEDx presentation and "imitate a small part of the speaker's presentation". This allowed them to focus on discrete speaking skills such as intonation. The teachers also commented that they assign videos for students to watch at home in a flipped classroom format.

3.8. Websites and Online References

The surveyed teachers reported finding a variety of websites and online reference tools useful. Often, these have specific affordances depending on the pedagogical task the teachers are engaging in. However, some general affordances of this category of tools were identified. Notably, these tools are accessible in different environments, provide authentic exposure to language (e.g., BBC.com), or help with specific aspects of language development, such as vocabulary (e.g., WordHippo, an online word tool).

Some interviewees mentioned that they ask students to research a topic using various websites such as Wikipedia. They also mentioned that they ask students to search for information and share it on Google Docs or other digital tools. The teachers noted that students can struggle with understanding the language and content on certain websites. One secondary schoolteacher (I10) mentioned how she used Google Translate with her students:

> Often when you hear Google Translate, you think of 'copy and paste,' and then you get broken translations, right? This sounds ridiculous. I teach my students to edit the translation and get them to understand what is wrong. If you translate a long text, then they know it will most likely not be translated properly. So I teach my students to check it out and to think about editing it and using other synonyms etc. (I10)

This teacher argued that students will use Google Translate anyway, so they need to be taught how to use it more effectively. Therefore, she explicitly used it in class, with an emphasis on raising students' awareness of the possible limitations of the tool.

3.9. Online Library

Several surveyed primary school teachers mentioned finding online library tools, such as EPIC! and Raz Kids, helpful. The following affordances were identified: the provision of a large bank of leveled, authentic materials; the accessibility of the materials at home or in class; and the tools' inclusion of features that can support the development of reading skills (e.g., reading aloud functions, comprehension questions, etc.).

The interviewees reported that they use online libraries as whole-class reading materials and for home reading. One primary schoolteacher (I6) stated the following:

> We use Raz kids for reading and Epic as well, we either do it in class as the whole class reads out one book, or the kids read their book. Some of the books were assigned so they could just press the button and read it right away. (I6)

Online libraries provide teachers with a vast depository of reading materials organized by topic, recommended ages, and reading levels, which teachers can access for use in lessons. Some teachers stated that some of the libraries were able to help teachers automatically assess students' reading levels, which allowed them to assign or recommend students to read specific books as part of their out-of-class learning.

4. Discussion

This study's findings provide an overview of the digital tools that English language teachers in Hong Kong use in their professional practices. Fourteen specific types of digital tools have been identified. These were classified into core, additional, and remote digital tools based on their frequency and mode of use. Notably, primary and secondary school teachers use similar tools, with the exception of online library tools used exclusively by primary teachers.

The findings highlight how a professional group (English language teachers) has recognized the affordances of specific digital tools and appropriated them into their professional practices, thus helping them achieve their pedagogical tasks. This has created distinct "cultures of use" that may or may not be unique to English language schoolteachers in Hong Kong [27]. The tools used and how they are used will be affected by specific local factors, group members' needs, and the local cultures that develop. For instance, when the data were being collected, our participants were teaching in a face-to-face classroom

context; however, if they were teaching online, the remote digital tools would likely have been the core tools utilized due to their affordances with respect to the virtual teaching mode [9,10,38].

Notably, the teachers' responses indicate that their use of digital tools is often due to the affordance they offer with respect to increasing and diversifying participation and interaction. Learning-management-oriented, quiz-style, interactive presentation, and collaboration digital tools were all utilized by teachers as ways to improve or diversify students' participation or interaction both inside and outside of the classroom. For example, the interactive slides available on some interactive presentation programs allowed teachers to elicit drawings, words, or answers to closed and open prompts simultaneously. These affordances allow teachers to elicit different kinds of responses (e.g., drawing-based, multiple choice, and open-ended) and increase the number of respondents to a teacher's question or prompt. As interaction and participation are seen as essential aspects of language learning [39], teachers will likely recognize the relevant affordances of these digital tools and adopt them into their practices. More specifically, the teachers can adopt different tools depending on the type of interaction and participation they wish to facilitate, e.g., using quiz-style digital tools for the quick assessment of a grammar item and using a collaboration digital tool for tasks that require longer, more complex responses.

In addition, the findings show that in this process of appropriation by the 'cultural group', i.e., teachers, digital tools have changed how teachers conduct their tasks and even created new pedagogical tasks [27]. For example, the ability to easily share multimodal texts with students has only been made possible due to the invention of specific tools, such as learning-management-oriented digital tools. In addition, the ability for students to share their responses to a question or a prompt simultaneously in class would have required some other non-digital tool, such as physical response cards, if teachers were not aware of the relevant digital tools or did not recognize their pedagogical affordances. Therefore, digital tools change and widen the pedagogical tasks that can be included in a teacher's toolkit.

At this point, it is essential to remember that tools are not inherently good or bad [25,26], but have affordances and constraints that need to be evaluated before they are deployed in a task. Many of the digital tools identified require pre-class preparation before they are used in a class. Although this can help teachers plan their lesson and its implementation, it may also constrain lesson delivery. As McDonald et al. argue when discussing the use of tools in classrooms, "they act as controllers of behavior, demanding attention and channeling action" [11] (p. 123). At an initial level, teachers need to be aware of digital tools, including their affordances and uses for language teaching. However, they also must be mindful of the potential constraints of digital tools and their impact on human behavior. This may transcend the pedagogical affordances and constraints of the specific digital tool and consider affective, cognitive, physical, and other factors. For instance, using a digital quiz tool may allow teachers to quickly gather formative feedback on a class (a pedagogical affordance). However, it may also demotivate students who 'lose' the quiz, lead to comparisons between classmates, or create unhealthy competition within a group of learners. Students may also become fatigued if the same tools are used repeatedly [40]. Armed with this more profound understanding of digital tools, teachers can make more nuanced decisions on whether and how to use a specific digital tool.

Implications, Limitations, and Suggestions for Further Study

The present study has both practical and theoretical implications. Practically, it informs teachers, school leadership, and professional development providers with respect to the types of digital tools commonly used by primary and secondary school teachers and their affordances in terms of English language teaching. To be prepared for increasingly digitized school environments [22], it is essential that pre- and in-service teachers are aware of the tools commonly used and are capable of capitalizing on their affordances as they integrate them into their professional practices. Teachers now have a guide regarding the digital

tools they require to become aware of and master their membership of this professional group [25].

This study has provided an initial understanding of the variety of tools used in Hong Kong schools. As the use of tools is context-specific and affected by environmental factors, e.g., the availability of technological hardware, it is important that the list of digital tools is localized for different education systems or schools.

Theoretically, this study provides a model for understanding the context and subject-specific bidirectional relationship between specific digital tools, their affordances, and teachers' professional tasks. We argue that when exploring teachers' or other professionals' use of digital tools, scholars need to examine the 'what,' 'why', and 'how' of their use, and understand these questions through their relationship with one another. Specifically, they should examine how teachers change their practices with digital tools, and how the use of digital tools changes teachers' practice [8,27]. Tools can serve as an entry point to the understanding of professional practices and classroom contexts [11].

The study has limitations. First, it relied on teachers' self-reported use of digital tools. Second, the sample size of the online survey was small. Third, it explored one context. Therefore, we encourage other scholars to explore the use of digital tools through observations of practice. As the use of digital tools is context- and subject-specific, we also encourage scholars to explore the use of digital tools in other education systems.

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