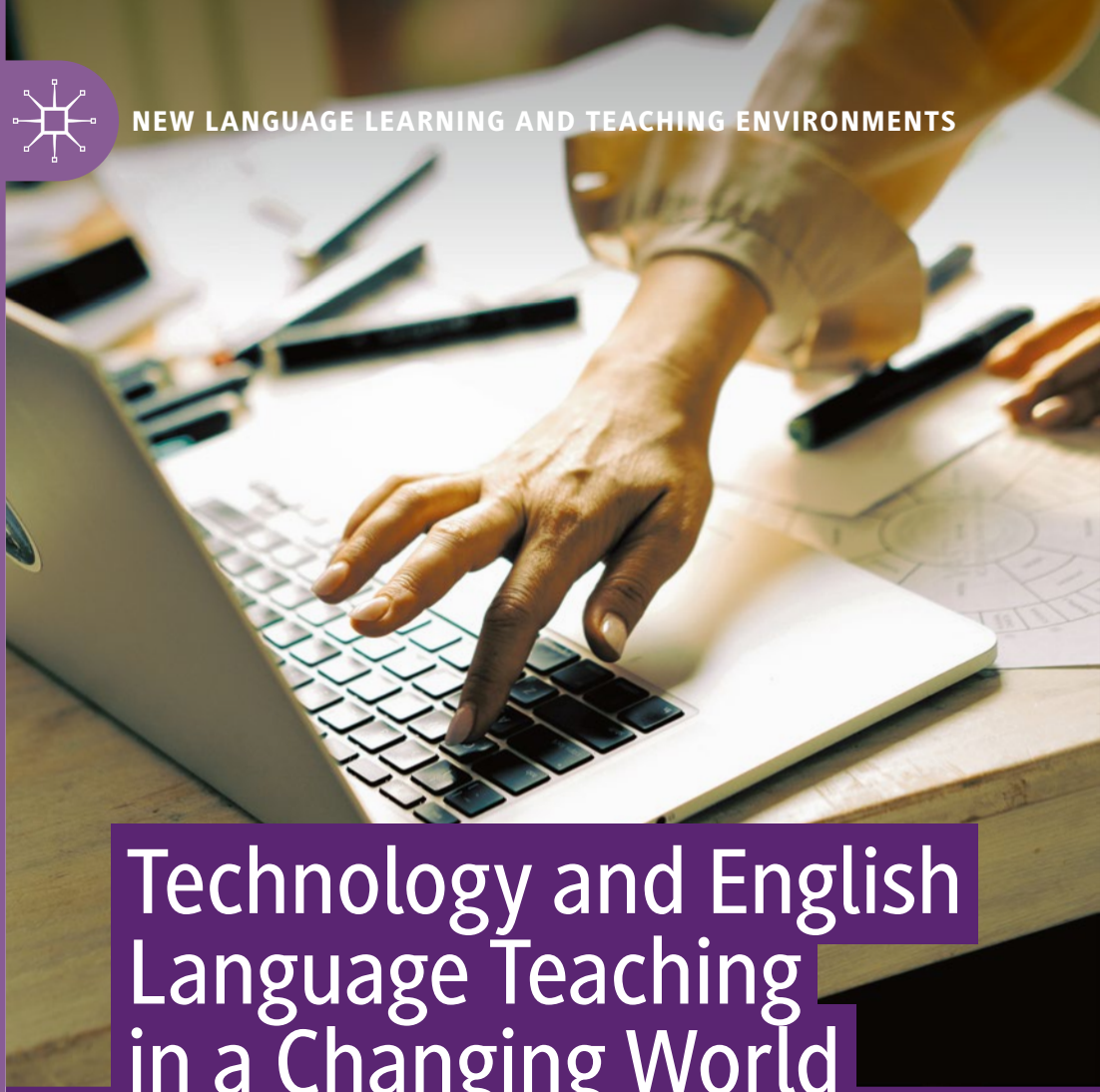

NEW LANGUAGE LEARNING AND TEACHING ENVIRONMENTS

Technology and English Language Teaching in a Changing World

A Practical Guide for Teachers and Teacher Educators

Edited by
Ju Seong Lee · Di Zou
Michelle Mingyue Gu

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New Language Learning and Teaching Environments

Series Editor
Hayo Reinders
Department of Education; Department of Languages
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New Language Learning and Teaching Environments is an exciting new book series edited by Hayo Reinders, dedicated to recent developments in learner-centred approaches and the impact of technology on learning and teaching inside and outside the language classroom. The series aims to:

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Ju Seong Lee • Di Zou
Michelle Mingyue Gu
Editors

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Series Editor Foreword

The "New Language Learning and Teaching Environments" book series is dedicated to recent developments in learner-centred approaches and the impact of technology on learning and teaching inside and outside the language classroom. It offers a multidisciplinary forum for presenting and investigating the latest developments in language education, taking a pedagogic approach with a clear focus on the learner, and with direct implications for both researchers and language practitioners.

With a title that includes the words "in a changing world", this impressive volume edited by Ju Seong Lee, Di Zou, and Gu Mingyue could not have come at a better time. As I write this in November 2023, the world of English language education most certainly has changed, both at an astonishing pace and in numerous, far-reaching ways. This makes it more important than ever to hold on to what we value, build on what we know, and explore new directions with rigour and critical curiosity. The 13 chapters do precisely that and offer a cornucopia of insights into, as well as practical applications for, the use of technology, ranging from commercial and pedagogical games, digital storytelling, video shadowing, automated writing evaluation, digital portfolios, multimedia composing, and more. And they do this across contexts ranging from Kazakhstan, Iran, Indonesia, Japan, China, and others.

Together these contributions significantly enhance our understanding of the role of technology in English language teaching and the ways in which learning can be supported. I highly commend the editors and authors and expect this volume to have a major impact on our field.

Auckland, New Zealand
November 2023

Hayo Reinders

Contents

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Introduction

A Global Shift to Technology-Mediated Learning

The spring of 2020 brought unprecedented changes to language education around the world. When the COVID-19 pandemic disrupted normal life, schools were forced online practically overnight. For English teachers accustomed to interactive classrooms, facilitating remote learning posed new challenges of engaging students and guiding their language development. Fortunately, technology-enhanced instruction was not entirely foreign. Since the 1960s, computers have gradually become integrated into the field (Chun, 2019). Early "language laboratories" utilized mainframe systems for drills and practice. By the 1980s, personal computers introduced richer audiovisual lessons to classrooms.

As multimedia and the Internet exploded in popularity during the 2000s, teachers gained exciting new options for supplementing lessons or assigning tasks. Students, too, began extending their learning beyond class time (Lee, 2022). With smartphones providing constant connectivity by the 2010s, learners began to naturally interact in digital spaces for fun or information. This "extramural" study represented an organic shift towards self-directed language use. Research on technology-mediated learning expanded to examine how students engaged with English

outside formal educational settings (Dressman & Sadler, 2020; Nunan & Richards, 2015; Reinders et al., 2022). Educators explored thoughtful ways of leveraging students' independent activities to strengthen classroom language skills (Hubbard, 2020). Conversations with regard to guiding technology integration also grew more pressing, as digital opportunities rapidly diversified (Dressman et al., 2023).

Then the pandemic upended everything. With social constraints put into place seemingly overnight, remote technologies became the only means of instruction. Many teachers felt ill-prepared to transition to carrying out face-to-face online lessons by means of new mediums. Subsequently, students struggled with isolated, inconsistent learning experiences.

A Need for Guidance

A group of international experts in technology-enhanced language teaching have come together to provide guidance during the current crisis and beyond. Their contributions in this book aim to support language educators in effectively teaching English in technology-rich environments, even amidst disruptions caused by the pandemic. Unlike other resources in language instruction, this book offers a comprehensive perspective on technology-enhanced teaching. It covers various technologies, both educational and non-educational (commercial), and addresses students' receptive and productive English skills. The book also discusses how teachers can harness technology to enhance their teaching practices. In summary, this holistic guide empowers English teachers to confidently overcome technology-related challenges and optimize student learning in the present and future.

The collected chapters first review significant shifts seen within Computer-Assisted Language Learning (CALL) and its research landscape. Studies increasingly examine how students learn English independently by using digital tools beyond classrooms. At the same time, concerns arise that teachers may integrate technologies without a full understanding of how to support meaningful language growth. With this context in mind, the volume presents diverse models of thoughtfully

designed classroom and extramural activities. Descriptions show how insights from applied linguistics and learning theories constructively inform educators' technology choices. Readers gain fresh ideas while learning to ground instruction within a framework of reflective practice.

The first section focuses on enhancing students' receptive English skills. In the first, **Sundqvist and Nilsson** designed "Talk about games!" (Years 7 and 9) and "Teach, demonstrate, and explain!" projects. These projects were based on research that showed playing commercial-off-the-shelf (COTS) games can help L2 students learn English vocabulary. The authors provided an innovative pedagogical model (e.g., making oral presentations about games) that shows how games can be integrated into formal language learning. **Zou, Lee, and Zhang** proposed a digital role-playing game (RPG)-based vocabulary learning activity, using the RPG Maker and the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The students played the RPGs in solo, collaborative, and competitive modes of RPG, which increased their motivation and confidence in learning. They were able to learn new vocabulary and use it when creating English language walkthrough videos. **Fathali** adopted the Self-Determination Theory (SDT) and the Technology Acceptance Model (TAM) to develop a web-based e-portfolio. The author implemented this e-portfolio program for EFL university students in Japan and Iran. The authors argue that the intervention met students' psychological needs, encouraged them to read more beyond the classroom, and potentially enhanced their self-study ability. **Drajati and Wijaya** used TED-Ed lessons and other digital resources (e.g., *YouGlish*) to facilitate extensive reading activities in and outside the classroom. They involved 262 Indonesian EFL high school students and 33 teachers from 8 schools in this project. It turns out that the project successfully enhanced students' reading comprehension and vocabulary development. The authors also provided useful pedagogical tips on how to effectively operate the project.

The second section focuses on enhancing students' productive English skills. **Soyoof and Reynolds** discussed how COTS games improved two young EFL Iranian students' willingness to communicate in a second language (L2 WTC) through interaction with their mother. Using video recordings, semi-structured interviews, and demographic profiles, the

authors found that the mother played a crucial role in enhancing the students' L2 WTC during game play at home. **Xie and Jiang** developed a six-stage creative writing workshop using Digital Multimodal Composing (DMC) in EFL writing courses. Based on focus group interviews, they found that DMC stimulated ideas for authentic and creative writing, increased students' confidence in using English, and scaffolded rhetorical and structural planning in text-based writing. Some students also improved their digital and writing skills through extramural video-making tasks. Based on his extensive research on shadowing, **Hamada** introduced the theoretical framework of video-based shadowing. The author detailed how it could be used both in extracurricular and extramural activities to enhance bottom-up listening skills and pronunciation for Japanese EFL students. **Zadorozhnyy and Lee** designed and implemented an Interdisciplinary and Multimodal Presentation (IMP) project for Kazakhstan EFL students to improve their multimodal presentation skills. Unlike the traditional English presentation course, the teacher acted as a facilitator, demonstrator, and encourager. Students completed the IMP project in both extracurricular and extramural settings, applying their skills beyond the classroom.

The third section focuses on empowering teachers with innovative teaching approaches. **Martin, Busack, and Stober** showed the integration of media didactics and English grammar teaching in a double-seminar for pre-service EFL teacher education in Germany. The pre-service teachers were tasked with creating a digital storytelling task (DST) related to a grammar topic. This pedagogical approach helped deepen their understanding of grammar, enhance their use of digital tools, and prepare them effectively for future teaching. **Yu and Wanqing**, drawing on the Technological Pedagogical Content Knowledge (TPCK), designed a DST project for Hong Kong EFL pre-service teachers. The project resulted in increased English proficiency, digital literacy, motivation, confidence, creativity, critical thinking, and pedagogical skills among the participating teachers. **Odo** discussed how Automated Writing Evaluation (AWE) tools (e.g., *Grammarly* or *Quillbot*) could improve EFL pre-service teachers' writing skills. The author found that AWE provided immediate feedback, identified and corrected grammar and vocabulary errors, and ultimately improved language skills, including

communication. **Vazquez-Calvo and York** developed "*Story by Memes*", a project that involved creating a three- or five-minute video-narrated story using online memes resources. The project was based on four principles (*fan practices, ludic practices, language learner identity,* and *language teacher identity*). The researchers conducted eight-step activities with 57 pre-service EFL teachers in Spain. These tasks provided an explicit and inclusive representation of the diverse identities that the pre-service EFL teachers possess. It also showed the potential to bridge informal literacies and language practices with formal language education, making them applicable to English teaching courses. **Wu and Lee** described how Malaysian pre-service candidates enhanced their pedagogical technology integration through reflective microteaching experiments, using the "teach less and learn more" (TLLM) principle and incorporating new tools, such *as Echo360 lecture capture system*.

Guiding Principles for a Changing Field

In conclusion, **Hubbard** reviewed language teacher education and professional development options based on the themes discussed in our book chapters. To effectively prepare new teachers for long-lasting careers and support their professional growth in technology-mediated language learning, he suggests several valuable principles. These include fostering a flexible mindset towards technology integration, nurturing a willingness to experiment, cultivating critical thinking related to technology, engaging in targeted reflective teaching practices, and actively participating in relevant communities of practice.

This edited volume demonstrates that CALL represents a dynamic partnership between humans and technology. When digital tools are thoughtfully and critically integrated into classroom and extracurricular/extramural activities, they enhance authentic language development and enrich learning experiences of students. The book provides timely and practice guidance for teachers on supporting students' language experiences and skills, empowering English teachers to embrace exciting challenges of technology while maximizing student learning in the present and uncertain future.

References

Chun, D. (2019). Current and future directions in TELL. *Educational Technology & Society, 22*(2), 14-25.

Dressman, M., Lee, J. S., & Perrot, L. (2023). *English language learning in the digital age: Learner-driven strategies for adolescents and young adults*: Wiley-Blackwell.

Dressman, M., & Sadler, R. (Eds.). (2020). *The Handbook of Informal Language Learning* Hoboken, New Jersey: Wiley-Blackwell.

Hubbard, P. (2020). Leveraging technology to integrate informal language learning within classroom settings. In M. Dressman & R. Sadler (Eds.), *The Handbook of Informal Language Learning* (pp. 405-419). Hoboken, New Jersey: Wiley-Blackwell.

Lee, J. S. (2022). *Informal Digital Learning of English: Research to Practice*. New York, NY: Routledge.

Nunan, D., & Richards, J. C. (Eds.). (2015). *Language learning beyond the classroom*. New York, NY: Routledge.

Reinders, H., Lai, C., & Sundqvist, P. (Eds.). (2022). *The Routledge Handbook of Language Learning and Teaching Beyond the Classroom*. New York, NY: Routledge.

Part I

Enhancing Students' Receptive English Skills

1

Integrating Commercial-off-the-Shelf Games in L2 English Vocabulary Instruction

Pia Sundqvist and Rickard Nilsson

Issue

Commercial-off-the-shelf (COTS) games are in stark contrast to so-called educational games, where the goal is teaching and learning (Reinhardt, 2019). In the specific area of gaming and second/foreign/additional language (L2) learning, research has pointed to the benefits of playing COTS games for L2 proficiency (e.g., Reinders & Wattana, 2015). While most such studies have focused on the relation between gaming in L2 English and vocabulary knowledge, and to date have reported positive findings (e.g., Hannibal Jensen, 2017; Rankin et al., 2006; Sundqvist, 2019; Sylvén & Sundqvist, 2012), COTS games are still not commonly used in

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English language teaching (ELT). For example, in a study among pre- and in-service L2 English teachers ($N = 73$) in Germany that focused on teacher attitudes toward and experiences with video games, Becker (2022) found that COTS games were not widely used, despite the widespread popularity of games among school-age children. Among other factors, Becker identified teacher hesitancy about using games because of problems relating to, for instance, lack of appropriate equipment, legal conditions (such as licensing and copyright), and their own feelings of insecurity regarding digital game-based teaching methodology. In that study, as many as 53 teachers (81.5%) reported not knowing any methodology at all. He also found a generational gap in that it was more common for younger participants (ages 23–35) to report having used COTS games in teaching while having more positive attitudes about doing so, in contrast to older participants. A plausible explanation for this generational gap is that younger teachers, to a greater extent, reported prior personal experiences in playing COTS games. In sum, this German study paints an ambivalent picture of attitudes toward and experiences with COTS games in ELT, a depiction that underscores the existence of a play/education dichotomy (Reinhardt, 2019) in that context. However, the situation is clearly not unique to Germany, nor is it limited to digital game-based teaching of English. For example, there is a recent study on the positive influence of online games on English language skills among children in Bangladesh (Achol & Akter, 2022). Further, a 10-week long English-as-a-foreign-language (EFL) intervention study that was done in Turkey focused on game-enhanced teaching and learning, as compared to conventional teaching methods (university level students), and reported significantly heightened motivation in favor of the game-enhanced treatment (Aydın & Çakır, 2022). In another Turkish study, undergraduate students reported on the benefits of playing massively multiplayer online role-playing games for the development of communicative skills in English. In that study, the vast majority of the participants said they preferred to communicate trans-nationally (Bakan et al., 2022). Finally, Newgarden and Zheng (2016) conducted a study in the US (university level) on the affordances for L2 learning by using the game *World of Warcraft* (WoW), in which the authors also reported positive findings from gaming in relation to heightened language skills. In that study, the

participants "learned to take skilled linguistic action as they coordinated recurrent WoW gameplay activities (questing, planning next moves, traveling, learning a skill, etc.)" (p. 274).

Although there is some research on the topic, the scarcity of studies targeting the actual use of COTS games in ELT motivates the specific focus of this chapter, which concerns two projects carried out among secondary-school students of L2 English in Sweden.

Theory

In examining L2 research and practice involving digital games, it is essential to consider game characteristics and what questions to ask regarding both teaching and learning. Reinhardt and Sykes (2014, see also Reinhardt, 2019) examined work on games and play in L2 teaching and learning (L2TL), which they categorized into a theoretical framework. They developed this framework for the purpose of understanding L2 teaching and learning research and practice involving digital games as *game-enhanced* (using vernacular games not originally intended for L2TL), *game-based* (using games intentionally designed for L2TL), and *game-informed* (using instruction informed by the theoretical principles of play and games), "roughly based on functional characteristics of the game under study" (Reinhardt & Sykes, 2014, p. 3). In our case, we seek to describe the affordances of COTS games for L2 teaching and learning, and "how those affordances might be realized in formal pedagogical environments" (p. 3). The sequence of activities outlined below presents some authentic examples of how COTS games were used in some classrooms. For example, an English teacher who participated in our study used a COTS game to model an oral presentation in two classes (school years 7 and 9, see below) and to model an oral game tutorial (school year 9+, see below). Further, the game-enhanced learning activities that are discussed herein build on several of the general learning principles offered by COTS games, as described in Gee (2007), such as the Active Critical Learning principle (all aspects of the learning environment are set up to encourage active and critical learning), the Design principle (learning about design principles is fundamental to the learning experience), the Practice

principle (learners obtain practice in a context in which such practice is not boring), and the "Regime of Competence" principle (the learner is afforded multiple opportunities to operate at the outer edge of their abilities, while the task is challenging but not unattainable).

Materials

To conduct these projects, teachers and students need access to computers or tablets and a slide presentation tool, and the classroom must have reliable internet access. The classroom should be equipped with a large screen or projector and a sound system.

Sequence of Activities

Extramural Activities

In this section we present the "Talk about games!" and "Teach, demonstrate, and explain!" projects, both originally planned by the second author, and drawing on students' extramural English gaming activities. The common core of the projects was to use games (video, board, or card games) as a theme for oral presentations. As it turned out, nearly all students chose to focus on COTS games. In what follows, we present how such games can be implemented in L2 English classrooms by reporting on the two projects, both of which allowed for students to practice oral and written skills. There also was an explicit purpose of intentional vocabulary learning for gamers and non-gamers alike in the projects.

The projects spanned six or seven lessons and were designed for students in school years 7–9 (approximately ages 13–16). The overarching plan for the "Talk about games!" project necessitated dividing the approach into three versions: one for a class in year 7, another for a class in year 9 (the last year of compulsory school/lower secondary school), and a third for a class in year 9 which included students proficient enough to study the first English course of upper-secondary school (called English 5), even though they were still in the lower secondary level. We refer to

this specific group as "year 9+" and to their project as "Teach, demonstrate, and explain!", a comparatively more extensive project. Two English lessons per week in years 7 and 9 took place (but lesson length varied slightly), resulting in a total of 390 minutes in year 7 and 410 minutes in year 9. In year 9+, one 90-minute lesson was held per week for six weeks, compiling a total of 540 minutes.

English curricula in Sweden are aligned with the *Common European Framework of Reference* (*CEFR*). In terms of proficiency levels, this means that students in year 7 can be expected to perform approximately at CEFR level A2.2. Further, a passing grade in year 9 corresponds to level B1.1 and in English 5 to level B1.2. While the lesson plans for years 7 and 9 had identical aims, the goals for year 9+ were slightly different due to having a different curriculum. It should be emphasized that although the overarching plan was similar for all three groups, such as the sequence of activities and most warm-ups, instruction and requirements varied in that they were increasingly more advanced depending on the students' level.

"Talk About Games!": Years 7 and 9

The overarching aim of the "Talk about games!" project was to have students inform their peers orally about a favorite video/board/card game. Students were instructed to explain important aspects or elements of a game together with new vocabulary, so that their peers would understand how to play the game and learn new words. A live demonstration or a short video recording of gameplay should also be included in the oral presentation. The specific learning outcomes focused on oral and written proficiency, with a specific focus on vocabulary knowledge. An overview of the execution of the project is presented in Table 1.1, using the lesson plans for years 7 and 9. The lesson plans for year 9+ were similar but had some additional components and will, therefore, be presented separately.

Table 1.1 The "Talk about games!" project: Overview of the main components in lesson plans for years 7 and 9

Lesson 1: Introduction of project	Lesson 2: Consolidation and choices	Lessons 3–6: Preparations	Lesson 7: Oral presentations
Discussion vocabulary learning	Consolidation lesson 1	Preparatory work	Individual oral presentations—live or recorded
Most unusual word?	Instructions, including assessment criteria	Target vocabulary, peer quizzes, etc.	Q&A session and vocabulary work
Teacher modeling	Game choices, avoiding overlap	Write-up oral presentation	Exit tickets (evaluation/ feedback)
Time frame, task, and goals	Students know "their own game"	Rehearsals	
Consider: What game?			

Lesson 1

The first lesson served as an introduction to the project. After a brief warm-up, the students had three minutes to think of the most unusual word they knew; then they took turns saying their word out loud. For the year 9 students, the teacher also asked a follow-up question: "Do you remember where you learned that word?" After this, small group discussions were held, with two guiding questions provided on the whiteboard concerning how vocabulary is learned: "Do you remember that last word you learned or looked up in a dictionary/Googled?" and "How do you best learn new words?" Each group secretary then presented a summary of their discussion, after which the teacher tried to steer students' attention toward discussing the dichotomy between acquiring and learning vocabulary (i.e., in essence, the difference between incidental and intentional vocabulary learning). At least for the year 9 students, this difference was clear.

The teacher then shared his own experiences of learning vocabulary through games and of studying gaming in relation to vocabulary learning

as part of a research project (Sundqvist & Nilsson, 2022). He then transitioned back to games he played when he was growing up, presenting *Super Mario RPG: Legend of the Seven Stars* (in year 7) and *Heroes of Might and Magic III* (in year 9). These 10-minute presentations focused on how to play the games. However, before each main section of the presentation (roughly: history, controls, gameplay, and personal experiences), the teacher introduced useful vocabulary. Comprehension checks were used at the end of the lesson to ensure that students had understood. The first lesson in years 7 and 9 ended with oral instruction about the project the class would be working on, including the timeframe and sub-goals. For those who wanted to present video games, a suitable age rating was necessary. In preparation for Lesson 2, the students were asked to consider two possible game titles they would like to work with.

Lesson 2

The second lesson began with a consolidation activity, which was a summary of Lesson 1 and a handout with project instructions. Assessment criteria (focusing on oral proficiency and, to a lesser extent, on written proficiency) and core content and learning objectives were then discussed, and a list of recommended games was provided. It was stressed that learning new vocabulary was central and obligatory. For year 9, an additional task involved creating a short vocabulary test for peers. A shared document was provided to avoid game overlap for the presentations. All materials were made available on the school learning management platform. By the end of the lesson, each student knew which game they would work with, knowledge that was recorded in the shared document.

Lessons 3–6

Lessons 3 through 6 consisted of student presentations, such as gathering information and writing the presentation and selecting keywords/phrases for the actual delivery. During these lessons, the teacher helped and guided students, offering support to those who may have had second

thoughts about proceeding with their chosen game. The lesson plans allowed time for rehearsing the oral presentation in separate rooms. Extra worksheets (on grammar and vocabulary) were provided for students who may have finished faster than expected.

Lesson 7

The final lesson, 7, consisted of students' individual oral presentations, either live or recorded (shown on a screen). For year 7, these oral presentations (4–8 minutes) were done with half the class present, thereby reducing possible anxiety about speaking in front of peers, whereas for year 9 (6–10 minutes), the entire class was present. After every presentation, peers could ask spontaneous questions about the games. In year 9, students also quizzed their peers on vocabulary through various means (printouts and digital quizzes). Finally, exit tickets were used to evaluate the entire project.

After the "Talk about games!" project was completed, the teacher provided each student with oral and written feedback, on a one-on-one basis.

Year 9+: The "Teach, Demonstrate, and Explain!" Project

As mentioned, a variant of the plan described above was used for year 9 students, who studied English 5 (year 9+). This class included ambitious students who were demonstrably eager to learn, with high levels of autonomy and motivation. The project took place at the end of the school year and was meant to allow for student choices. Thus, the students could choose one of several projects, all of which focused on intentional vocabulary learning and practicing oral proficiency. The first option, creating a live video game tutorial, was by far the most popular choice. The second option was to discuss a favorite author or piece of fiction. The third option was open, so students could devise their own suggestions, to be approved by the teacher. Detailed instructions and assessment criteria were shared on the school's learning management platform.

Since many students chose the game tutorial option, to motivate the students even further, the teacher modeled an oral presentation of a game tutorial. To accomplish this, the teacher adapted the previously mentioned presentation of *Heroes of Might and Magic III* to suit this more advanced group. The slides included an introduction to the game, key vocabulary with explanations and examples in English (i.e., translation equivalents in Swedish were not used), a breakdown of what would be accomplished in the tutorial, and a game mechanics summary. After the presentation, the teacher Alt+Tabbed into the game (prepared in advance). In short, the tutorial centered on how to survive an attack from an enemy in a particular scenario. It lasted about 15 minutes, which included the introduction of new vocabulary. The remainder of the lesson was spent on preparation as well as questions and answers.

In the student presentations that followed a few lessons later, most of them adopted an approach recommended by the teacher in which the students worked in pairs; one student did the talking and explained the concepts/words while the other one played the game. However, to ensure that both participated orally, the student who played during the live tutorial was responsible for presenting the basic game information in the first part of the presentation, ahead of the game demonstration itself. During gameplay, the student who spoke described what was happening in the game and repeated the concepts/words that had been introduced earlier by their peers. When a presentation ended, the presenting pair "tested" the rest of the class on the new words, most frequently by use of digital quiz programs but also with the help of printouts or oral multiple-choice questions.

All students were highly proficient in English and many of the words that were introduced mainly served to guide their presentations, as most of them were already familiar with specific game terminology or at least had the gist of it. However, since the purpose was to learn *new* words, they strove to implement difficult and unusual words into their presentations (see below).

As with years 7 and 9, the teacher provided each student with oral and written feedback one-on-one upon completion of the project.

Reflection

Years 7 and 9

Overall, the students followed the instructions well throughout all lessons and showed sustained interest. In evaluating the project, several students reported that it would have been more fun to do the task in pairs, which of course could also be possible. However, in this case, the teacher was interested in having all students carry out the same task (to look for and explain vocabulary, write the presentation, demonstrate their game, and offer individual oral presentations to the class). In year 9, preparing the short vocabulary tests for peers turned out to be fun, and some students were very creative when producing their quizzes. These tests also clearly had a positive impact, as they facilitated vocabulary acquisition and retention.

From the teacher's point of view, double-checking the age rating for all games and making sure everyone fully understood the instructions were at times challenging requirements. There were a few instances in which the teacher had to make decisions on whether certain games were acceptable, due to the age rating or content of a particular game. Of course, some "older" games can come across as comparatively tame compared to more contemporary offerings. However, as a rule of thumb, the then current official age recommendation for a particular game was followed.

The teacher's own presentation (the modeling) helped with explaining the project. Furthermore, by placing the presentation slides on the digital classroom platform, students could go back and refresh their memory. Also, the number of students who said that they did not play video games was very small and not skewed toward any gender. Non-gaming students were given guidance to find some other type of game to present, such as a board or card game.

Ultimately, the year 7 and 9 students created opportunities for one another to encounter new words and reinforce word meanings, thereby enhancing their comprehension and retention. Since the provided vocabulary always served a clear purpose—for example, often being important for understanding game mechanics—word meanings appeared to be

more easily retained by the students. The contextual uses of words during the presentations, together with the student comprehension tests (year 9), had clear positive effects on vocabulary acquisition and promoted meaningful language learning experiences while enhancing their interest in completing the task at hand.

Year 9+

The exit tickets showed that the students found the project very engaging. For instance, they thought the paired format made the tutorial presentations relaxed and natural. The modeled presentation served to motivate them toward making a similar presentation themselves.

The in-depth descriptions and insights shown in the game tutorials were sometimes striking in their complexity. Not only did the students use infrequent and highly specific vocabulary, but they also implemented the vocabulary idiomatically, with advanced descriptions of the games. Furthermore, the vocabulary tended to be explained twice, once in the introductory oral presentation and again in the tutorial that followed. This was especially useful, particularly as the latter afforded contextualized explanations (and repetitions) of the meanings of new words. Words such as *arcane*, *besiege*, *parry*, *summersault*, and *torrential rain* were used. Overall, the project was successful in that it promoted the acquisition of vocabulary. The project also was engaging, not only for the students but also for the teacher.

Concluding Remarks

We have discussed some ideas about how teachers can implement COTS games and students' own experiences of gaming in ELT for the purpose of intentional vocabulary learning. Clearly, as reported in Becker (2022), a teacher who has their own experiences with gaming is likely to be more willing to use games in the classroom and have ideas of suitable game-based teaching methodology. However, teachers with little or no experience of gaming can compensate by designing lessons that draw on

students' experiences and knowledge and focus on offering clear instructions, a good lesson structure, and solid guidance regarding vocabulary learning.

In the projects presented here, an important lesson learned was that new words can preferably be interwoven with oral presentations of COTS games. Further, while some words will be game-specific, not all have to be.

References

Achol, A. I., & Akter, S. (2022). Influence of popular online games on English language skills development of children in Dhaka City. *International Journal of English Literature and Social Sciences, 7*(6). https://doi.org/10.22161/ijels.76.40

Aydın, S. M., & Çakır, N. A. (2022). The effects of a game-enhanced learning intervention on foreign language learning. *Educational Technology Research and Development*. https://doi.org/10.1007/s11423-022-10141-9

Bakan, U., Han, T., & Bakan, U. (2022). Learner perceptions and effectiveness of using a massively multiplayer online role-playing game to improve EFL communicative competence. *Knowledge Management & E-Learning, 14*(3), 286–303. https://doi.org/10.34105/j.kmel.2022.14.016

Becker, D. (2022). On the use of commercial video games in the EFL classroom in North Rhine-Westphalia—An empirical perspective. *Anglistik: International Journal of English Studies, 33*(1), 59–75. https://doi.org/10.33675/ANGL/2022/1/8

Gee, J. P. (2007). *What video games have to teach us about learning and literacy*. Revised and updated edition. Palgrave Macmillan.

Hannibal Jensen, S. (2017). Gaming as an English language learning resource among young children in Denmark. *CALICO Journal, 34*(1), 1–19. https://doi.org/10.1558/cj.29519

Newgarden, K., & Zheng, D. (2016). Recurrent languaging activities in World of Warcraft: Skilled linguistic action meets the Common European Framework of Reference. *ReCALL, 28*(3), 274–304. https://doi.org/10.1017/S0958344016000112

Rankin, Y. A., Gold, R., & Gooch, B. (2006). *Evaluating interactive gaming as a language learning tool.* Paper presented at the EuroGraphics 2006, Vol. 25, Vienna, Austria, September 4–8, 2006. http://www.thegooch.org/

Reinders, H., & Wattana, S. (2015). Affect and willingness to communicate in digital game-based learning. *ReCALL, 27*(1), 38–57. https://doi.org/10.1017/S0958344014000226

Reinhardt, J. (2019). *Gameful second and foreign language teaching and learning: Theory, research, and practice*. Palgrave Macmillan/Springer International Publishing.

Reinhardt, J., & Sykes, J. M. (2014). Special issue commentary: Digital game activity in L2 teaching and learning. *Language Learning & Technology, 18*(2), 2–8. http://llt.msu.edu/issues/june2014/commentary.pdf

Sundqvist, P. (2019). Commercial-off-the-shelf games in the digital wild and L2 learner vocabulary. *Language Learning & Technology, 23*(1), 87–113. http://hdl.handle.net/10125/44674

Sundqvist, P., & Nilsson, R. (2022). Young gamers in the digital wilds: Implications of gaming preferences on L2 English vocabulary learning and teaching. *Babylonia Journal of Language Education, 1*, 14–19. https://babylonia.online/index.php/babylonia/article/view/153

Sylvén, L. K., & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. *ReCALL, 24*(3), 302–321. https://doi.org/10.1017/S095834401200016X

2

Digital RPG-Based Vocabulary Learning

Di Zou, Ju Seong Lee, and Ruofei Zhang

Issue

Acquiring an adequate amount of English as a Foreign Language (EFL) vocabulary requires a long-term commitment characterized by a continuous investment of time and energy in mastering and practicing new words. The learning outcomes of such dedication may not become

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apparent for months or even years. Therefore, for young primary school students, EFL vocabulary learning can pose a considerable challenge. These students often struggle with maintaining the level of persistence and focus required to endure the inevitable frustrations and monotony associated with such an extended learning process. Consequently, these challenges might precipitate diminished motivation, negative learning attitudes, and ultimately, reduced efficiency in EFL vocabulary building.

Digital Role-Playing Game (RPG)-based language learning emerges as an effective solution for these aforementioned obstacles in young students' language development. This method involves acquiring and honing language skills through the use of digital RPGs. During a period of many years, RPGs have gained widespread recognition as a valuable educational technology, and digital game-based learning is increasingly viewed as an efficacious pedagogical approach. As such, a growing number of educators and practitioners are incorporating digital RPG-based learning in their authentic language teaching contexts. By leveraging the innate appeal of digital RPGs, this approach to language learning is fundamentally more engaging than traditional methods, enticing students to commence and maintain learning over extended periods (Guo et al., 2017). Digital RPG-based learning also can potentially immerse students in a flow state—that is, a condition characterized by profound engagement in an activity, which encompasses heightened focus, a sense of control, and an obliviousness to extraneous matters and the passage of time (Csikszentmihalyi, 1997). This flow state is conducive to optimal learning experiences, thereby enhancing learner motivation, improving learning attitudes, and boosting learning efficiency (Perttula et al., 2017).

Given these considerable benefits of digital RPG-based learning, we advocate for language teachers to embrace this innovative approach by developing educational RPGs and implementing RPG-based vocabulary learning activities in their teaching practice. With these advanced learning tools, teachers can facilitate vocabulary development for young students, particularly those struggling with low L2 motivation and self-confidence. This equips them with increased persistence, heightened focus, amplified motivation, improved attitudes, and enhanced efficiency in vocabulary learning. In this chapter, we outline the necessary steps for designing, developing, and implementing digital RPG-based language learning. Practical examples, valuable tips,

and recommended tools and materials are also provided to equip language teachers with the resources they need to adopt this groundbreaking educational approach. The context of this learning approach is described as follows:

- Context: Hong Kong primary schools
- English level: A2 Common European Framework of Reference (CEFR) (Elementary)
- Target learners: 5th Grade EFL learners (ages 9~11) with low L2 motivation and self-confidence
- Learning objectives: Students will be able to describe their daily routine by using simple present tense (e.g., go to school, wash hands) as well as by using words (e.g., hand sanitizer) that have appeared in the digital game.
- Digital resources: Digital role-playing game (RPG)

Theory

Drawing on the work of Soyoof et al. (2023), we have developed a framework for designing and implementing digital RPG-based vocabulary learning. This framework is grounded in Brown and Lee's (2015) theories and the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. We advise teachers to conduct a thorough analysis of learner needs and attitudes and then act to seamlessly incorporate game elements into instructional content while utilizing a user-friendly RPG Maker to create digital RPG activities for educational purposes. We also underscore the importance of assessing the quality of these activities to facilitate continuous improvement.

Analysis

To create educational RPGs and incorporate RPG-based teaching plans, it is crucial for educators to undertake a comprehensive analysis. This encompasses understanding the target learners, the instructional content, the learning objectives, as well as the technological resources and environment at their

disposal (Zou, 2020). As RPG activities could extend beyond the school setting, such as at home, an examination of parents' understanding and perception of RPGs also is pertinent, especially regarding their openness to integrating RPG activities into home-based learning (Zou & Zhang, 2021).

Design and Development

Key elements of a digital RPG include the storyline, the map, and the various venues, each playing a critical role in the overall design and efficacy of the game (Annetta, 2010). The storyline acts as a guiding plot, enabling teachers to weave learning tasks seamlessly into the game. This element is crucial for an educational RPG, as it sequentially guides students through learning tasks while simultaneously sustaining their interest and motivation. For example, in an adventure journal game, the quest to find buried treasure requires students to comprehend reading materials based on the target knowledge (composed of vocabulary and sentences). The teacher can integrate the academic tasks of learning and practicing this target knowledge as challenges on the path to discovering the game's treasure, inspiring students to systematically uncover these clues by completing successive learning tasks.

The map serves as the entire space available to players while they navigate through the game and accomplish various tasks. It can be conceptualized as a vast continent that houses multiple cities or a sea area dotted with several small islands. As illustrated in Fig. 2.1, the teacher can construct the map by employing a collection of tilesets (or venues). In accordance with the storyline, the teacher can allocate different learning goals to each venue. For instance, if one learning objective involves the comprehension of travel-related words and phrases, the storyline can depict a journey through a wonderland. Correspondingly, the map can represent this wonderland and complete with a variety of tourist attractions.

Venues play a significant role in placing game players within specific contexts and delivering explicit scenarios. Teachers are at liberty to design these venues to seamlessly dovetail with the storyline and learning objectives. Much like the creation of the map, teachers can employ an array of tilesets to design venues that are visually appealing and congruent with a specific game setting. NPCs also can be created within these venues, as

Fig. 2.1 The game map

they are equipped to interact with players via conversations, facial expressions, and body language (refer to Fig. 2.2). At the outset of the game, NPCs can be utilized to present an introduction in which the basic setting, define goals, are outlined and rules explained.

NPCs fulfill numerous crucial functions in digital RPGs, one of which is task delegation, which allows players to undertake specific learning activities. This mechanism effectively weaves the learning tasks into the fabric of the game (refer to Fig. 2.3). Essentially, NPCs provide a contextual anchor for learning tasks within the gaming environment. For

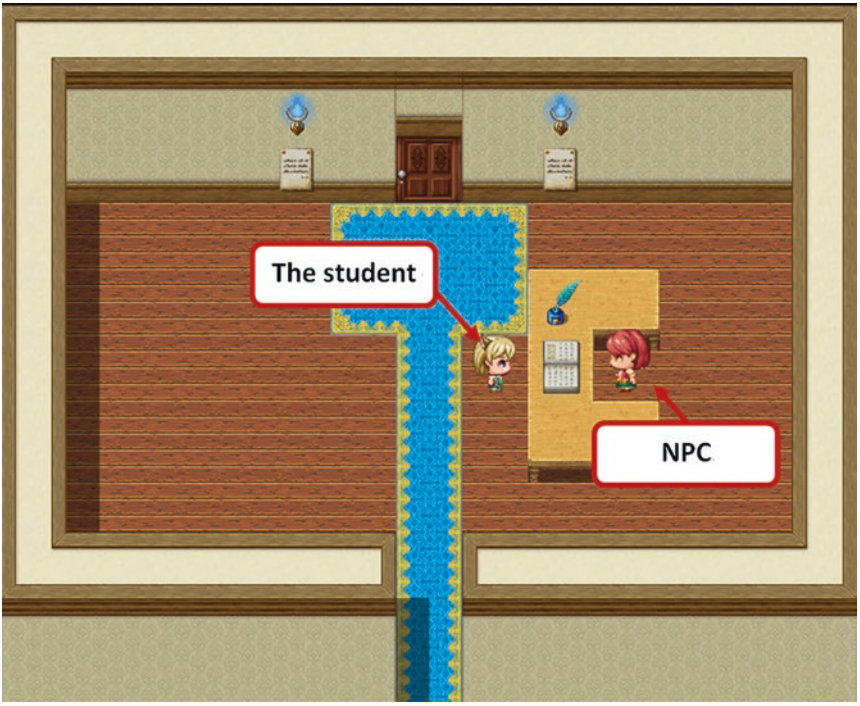

Fig. 2.2 A sample venue and NPC

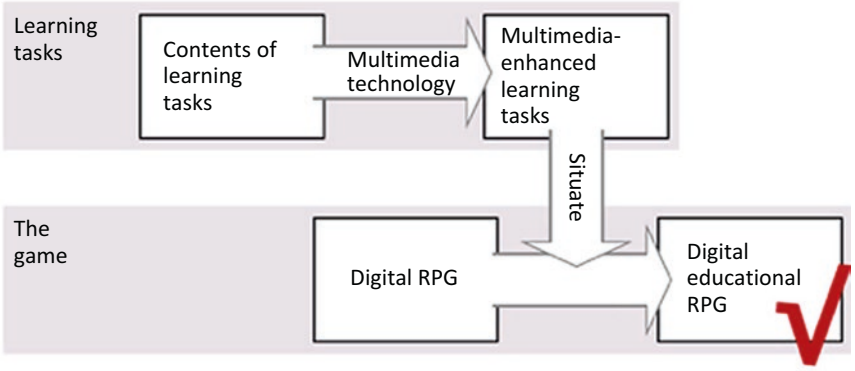

Fig. 2.3 Process of developing a digital educational RPG

Fig. 2.4 To check players' readiness for the next task

instance, one common strategy for providing this anchor includes designing NPCs to disseminate target knowledge, such as elucidating target vocabulary or showcasing instructional videos.

Teachers also can employ NPCs as gatekeepers to gauge students' preparedness for taking on upcoming tasks (Fig. 2.4). NPCs can respond according to students' choice of answers (e.g., "Yes, I want to re-watch the video," or "No, I am ready for exercises!"), either reiterating the previous learning task or transitioning to the next. When incorporating learning tasks into the game's flow, it is vital that teachers thoughtfully embed task instructions and performance feedback within the interactions between learners and NPCs.

NPCs within RPG learning tasks can serve as tools for formative assessment via a variety of exercises, such as multiple-choice questions, true/false questions, and flashcards. Utilizing assessment results, teachers can provide immediate feedback on students' performance through

NPCs. For instance, teachers can program NPCs to say words such as "Good" when students give correct answers. Likewise, they can design NPCs to say words such as "The answer is incorrect, please try again" when students provide incorrect answers. Teachers also can design NPCs to encourage students with sentences such as "You have done an excellent job!" or "Do not give up! Just try again. You can do it!" Teachers also can leverage NPCs to provide scores or gifts as rewards for exceptional performance, which can enhance students' motivation and improve their gameplay experience. Through their dialogues, NPCs also can deliver instructional materials and scaffolding that facilitate learners in incidentally developing vocabulary knowledge and more effectively executing vocabulary exercises.

Implementation

To enact digital RPG-based learning, educators should initially introduce this learning approach to their students, along with the game and the project. This introduction could take the form of briefing sessions or explanatory chapters, thereby ensuring that students understand how to effectively engage in this learning method.

Optimally, digital RPG-based learning is implemented in a student-centered way. Learners can play RPGs individually or the teacher may assign them to engage collaboratively with peers. Further, teachers can group students for digital RPG-based learning, prompting them to participate in a competitive mode. During the learning activity it is essential that teachers monitor the computer labs throughout the process, offering assistance as necessary and ensuring that students are focused on learning tasks. Should the learning activity occur at home, teachers may request parental supervision during students' gameplay time.

Evaluation

The effectiveness of digital RPG-based language learning can be assessed from two primary perspectives. The first pertains to academic outcomes:

how effectively have students achieved the learning objectives? To gauge this, teachers might administer post-tests on target language knowledge and skills, which could take the form of either achievement or performance tests. The second perspective concerns affective outcomes: what shifts have students experienced in their attitudes toward language learning? Factors to consider under this category include confidence, motivation, self-efficacy, satisfaction, enjoyment, and anxiety levels, among others. Teachers may also engage in a thorough reflection on the process of designing, developing, and implementing digital RPG-based language learning, taking into account its advantages and challenges while also proposing potential methods for further refinement regarding quality and efficiency. They may also encourage students to carry out self-reflection on their learning journey and submit reflection reports. Based on these evaluation outcomes, teachers can then consider modifying their strategies for RPG-based language instruction, thereby enhancing the quality and efficiency of their future teaching endeavors.

Materials

We recommend *RPG Maker* for the development of digital RPGs. This platform includes features such as a tileset-based map editor, a user-friendly scripting language for scripting events, and a battle editor. All versions come with premade tilesets, characters, and events, thus providing a solid foundation for new game creations. Users also have the freedom to generate new tilesets and characters and add fresh graphics. The Internet offers a plethora of easy-to-understand *RPG Maker* tutorials for those who need assistance.

As for implementation, digital RPG-based language learning can be conducted in campus computer labs. If students have personal computers they are encouraged to bring them to class, download the educational RPGs designed by the teacher, and engage in digital RPG-based learning during classroom hours. Once students have become proficient with this approach they can even extend the learning process to their homes by using their personal computers—but ideally under parental supervision.

Sequence of Activities

Extracurricular Activities

The RPG-based language lesson has been crafted to equip primary school students (specifically 5th graders) with the ability to articulate their daily routines using the simple present tense (e.g., "go to school," "wash hands") and vocabulary (such as "hand sanitizer") that are incorporated in the digital game. The lesson is structured into four main phases:

Initially, the teacher establishes the learning context by introducing the topic and engaging students in a conversation about their daily routines.

Subsequently, the teacher unveils the RPG to the students. Teachers can either instruct students to play the game independently or assign students to engage with the RPG in a collaborative or competitive setting.

In the following phase the teacher incorporates speaking activities. Students may be asked to work in pairs or groups to detail their daily routines. The teacher then offers immediate feedback based on students' performances.

In the concluding phase the teacher facilitates a collective review of the day's learning and summarizes the key takeaways from the lesson.

Extramural Activities

As for extracurricular activities, teachers can inspire their students to undertake three self-guided activities that cater to their personal interests. First, teachers can encourage students to participate in online gaming communities and exchange game-related insights with other members, all carried out in English. This practice promotes genuine and meaningful interactions that can augment students' intrinsic motivation for learning and facilitate significant language enhancement. Engaging in dialogue in English with other players of diverse linguistic and cultural backgrounds allows students to hone their intercultural and cross-cultural communication skills. Furthermore, participation in an online game necessitates reading, writing, speaking, and listening in English, thereby providing plentiful opportunities for students to exercise these core

language skills and acquire new vocabulary. Therefore, we ardently recommend that teachers endorse the extracurricular activity.

Second, teachers can motivate students to view English-language walkthrough videos. Given the widespread enthusiasm for video games among students, learning English through walkthrough videos could likely enhance their pre-existing interest in this approach and, in turn, improve their listening skills and broaden their vocabulary.

Third, teachers can suggest that students produce their own English-language walkthrough videos. This activity could be particularly beneficial for high achievers, as video creation involves drafting scripts and articulating them or addressing an audience in English, thereby effectively developing students' English writing, pronunciation and speaking skills.

Reflection

Based on our research, it appears that the digital RPG-based language learning approach may offer four significant benefits for students. First, this method can substantially increase students' motivation to learn, whether they engage in the RPG individually, collaboratively, or competitively. Specifically, involving students in educational RPG teams and competition can amplify their self-efficacy, invigorate their enthusiasm, and heighten their focus on learning tasks (Calvo-Ferrer & Belda-Medina, 2021). Second, through interactions with NPCs, students can obtain considerable exposure to new vocabulary and achieve a comprehensive understanding of words. These human-computer interactions may also enhance learner willingness to use new words in genuine communication. Also, teachers have the capability to craft their own digital RPGs using accessible tools such as *RPG Maker*. Given that students can replay educational RPGs in diverse modes, teachers might also realize a long-term reduction in their overall workload.

Our implementation of digital RPG-based language learning in a real-world classroom, in which students utilize teacher-developed RPGs to cultivate second language (L2) word knowledge and reading skills in different modes, has proven successful. Interview results indicate that the majority of

young students found this learning approach "interesting" and "enjoyable," indicating their significant improvement of long-term motivation. This result aligns with previous studies that have demonstrated the extremely positive effects of digital game-based learning on L2 learners' levels of interest and motivation (e.g., Guo et al., 2017; Hwang et al., 2016).

Teachers have reported that digital RPG-based language learning enables their students to focus on language learning for a significantly more extended period when compared to traditional methods, leading to higher learning efficiency. This finding concurs with flow theory (Csikszentmihalyi, 1997). Taking these pieces of evidence into account, it seems probable that the implementation of digital RPG-based learning in primary school students' L2 education can foster improvements in learner motivation, attitudes, experiences, and efficiency.

Based on our project's experience with digital RPG-based language learning in an actual classroom setting, we would like to provide some suggestions for teachers who aim to implement this approach in their instruction. First, we recommend that upon completion, teachers conduct a pilot study with a small group of students to ensure the quality of the educational RPGs based on the following questions:

1. Is there any typo?
2. Is there any place in the map/venue where the players might get stuck?
3. Is there any endless loop?
4. Can the transitions in the scenarios work smoothly? And
5. Is there any unnecessary and distracting detail/venue/NPC in the game?

Second, regardless of the location where digital RPG-based learning takes place, it is crucial for teachers to communicate project details to parents, ensuring that they will be able to provide comprehensive support. In particular, when learning activities are conducted at home, teachers should solicit parents' assistance and potentially their supervision during gameplay. This would be especially important if the students exhibit a lack of self-regulatory skills. We advise that digital RPG-based language learning should initially be implemented several times in a campus setting under a teacher's supervision before transitioning to a home-based setting.

References

Annetta, L. A. (2010). The 'I's' have it: A framework for serious educational game design. *Review of General Psychology, 14*(2), 105–113.

Brown, H. D., & Lee, H. (2015). *Teaching by principles: An interactive approach to language pedagogy*. Pearson education ESL.

Calvo-Ferrer, J. R., & Belda-Medina, J. (2021). The effect of multiplayer video games on incidental and intentional L2 vocabulary learning: The case of Among Us. *Multimodal Technologies and Interaction, 5*(12), 1–16. https://doi.org/10.3390/mti5120080

Csikszentmihalyi, M. (1997). *Finding flow* (Vol. 131). Basic Books.

Guo, Y. R., Goh, D. H. L., & Luyt, B. (2017). Tertiary students' acceptance of a game to teach information literacy. *Aslib Journal of Information Management, 69*(1), 46–63.

Hwang, W. Y., Shih, T. K., Ma, Z. H., Shadiev, R., & Chen, S. Y. (2016). Evaluating listening and speaking skills in a mobile game-based learning environment with situational contexts. *Computer Assisted Language Learning, 29*(4), 639–657.

Perttula, A., Kiili, K., Lindstedt, A., & Tuomi, P. (2017). Flow experience in game-based learning—A systematic literature review. *International Journal of Serious Games, 4*(1), 57–72.

Soyoof, A., Reynolds, B. L., Chan, K. K., Tseng, W. T., & McLay, K. (2023). Massive online multiplayer games as an environment for English learning among Iranian EFL students. *Computer Assisted Language Learning*, 1–44. https://doi.org/10.1080/09588221.2023.2171065

Zou, D. (2020). Gamified flipped EFL classroom for primary education student and teacher perceptions. *Journal of Computers in Education, 7*(2), 213–228.

Zou, D., & Zhang, R. (2021). Flipped primary EFL classrooms: Impact, feasibility, and potential. *ELT Journal, 75*(3), 267–277.

Zou, D., Huang, Y., & Xie, H. R. (2019). Digital game-based vocabulary learning: Where are we and where are we going? *Computer Assisted Language Learning*. https://doi.org/10.1080/09588221.2019.1640745

Zou, D., Zhang, R., Xie, H., & Wang, F. L. (2021). Digital game-based learning of information literacy: Effects of gameplay modes on university students' learning performance, motivation, self-efficacy and flow experiences. *Australasian Journal of Educational Technology, 37*(2), 152–170.

3

Integrating a Web-Based E-portfolio to Enhance EFL Learners' Reading Skills

Somayeh Fathali

Issue

I have been teaching English for more than 15 years at different language institutes and schools and for almost 5 years at the university level. While teaching at Alzahra University, I have found General English (GE) course to be one of the most demanding among various curricula. The GE courses are usually two- to four-credit courses composed of 14–16 sessions that are held in different universities. This type of course takes place at universities all around the world, with diverse curricula and teaching methodologies. There are usually no pre-defined curricula for GE courses and, depending on learners' needs and levels of language proficiency, the course lecturer designs a syllabus at the beginning of the course. Additionally, according to my experience with GE courses in some

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English as a Foreign Language (EFL) contexts, such as Iran, Japan, and Malaysia, most of them share the common condition of being multi-level classes with a large number of learners in each class. They are not homogenized regarding learners' English language proficiency, and they are usually a combination of elementary, intermediate, and advanced learners. Accordingly, insufficient time devoted to the course, the diversity of proficiency levels, the large number of learners overall, and, more importantly, a lack of effective exposure to the English language beyond the classroom in EFL contexts highlight the necessity of providing well-organized self-study modes to offer complementary language learning opportunities.

As an EFL university professor, I can state that an effective GE course with significant outcomes has always been my concern. As stated by Richards (2015), "There are two important dimensions to successful second language learning: what goes on inside the classroom and what goes on outside of the classroom" (p. 1). Accordingly, I started to develop an out-of-class language learning (OCLL) system to enhance EFL learners' English language learning beyond GE courses. This project was first developed in Japan through a Web-based e-portfolio system that supported Japanese GE learners for beyond-classroom reading practice (Fathali & Okada, 2018). The reason for choosing reading skills rather than the integration of skills pertained to the university's regulations and learners' assorted needs. The same system was then implemented in the GE courses at a university in Iran. In both contexts, significant improvements in learners' reading proficiency and their intention to continue reading practice beyond the classroom were observed.

Theory

One of the crucial issues in focusing on technology-based OCLL is not only the development of an appropriate system but also learners' intention to use the system. Accordingly, this project implemented two interrelated sets of frameworks, one for the development of the system and another for the enhancement of learners' intention to use it. Two frameworks were implemented for its development, including Reinders' (2014)

notion of personal learning environments for supporting OCLL and Day and Robb's (2015) principles for OCLL reading. Moreover, the Self-Determination Theory (SDT, Deci & Ryan, 1985) and the Technology Acceptance Model (TAM, Davis, 1989) were implemented for this purpose (Fathali & Okada, 2018).

Reinders' Notion of Personal Learning Environments for Supporting OCLL

Reinders (2014) emphasizes that the efficient integration of virtual learning environments (VLEs) and personal learning environments (PLEs) result in transferring learners from VLEs to continue self-regulated learning through their own PLEs. Accordingly, the Web-based e-portfolio system was designed with a combination of Google Sites as the collaborative VLE and Google Drive as the learners' PLEs. Although the higher education approach was mainly based on institutionally organized platforms such as learning management systems (LMSs), or VLEs, teachers recently attempted to direct learners to more flexible and independent environments, such as PLEs, which have appropriate features that enable the integration of formal institutional learning into informal learning beyond the classroom, while also supporting self-regulated learning. According to Reinders (2014), using PLEs is one of the most effective ways to support learners' autonomy and prepare them for life-long self-regulated language learning. He introduces different tools that can be used for creating PLEs, such as e-portfolios, communication tools (wiki/blog), social networking tools (Facebook), etc. Among those tools, the features of the e-portfolios are appropriate for linking out-of-class learning achievements with formal inside-class progress. In addition, e-portfolios can change teacher-directed instructions to learner-directed learning in which learners become active agents that take control of their own learning.

Day and Robb's Principles for OCLL Reading

Among the four main language learning skills (i.e., reading, writing, speaking, and listening), reading is one of the most ideal ways for

independent language learning to happen (Day & Robb, 2015). To date, there have been many approaches to the practice of reading. Among the different types of reading practice, extensive reading displays the most similar characteristics to out-of-class reading practice. For instance, Day and Robb (2015) state five principles appropriate for extensive reading beyond the classroom, namely:

- The reading material is easy.
- A variety of reading material on a wide range of topics is available.
- Learners choose what they want to read.
- Learners read as much as possible.
- Reading speed is usually faster rather than slower.

More importantly, it is argued that only reading online materials with no subsequent action or involvement would be tiring for and ineffective with students. Therefore, an effective way to improve reading achievement is to integrate it with other skills, such as writing, by means of post-reading activities. According to Rivas (1999), the "post-reading phase helps learners to consolidate what they have read and, at the same time, aims to relate the text to the learners' experience, knowledge, and opinions" (p. 18). Therefore, some activities, such as writing summaries, listing newly learned words, making questions, describing information, or having discussions with classmates after reading a text, help learners actively interact with texts and relate their reading practice to writing skills (Rivas, 1999). Accordingly, in this study, out-of-class reading practice is conducted based on the five relevant principles of extensive reading, in addition to the post-reading activity approach to help learners actively interact with texts.

Technology Acceptance Model (TAM) and Self-Determination Theory (SDT)

The Technology Acceptance Model (TAM) (Davis, 1989) is one of the most commonly applied models in the technology domain. It aims to explain the behavioral intention of users to continue employing various

technologies. Users' behavioral intention reflects the extent to which they plan to undertake an activity, which is normally followed by the occurrence of the consequential action. According to TAM, users' acceptance of a system and their behavioral intention to continue using it largely depends on two principal determinants, namely, perceived usefulness and perceived ease of use. Perceived usefulness is defined as the belief that a system can enhance performance, and perceived ease of use is the belief that a system can be used without mental and physical pressure.

Based on the cognitive theories of motivation and action, being motivated to act is equivalent to having the intention to engage in an action (Deci, 1975). Therefore, due to the strong mutual relationship between learners' motivation and their intention to act, in conjunction with the roots of TAM in motivational models, TAM was integrated with the motivational theory of SDT (Deci & Ryan, 1985) to attain a better outcome for the system (Fathali & Okada, 2018). SDT focuses on competence, autonomy, and relatedness as the three basic psychological human needs that facilitate intrinsic motivation. The need for competence is the individual's requirement to feel capable of performing effectively and achieving one's goals. The need for autonomy implies the intention to feel free to choose and control one's own actions. Finally, the need for relatedness concerns feeling connected to others through appropriate forms of interaction and cooperation. The system in this study was developed with regard to the determinants of TAM (perceived usefulness and perceived ease of use) and SDT (perceived competence, perceived autonomy, and perceived relatedness).

Materials

The main instrument used in the two contexts of Japan and Iran was the Web-based e-portfolio system. The system consists of a home page (Fig. 3.1), including various Web pages, as depicted below:

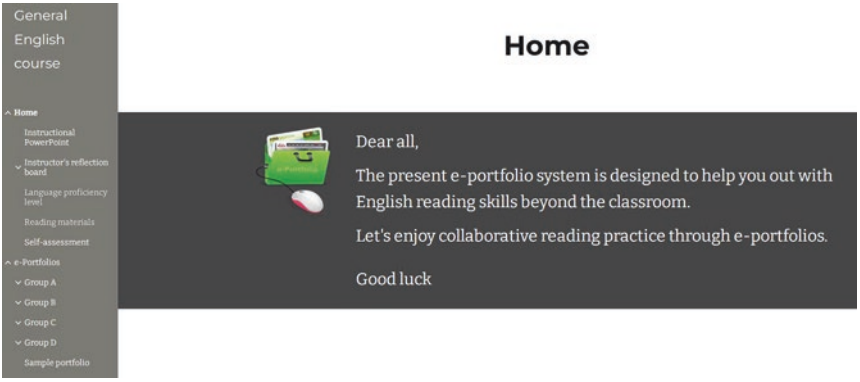

Fig. 3.1 Homepage of the Web-based e-portfolio system

Instructional PowerPoint

In order to reach the system's full potential, it was necessary to provide instructional training sessions in advance. To do so, a Microsoft Office PowerPoint file, including an illustrated step-by-step explanation of the system and the entire learning process, was created and presented in the first face-to-face session. The file also was uploaded on the website for the learners' probable future reference.

Instructor's Reflection Board

The second page, named "the instructor's reflection board," was designed to enhance the sense of connectedness between the instructor and learners. The page included the instructors' constant support by means of overall weekly feedback on learners' ongoing assignment submissions as well as crucial points that were identified through weekly monitoring of e-portfolios. The instructor tried to investigate common learning obstacles and eliminate them by introducing online supplementary materials. For instance, if the students had difficulty in using the present perfect tense, the teacher provided them with some links to webpages where they could access present perfect tasks, accompanied by explanatory feedback.

Language Proficiency Level

A page included a link to the Cambridge English language assessment website, which directed each learner to an online test, for which the final score was interpreted according to the Common European Framework of Reference for Languages (CEFR). The scores helped learners to identify their level of English language proficiency and helped them with material selection.

Reading Materials

An accurate investigation of online authentic reading materials resulted in some pedagogically and academically approved EFL websites, whose links have been inserted onto this page. Due to the large number of graded reading materials on the selected websites, learners were able to choose their preferred materials independently, based on their respective proficiency level.

Self-Assessment

Self-assessment could lead to self-awareness and the indication of a person's weaknesses, strengths, and learning preferences. Therefore, a set of assessment criteria, based on the objectives of the course was accurately developed to guide learners in reflecting on their personal achievements and goal setting. The assessment sheet includes can-do statements about the reading passage selection, the number of completed passages, task accomplishments, peer interactions, and technological literacy. The students scored the sheet weekly and uploaded it to their e-portfolios.

Portfolios

Combining all the e-portfolios into a single virtual collaborative space could allow learners to directly observe how their classmates learn by utilizing distinctive strategies, while simultaneously enhancing peer and

instructor feedback. The learners reported that not only did they feel connected to the instructor but, more importantly, they felt that they belonged to a community of learners who shared the same learning goals. As shown in Fig. 3.1, learners were randomly categorized into groups. The number of the groups and the number of the learners in each group depended upon the total number of learners in the class. Each learner had a personal page that was hyperlinked to his or her personal e-portfolio, as created in Google Drive.

Sequence of Activities

Extracurricular Activities

In both contexts, Japan and Iran, the GE courses were held twice a week (each session lasted 90 minutes) and the semester lasted for nearly four months. The learners took part in different inside-classroom activities, which is not the focus of this project, but rather, the same beyond-classroom practices through the system as below.

Session 1: In the first face-to-face session, I (the course instructor) explained out-of-class reading practice and the Web-based e-portfolio system. Using instructional PowerPoint, all the learners created a Gmail account, signed into their respective Google Drives, created a folder, and named it using their full names, and finally, they emailed sharable links to their Drive folders to me. They were also instructed on how to upload files to their drives. After I received all the links, we began a typical general English class, according to the course syllabus. After class, I created each learner's personal page and inserted the links into their folders on their respective pages. Every learner had a personal page that others could visit and, if they so chose, leave comments (Fig. 3.2). Finally, the link to the Web-based system and a personal information sheet was emailed to every learner. They were asked to fill in the sheet and upload it to their drives as the first file in those locations.

Session 2: In this session, the learners became familiar with the website and their personal pages. They were asked to review the reading

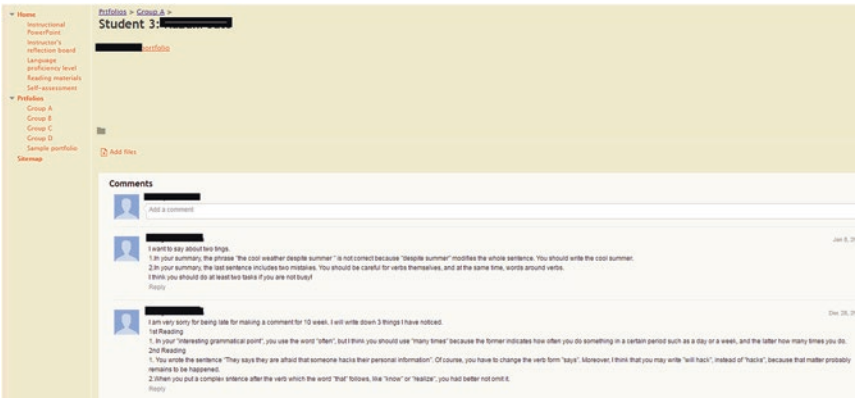

Fig. 3.2 A sample of a learner's personal Web page on the system

material websites on a weekly basis, select two passages and read them, and do the post-reading activities. In addition to the different post-reading activities on the websites, such as word games, sentence matching, and multiple-choice and open-ended questions, for additional practice the learners were instructed to do individual post-reading activities like writing summaries, listing newly learned words, and writing questions to help them actively interact with the texts. Accordingly, each learner uploaded a weekly file of their reading practice, including links to the passages they read and their preferred post-reading activities. Depending on learners' preferences, the files could be of any type, such as Microsoft Office Word, PowerPoint, PDF, or a particular image. At the same time, they were supposed to fill in the self-assessment sheet weekly and upload it to their drives.

To facilitate systematic mutual feedback, learners from opposite groups were assigned to pairs for weekly interactions (e.g., Student 1, Group A, was paired with Student 1, Group B). Moreover, learners had access to all e-portfolios and could interact with each other on different pages (Fig. 3.2). Learners were instructed on the distinction between self-level (praise) and task-level (correction) feedback, and they were asked to practice task-level feedback as much as possible.

Learners started out-of-class reading practice in the second week of the course. By the end of the course every learner had a personal information

Fig. 3.3 A sample of the content of a learner's e-portfolio in Google Drive

sheet, 15 files of reading practice, and 15 self-assessment sheets in their personal drives, which also were made available on the system (Fig. 3.3). As the instructor of the course, every weekend I visited the website and learners' personal pages and drives to make sure the students were following the requirements of the course. I gave them feedback, both self-level and task-level. Moreover, on my personal page, via the instructor's reflection board, learners could see my weekly overall evaluation of their work and access required supplementary materials.

Extramural Activities

As previously stated, the system was developed based on two sets of frameworks, which in turn were based on transferring learners to their PLEs and enhancing their intention to continue undertaking out-of-class reading practice after completing the course. First, learners' continuance intention was statistically investigated, and the findings revealed their significant intention to continue, by using the system for reading practice. Secondly, through an interview with the learners they indicated that

several of them planned to continue reading practice in their e-portfolios after the course concluded. They emphasized that in knowing their proficiency level, appropriate materials for reading, self-assessment, and post-reading activities could help them continue learning. After two months of observing learners' personal e-portfolios in their Google Drives, I could attest that some learners had exceeded 15 sessions and had several files uploaded to their Drives following the conclusion of the course.

Reflection

This project focused on the design and implementation of a Web-based e-portfolio system that enhanced the out-of-class reading practice of EFL learners in GE courses. A combination of inadequate time I was able to spend on the courses while teaching a large number of learners and the lack of effective collaboration beyond the classroom highlights the importance of OCLL environments for providing complementary language learning opportunities.

As previously explained, during the two first sessions of the course the instructor tried to provide sufficient instruction about the system and the learning process. Due to inadequate ICT engagement during students' high school education, the majority of learners exhibit very low confidence in using digital technologies for educational purposes at the university level. Therefore, the effectiveness of learning technologies is highly related to the simplicity of the technology, plus providing enough instruction with which to begin.

More importantly, EFL learners usually lack sufficient language support and materials beyond formal classrooms. Although there are unlimited language learning tools and resources that have been made available in the recent technological era, it is not easy for the learners to independently choose or benefit from these available materials. In general, it is not easy for learners to initiate their OCLL, and consequently they rely on teachers to support them. Accordingly, helping learners to first explore their level of English language proficiency, prior to providing them with appropriate materials and giving them the autonomy to choose their

preferred materials is of utmost importance. Additionally, a common idea that learners constantly expressed concerned the usefulness of post-reading activities. Learners reported that they found the activities very helpful and at times very interesting. Throughout peer interactions, some learners commented that they introduced post-reading activities to their partners.

And as previously stated, the potential for sharing individual works in order to initiate collaboration is one of the remarkable features of effective e-portfolios. The e-portfolio system in this study also enabled teacher and peer feedback. Learners tried not only to find existing errors but also provided correct answers, and in a few cases even provided additional resources. However, peers still had doubts about the appropriateness of the feedback they received. Although learners' performance on the system indicated regular mutual interactions, they reported that they valued peer feedback less than that of their instructor. As observed in the contexts of this study, the large number of learners in classes made it nearly impossible for the instructor to provide weekly feedback on individual learners' works. Therefore, the promotion of the quality of peer feedback and changing learners' attitudes about peer feedback is of crucial importance in online learning environments, especially for learning beyond the classroom.

Overall, EFL teachers who are concerned with implementing technological tools into their teaching contexts should be aware of the importance of adequate instruction and the simplicity of such tools. In general, this study showed that teachers can implement learning technologies in a way that fulfills learners' motivational needs, enabling these students to potentially maximize subsequent use of such technology toward attaining learning goals.

References

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Day, R. R., & Robb, T. (2015). Extensive reading. In D. Nunan & J. C. Richards (Eds.), *Language learning beyond the classroom* (1st ed., pp. 3–22). Routledge.

Deci, E. L. (1975). *Intrinsic motivation*. New York, NY: Plenum Press.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior* (2nd ed.). Plenum Press.

Fathali, S., & Okada, T. (2018). Technology acceptance model in technology-based OCLL contexts: A self-determination theory approach. *Australasian Journal of Educational Technology, 34*(4), 138–154. https://doi.org/10.14742/ajet.3629

Reinders, H. (2014). Personal learning environments for supporting out-of-class language learning. *English Teaching Forum, 52*(4), 14–19. http://unitec.researchbank.ac.nz/handle/10652/2964

Richards, J. C. (2015). The changing face of language learning: Learning beyond the classroom. *RELC Journal, 46*(1), 5–22. https://doi.org/10.1177/0033688214561621

Rivas, R. M. M. (1999). Reading in recent ELT course books. *ELT Journal, 53*(1), 12–21. https://doi.org/10.1093/elt/53.1.12

4

Empowering Students' Extensive Reading Facilitated by TED-Ed Lessons as IDLE Activities and the Impacts on Students' Vocabulary: Stories from Indonesia

Nur Arifah Drajati and Surya Agung Wijaya

Issue

Presently, Informal Digital Learning of English (IDLE) activities offer easy access to reading resources (e.g., online magazines, comics, blogs, etc.), given that, previously, books printed in English were difficult for English as a Foreign Language (EFL) students to access. In places where Indonesian students did not have access to read from informal English sources, the Indonesian Ministry and Culture office endorsed limited in-class activities via reading EFL books. Furthermore, teaching reading in Indonesian senior high schools was mainly approached by means of intensive reading; therefore, extensive reading must also be included (Cahyono & Widiati, 2006). Given these limiting factors, consequently,

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it was found that students only read a few books and lacked motivation to read. Therefore, bottom-up voices were restricted for students' reading selections with regard to their interests, thus affecting reading comprehension.

Furthermore, low reading comprehension made it difficult for Indonesian senior high school students to achieve English proficiency at B1, based on the Common European Framework of Reference (CEFR) scale. Students were expected to be able at the B1 level to have an understanding of the main points of familiar topics (e.g., work, school, travel, leisure, etc.). In Indonesia, students had less exposure to English after school because English was rarely used in national or local magazines, newspapers, books, etc. The situation was made more difficult for students when English was limited to being taught at school for only 2–4 hours per week, according to national and school policies. With limited time, teachers mostly provided extensive reading as homework, but students lacked any coherent reading strategy due to their overall lack of experience (Nation, 2011). Consequently, Indonesian students typically exhibited problems with poor reading habits, insufficient vocabulary mastery, and ineffective reading strategies.

However, students' demand for instruction in English increased due to a scholarship requirement and study abroad programmes. Therefore, providing students with various reading sources and building reading habits challenged teachers to give support by taking advantage of in-class and out-of-class activities to increase students' reading comprehension. It was recommended that students' reading comprehension should be developed through regular reading practice, to gain vocabulary mastery and develop reading strategies. IDLE spaces provided more alternate reading sources when reading is not limited to Student-Content (SC) interaction, but rather, is extended by Student-Student (SS) interaction or the case in which students have various interlocutors through which they could read comments and stories provided by overseas friends (Lamb & Arisandy, 2020; Lee & Drajati, 2019).

Consequently, this study explores how teachers empower students' extensive reading to develop vocabulary mastery by offering top-down and bottom-up strategies by interweaving Moore's (1989) interaction model and Moorman and Blanton's (1990) reading-activity model into

in-class and out-of-class activities. In order to bridge these diverse learning modes, we employed TED-Ed that offered various genres, interactive video text, forum and discussion boards, and dynamic and statistics texts that could be available for continuous access across multiple devices.

Theory

Before integrating IDLE in schools, 33 teachers took part in a professional development programme for teaching extensive reading and IDLE. To help teachers, researchers conceptualized the base model design of in-class and out-of-class reading, as facilitated by the use of TED-Ed by means of Moorman and Blanton's (1990) information text reading activity, in which the instructional phase is divided into "pre-reading, reading, and post-reading" and an instructional phase which is split into "instructional phase, independent student, and cognitive processing activities" (p. 175). We argue that those steps can be divided into two parts—an instructional phase for in-class activities and independent learning for out-of-class activities. Furthermore, Moorman and Blanton (1990) point out that teachers can encourage "students along a continuum from teacher-directed dependent learning to student-directed independent learning" from this framework (p. 175).

To detail the instructional process, we interweaved Moore's (1989) various student interactions (e.g., SC, ST, and SS interactions). Students were expected to actively collaborate, communicate, and experience social learning through the learning process. Therefore, reading activities were developed through the use of meaningful interactions. Moore's model began with an SC interaction that acknowledged that students internalize information and ideas encountered in various texts, including spoken, written, visual, gesture, and multimodal forms. Moreover, ST interaction covered how teachers maintain, motivate, and enhance students' interest in online materials, skills, modelling, feedback, and consulting. Moore argued that "the instructor is especially valuable in responding to the learners' application of new knowledge. Whatever self-directed learners can do alone for self-motivation and interaction with content presented, they are vulnerable at the point of application"

(Moore, 1989, pp. 3–4). Moreover, SS interaction could be implemented through the use of peer or group projects, discussions, and feedback. Although the early development model focused on distance learning with SC, ST, and SS interactions, his model can be contextualized into students' independent learning that occurs after school (extracurricular IDLE).

As can be seen in Fig. 4.1, we conceptualize three stages of formal reading learning for teachers, an approach that utilizes extensive reading and IDLE sources, extracurricular activities for students that develop extensive reading from tasks, and extramural IDLE for students' personal reading purposes. The first formal learning phase is conducted through (1)

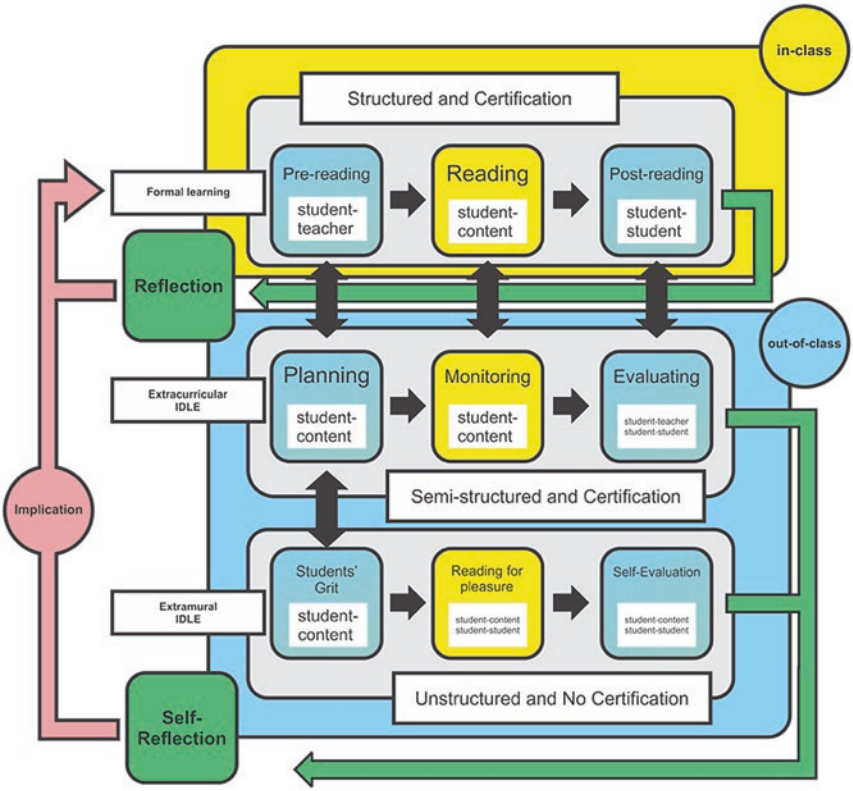

Fig. 4.1 Conceptual model of an IDLE-based reading activity

pre-reading, which can focus on recalling prior knowledge of a topic and introducing essential vocabulary due students' lack thereof; (2) during reading, teachers can promote extensive reading, which "involves each learner independently and silently reading lots of material which is at the right level for them" (Nation & Waring, 2019, p. 4); and (3) in the post-reading, we focused on SS, which integrates information obtained from texts by focusing on vocabulary development, with teachers guiding students with regard to reading reflection.

When we looked at extracurricular IDLE's reading texts, these texts incorporated various modes of communication, including text, image, sound, video, etc. Therefore, we chose TED-Ed and saw that its lessons provided rich and engaging reading topics that Indonesian EFL textbooks rarely included for promoting vocabulary building. During planning and monitoring, students can design their own learning strategies on IDLE, although the overall goal is still promoted by teachers. When students' reading motivation and habits are expressed, Grabe (2016) argued that teachers must be "good coaches," giving on-point suggestions, feedback, and reinforcement during the evaluating phase because the idea that one "only has to read and read a lot" is insufficient for reading development. Therefore, this argumentation was in line with Moore's (1989) assertion that ST interaction could elevate students towards "(1) applying it correctly, (2) applying it as intensively or extensively as possible, or (3) make them aware of all potential areas of application" (p. 4).

So that they could succeed with students in extramural IDLE reading, we encouraged teachers to divide reading activities into two stages: (1) introduce the instructional phase for promoting reading strategies and habits from in-class activities and (2) cultivate the independent student for developing reading habits and confidence gleaned from out-of-class activities. Although in-class activities still provided reading tasks, teachers would share ideas with students about what they wanted them to achieve in out-of-class activities. We assumed that when students developed their reading habits, multimodal literacy, and reading comprehension using TED-Ed in extracurricular IDLE, students' extensive reading also would be shaped in extramural IDLE when they conducted independent reading of stories published in English.

Materials

Teachers used TED-Ed lessons (https://ed.ted.com/) for reading activities (e.g., watch, think, dig deeper, and discuss) to facilitate students' interactions with content, teachers, and other students, all of which were not limited to solely one school. "Watch" provides videos that we consider to be a multimodal text as social practice (combining spoken, written texts, visuals, gestures, and multimodal texts), whereas current textbooks are multimodal. "Think" provides students with tasks to carry out. "Dig deeper" empowers them by providing additional reading resources outside TED-Ed. "Discuss" allows students to meet with other students from various schools or with assorted interlocutors.

Moreover, TED-Ed lessons also provide various genres (e.g., narrative, instruction, description, explanation, persuasion, or hybrid texts) and topics that are rarely covered by the Indonesian Ministry of Education and Culture-endorsed EFL textbooks. Teachers in this programme use TED-Ed's read-aloud picture book collections regarding students' low reading proficiency levels. However, teachers can select materials from TED-Ed and modify them to suit students' needs. Furthermore, teachers also employ YouGlish (https://youglish.com) to provide additional vocabulary inputs and digital dictionary in the form of video.

Sequence of Activities

Extracurricular Activities

In the first in-class implementation, teachers focused on introducing TED-Ed (see Table 4.1), using a classroom projector to teach them how to use the lessons. Students tried working independently by using their smartphones or working in groups with laptops or tablets, along with TED-Ed lessons (regarding school policy). Students created their accounts on TED-Ed. Teachers provided five unknown, high-frequency vocabulary words from texts during pre-reading to reduce the gap between prior knowledge and newly acquired knowledge of TED-Ed texts, titled, "The Princess and the Pea—Read Aloud Picture Book."

Table 4.1 Teachers integrate IDLE activities in the classroom

Reading activities	In-class activities
Pre-reading	1. Teacher introduced TED-Ed website and how to use it for extensive reading purposes 2. Teacher provided YouGlish to reinforce vocabulary related to TED-Ed website 3. Teacher guided students with some questions to activate prior knowledge
Reading	1. Students read from TED-Ed* 2. Students answered some tasks on TED-Ed 3. Students read additional information from TED-Ed 4. Students joined in a discussion of TED-Ed *Topic already selected by the teacher while considering students' language proficiency level
Post-reading	1. Students in pairs discussed and evaluated their reading performance using TED-Ed 2. Teacher gave a chance for students to give spoken reflections to share their weaknesses and strengths by using TED-Ed for reading 3. Other students contributed by giving feedback based on spoken reflections. 4. Teacher provided feedback and reinforcement about reading strategies 5. Teacher motivated and encouraged independent reading through IDLE activities 6. Teacher provided tasks for extracurricular IDLE

During post-reading, students focused on tasks, read additional information, and provided comments about TED-Ed in order to practise implementing vocabulary (see Fig. 4.2). Monitoring students' reading process became much easier for teachers because TED-Ed provided them with progress reports.

After school (see Table 4.2), teachers asked students to list three or more of their favourite videos, plus identifying five previously high-frequency vocabulary words encountered while reading texts. We settled on five vocabulary words to make students feel less overloaded with information in the beginning stage and avoid discouraging them during the following process. However, teachers could include some vocabulary in the subsequent implementation. Students took screenshots of their favourite listed videos, reflected on their lessons taken from the stories, and provided five high-frequency vocabulary words in their diaries.

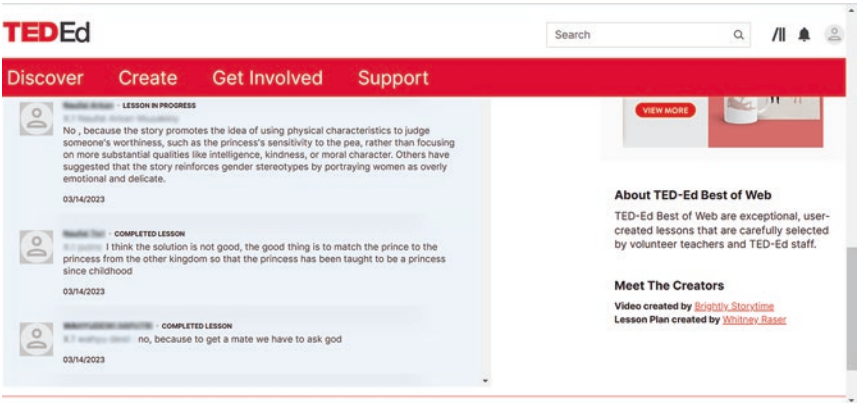

Fig. 4.2 Students' discussion of TED-Ed

Table 4.2 Reading activities guided by teachers in the extracurricular programme

Reading activities	Out-of-class activities
Planning	1. Students selected three or more videos from TED-Ed, based on their interests 2. Students identified five difficult high-frequency vocabulary words
Monitoring	1. Students read and watched their favourite videos 2. Students contributed to the discussion 3. Students listed difficult high-frequency vocabulary 4. Students took screenshots of their activities
Evaluating	1. Students wrote about their experiences based on reflective prompts and included the screenshots in their diaries 2. Students rewrote new difficult high-frequency vocabulary in their diaries and explained why that high-frequency vocabulary is considered difficult for them 3. Teachers provided feedback and reinforcement about reading strategies and students' IDLE practices

In the second in-class implementation, teachers discussed and gave reinforcement for students' reflections taken from previous sessions. Students wrote on a whiteboard unknown high-frequency vocabulary words as procured from out-of-class activities. Next, teachers introduced how to guess some vocabulary based on context and prior knowledge.

Students working in groups tried to implement this approach with TED-Ed stories by looking for new high-frequency vocabulary. Then, students listed new vocabulary in their books and attempted to guess the meaning based on a word's particular context.

When comparing these guesses, students looked for answers on YouGlish (https://youglish.com) or in dictionaries to understand how speakers used them in context and in their spoken vocabulary. Students compared those definitions based on their understanding of the words, as well as by using information taken from videos. Teachers gave feedback on students' reading practices and their guesses about the meaning of vocabulary words with regard to context and prior knowledge. Teachers provided examples of how students could increase their vocabulary by doing from out-of-class activities with TED-Ed to enhance their reading comprehension.

After school, teachers could increase the size of unknown high-frequency vocabulary words as students showed additional readiness to acquire new knowledge. They then asked students to read as much as possible to search for ten new high-frequency vocabulary words, in order to accelerate students' reading speed by seeking material on their favourite topics, as found in TED-Ed videos. Students listed and guessed the meaning of these words, as reported in their diaries but without using YouGlish or dictionaries. Students wrote what new insights they found after reading the texts and expressed their difficulties in comprehending these additional words. They also discussed how they attempted to solve their various problems.

In the third in-class implementation, teachers used local stories in which students were familiar with the story, for example, "The Mouse Deer and the Crocodile." After 10 minutes of reading, teachers employed the TED-Ed link, "My Friend Maggie—Today I Learned—Read Aloud Picture Book." Teachers asked students to identify (who, what, when, why, where, and how) between Indonesian-endorsed EFL textbooks and TED-Ed stories (e.g., Who are the main characters in both stories? What different cultures do you find between two stories?, etc.). Then, high-frequency vocabulary words were implemented in various expressions and sentences by having the students answer questions.

During out-of-class activities, students worked in groups to find and read other TED-Ed stories that were found to be similar to popular Indonesian-endorsed EFL textbook stories. After looking for such stories, students reflected on them in their diaries to discuss similarities or differences in basic facts (e.g., who, what, when, why, where, and how) taken from those stories. Students also reflected on how other students contribute to reading activities, how working in groups helps them to encounter high- and low-frequency vocabulary, and how they argue with one another about similarities or differences they noticed in the stories.

Extramural Activities

More than 100 students (n = 122) reported that they continued using TED because they enjoyed reading about TED-Ed topics in their leisure time. Various topics gave them more reading options, based on their interests. Some students loved cats and found stories about cats on TED-Ed that gave them new perspectives on their favourite pets. Furthermore, they also found that TED-Ed blogs and TED-Ed GIFs were also valuable for enhancing their understanding of videos because some of the students had already chosen topics that were similar to the videos.

Independently, 98 students (of n = 122) used TED-Ed to facilitate their high-frequency vocabulary learning because they understood the value of vocabulary learning for reading, listening, and viewing. Although they also mentioned that unknown low-frequency vocabulary was complex, they saw this as a manageable burden because various pictures, voices, and animations helped them with meaning-making with texts. Furthermore, Nation (2011) points out that students learn more high-frequency words, from " as low as 100 words to somewhere around 3000 words," which proved more valuable for extensive reading.

Interestingly, 42 students (of n = 122) also tried sharing their favourite videos with other friends on social media (e.g., WhatsApp, Facebook, and Twitter) while expressing their opinions about the videos they viewed in English. However, they reported that they still felt shy about using

extensive English with friends because they feared losing face (e.g., using only English out-of-class is still socially stereotyped as being a show-off). Therefore, they said they felt safer using code-switching and code-mixing in conversations. In doing so, students considered their degree of acquaintance with others. For example, the closer friendships with local students were, the more practice they undertook together; the more they did not know each other (other speakers from other countries), the more they were willing to communicate.

Although they did not complete the similar circle from extracurricular IDLE, they reported that they felt more confident in their reading abilities because they had acquired new vocabulary and understood the texts by using various reading strategies. They mentioned that before TED-Ed was implemented in their school they were not excited about reading English language books because of the stories, topics, monochrome colours, and pictures. They mostly read English on social media, but the texts were short. With TED-Ed, they became more motivated to read because they liked TED-Ed lessons, as they provided various ways of reading (e.g., reading by means of videos and TED-Ed blogs, which provided them with engaging topics).

Reflection

Extracurricular and extramural IDLE indicated that SC interaction was reported beneficial for students' reading activities, as it promoted intentional and incidental vocabulary learning, developed a sense of guessing vocabulary from a context (e.g., by seeing picture, text, sound, gestures, etc.), and presented new knowledge in comparison with their prior knowledge. Students indicated their zeal to read a lot based on their interest in pursuing out-of-class activities. One of the reasons they listed was the availability of rich and engaging topics that students rarely found in regular Indonesian EFL textbooks. Using TED-Ed lessons also resulted in less reading disruption because they provided scaffolding for readers (e.g., watch, think, dig deeper, and discuss).

Moreover, ST interaction played an essential role in motivating students to work on extracurricular and extramural IDLE. Teachers could coach and strive to maintain students' interest and motivation to read after school by giving various support in terms of affective (e.g., teachers encourage students to use TED-Ed after the programme), capacity (e.g., teachers provide other similar resources and acknowledge the risks and advantages of undertaking activities after the programme), and behaviour (e.g., the more teachers use in-class and out-of-class activities by employing IDLE sources, students may initiate such activities in the future).

Providing tips, feedback, and reinforcement regarding reading strategies was also crucial in improving students' reading comprehension. Diaries could facilitate personal communication between students and teachers by addressing individual needs. Much reading does not mean that all input becomes comprehensible, so teachers must address students' motivation and give specific reading feedback to develop their interest in pursuing self-directed learning strategies (Grabe, 2016; Moore, 1989).

Although students' peer discussions and feedback in TED-Ed and in-class activities were designed to facilitate the customary practice of English, SS interaction in extramural IDLE was still limited to Indonesian SS, although TED-Ed allows for telecollaboration. Students need to meet other speakers from other countries during their SS interactions. During extramural or extracurricular IDLE, teachers could encourage students to look for overseas friends on social media and bring up TED-Ed topics in subsequent conversations. Therefore, students are more willing to use English with their friends in extramural IDLE because they know the benefits of English, based on, for instance, discussing their respective hobbies. We agree with MacIntyre et al. (1998) that to elevate SS interaction, teachers must direct their attention to the topic of discussion, the degree of acquaintance, the formality of a situation, and the particulars of those persons who are involved in a specific interaction.

Integrating extracurricular IDLE at schools, teachers must strive to see that technology support follows school policy because some schools do not allow students to bring in and use smartphones at school. Therefore, teachers at times must negotiate with school communities with regard to

the use of school computers, laptops, or tablets. This study indicates that students want to use TED-Ed independently because they already own various personal gadgets (e.g., smartphones, laptops, or tablets). In integrating IDLE, teachers should know what age students begin to own their gadgets because different families and countries may have other standards or policies for using such devices at home. If this study is replicated with young learners, schools should promote IDLE activities and communicate the specifics of their use with parents for out-of-class activities. Furthermore, a longitudinal study can be conducted to capture how students' reading habits change over time during extracurricular and extramural IDLE in utilizing TED-Ed lessons and then report on students' reading comprehension development after they practise and use IDLE resources for extensive reading.

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References

Cahyono, B. Y., & Widiati, U. (2006). The teaching of EFL reading in the Indonesian context: The state of the art. *Teflin Journal, 17*(1), 36–58. https://doi.org/10.15639/teflinjournal.v17i1/37-60

Grabe, W. (2016). L2 reading comprehension and development. In E. Hinkle (Ed.), *Handbook of research in second language teaching and learning* (pp. 299–311). Routledge.

Lamb, M., & Arisandy, F. E. (2020). The impact of online use of English on motivation to learn. *Computer Assisted Language Learning, 33*(1–2), 85–108. https://doi.org/10.1080/09588221.2018.1545670

Lee, J. S., & Drajati, N. A. (2019). Affective variables and informal digital learning of English: Keys to willingness to communicate in a second language. *Australasian Journal of Educational Technology, 35*(5), 168–182. https://doi.org/10.14742/ajet.5177

MacIntyre, P. D., Dörnyei, Z. N., Clément, R., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal, 28*(4), 545–562. https://doi.org/10.1111/j.1540-4781.1998.tb05543.x

Moore, M. G. (1989). Editorial: Three types of interaction. *American Journal of Distance Education, 3*(2), 1–7. https://doi.org/10.1080/08923648909526659

Moorman, G. B., & Blanton, W. E. (1990). The information text reading activity (ITRA): Engaging students in meaningful learning. *Journal of Reading, 34*(3), 174–183.

Nation, I. S. P. (2011). Research into practice: Vocabulary. *Language Teaching, 44*(4), 529–539.

Nation, I. S. P., & Waring, R. (2019). *Teaching extensive reading in another language*. Routledge.

Part II

Fostering Students' Productive English Skills

5

The Role of a Mother and Siblings in Enhancing Two Young Iranian EFL Students' Willingness to Communicate in a Second Language Through Serious Game Play

Ali Soyoof and Barry Lee Reynolds

Background of the Study

Research has shown that the home environment is regarded as an essential space in improving young students' second language (L2) (English) communication skills (Soyoof, 2022b). In particular, by using digital technologies, young students' L2 communication can be developed through interaction with parents and siblings (Soyoof, 2022b). Consistent with the

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aforementioned studies, many papers in the literature on second language learning attest to the effectiveness of different digital resources for promoting students' L2 willingness to communicate (L2WTC) as a form of Informal Digital Learning of English (IDLE) (Lee, 2019a; Lee, & Sylvén, 2021; Soyoof et al., 2021, 2023; Soyoof, 2022a;). WTC refers to preparedness to begin communicating in a particular discourse with a person or people using an L2 (Lee, 2019a). IDLE refers to "self-directed, informal English learning using a range of different digital devices (e.g., smartphones, desktop computers) and resources (e.g., web apps, social media) independent of formal contexts" (Lee, 2019b, p. 2). IDLE can be classified into two types, extracurricular and extramural IDLE. While extramural L2 learning is not linked to educational contexts and is voluntarily initiated by students, extracurricular L2 learning is connected to formal and educational contexts and is initiated by teachers (Soyoof et al., 2021).

In relation to L2WTC in extramural IDLE, Lee (2019a) explored the attitudes of 98 Korean English as a Foreign Language (EFL) university students towards L2WTC in extramural IDLE by using a grounded theory methodology. He reported that three factors, namely socio-political, contextual, and individual differences, can foster or hinder the L2WTC of Korean EFL students in the digital space outside classroom contexts. Later, Lee and Sylvén (2021) investigated the relationship between the L2WTC of two groups (i.e., Korean and Swedish EFL secondary students) and their IDLE activities. The authors found that both Korean and Swedish students are more inclined to initiate communication in English during their engagement with IDLE activities. Further, inspired by Lee's study (2019b), Soyoof (2022a) found that Iranian secondary students' L2WTC in digital spaces can be improved through communication with more knowledgeable English speakers (e.g., gamers or social media users) in their community. Most recently, Soyoof et al. (2023) reported that from the perspectives of 500 Iranian EFL students, massively multiplayer online role-playing games (MMORPGs) as an extramural IDLE activity can enhance students' L2WTC through peer-to-peer feedback and L2 interaction with more knowledgeable English speakers. Overall, the literature has acknowledged that students' L2WTC can be promoted by their peers in digital spaces, namely forums, social media platforms, and digital games.

However, to date the focus of studies on IDLE and L2WTC has been on commercial off-the-shelf (COTS) games, whose primary purpose is entertainment rather than education, the latter of which is the main purpose of serious or educational games (Soyoof et al., 2022). Furthermore, to the best of the researchers' knowledge, the roles of mothers and siblings in young students' L2WTC in the home environment have not been extensively explored. Understanding more about the development of young learners' L2WTC in the home environment is important, as this formative environment is where young learners first experience extramural IDLE. Furthermore, the home context can provide a comfortable and supportive environment for fostering young students' L2WTC. Moreover, previous studies (Soyoof, 2022a, 2022b) showed that one of the most frequent interactions at homes can take place between mothers and siblings during educational playtime, which can play a huge role in students' L2WTC. With this knowledge in mind, the researchers embarked on exploring the role of serious games as an educational playtime in the L2WTC of young students, eight years of age, with two goals in mind. First, one aim was to highlight the role of serious games as an extramural IDLE activity for L2WTC development. A second aim involved underscoring the role of mothers and siblings as an important factor in fostering young students' L2WTC. Hence, this study aimed to answer the following question:

1. What is the role of family members in young Iranian EFL students' L2WTC during serious game play at home?

Sociocultural Theory of Human Learning and Development

Sociocultural theory encompasses human learning in general and language learning in particular. According to this theory, interactions and collaborative activities with other language speakers can aid individuals in their acquisition of a second or foreign language (Soyoof, 2022b). More specifically, young students' second language learning can be

improved through interaction with more knowledgeable people, such as teachers, peers, and parents (Soyoof, 2022a, 2022b). These studies reported that in the home environment mothers adopt different types of mediation strategies to improve their children's second language learning. These mediation strategies were adopted by mothers to safeguard young students from the potential harm of digital technologies or to support young students to better learn the L2 (Soyoof, 2022b). As an example, based on the language proficiency level and previous English practices of young students, mothers supported their children through different mediation strategies such as bilingual translation and metalinguistic discussions (i.e., explaining the rules of language), among others. Overall, these mediation strategies used by mothers at home have resulted in fostering L2WTC in young students at home. However, these mediation strategies were used with young students engaged in COTS games and the viewing of English animations rather than engagement in serious game play. To this end, this study aims to fill this research gap by highlighting the role of mothers and siblings in young students' serious game play at home.

Methodology

To recruit the participants for this case study the researchers used purposive sampling. According to Creswell (2013, p. 97), "a case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time." In purposive sampling, researchers often recruit their participants based on predetermined criteria (Soyoof, 2022a, 2022b). In this way, for this study the authors sought Iranian children, eight years of age, who were studying English at private language institutes in Shiraz, Iran. To select the participants, the study was advertised in a WhatsApp group aimed at teaching English to Iranian children. A family showed interest in participating in the study. After the twin sons and their mother signed consent and assent forms, the process of data collection was initiated by giving them an open-ended questionnaire. The questionnaire elicited information about the types of digital resources that the young students were

using at home. They filled out the questionnaire with the assistance of their mother. The following information about the Shirazi family (i.e., the case addressed in this study) was achieved through the use of an open-ended questionnaire.

Since the twin sons were studying at a private language institute in Iran, they had taken a Quick Placement Test for offshore testing (the University of Cambridge Local Examinations Syndicate (UCLES, 2001)). Based on the test, they reported in their demographic profiles that the English language proficiency of Hamed was upper-intermediate, based on Common European Framework (CEFR), while Hamid's English proficiency level was lower-intermediate, in line with CEFR (Council of Europe, 2001). The mother of the children, who had obtained a bachelor's degree in English literature, was an English teacher in the private language institute. Her English proficiency level was advanced or proficient, in accordance with CEFR. Hamed and Hamid reported that one of the favourite digital games of the mother and her children is *STEM Buddies,* a serious game that teaches simple mathematical and physical concepts to primary school students by using the English language in written and spoken modes. Thus, the researchers decided to ask Hamed and Hamid's mother to record two videos while her sons were playing *STEM Buddies*.

In addition to the open-ended questionnaire, the mother of the twin sons recorded two videos of how she supervises or communicates with her sons as they played the serious game on their tablets. While viewing these two videos, the researchers wrote notes based on the video recordings. Then, the first author interviewed each of the twin sons in Persian for 15 minutes by using Bale Messenger. The interview questions aimed at providing information for the researchers to answer the research question. After transcribing the interview from Persian to English, back translation was done by two proficient English-Persian translators for checking the accuracy of the initial translation.

Following that, the researchers used thematic analysis for analysing the notes on video recordings and the final version of the interview transcript. Thematic analysis is regarded as one of the most suitable ways of analysing data qualitative design (Braun et al., 2019). The researchers thematically analysed the data by following the six stages suggested by Braun et al. (2019, pp. 852–857) encompassing:

1. Familiarisation with the data
2. Generating codes
3. Constructing themes
4. Revising themes
5. Defining themes
6. Producing the report

Inter-code reliability was calculated using SPSS (Cohen's κ = .90). Cohen's kappa coefficient (κ) is regarded as a statistic that is often used for measuring inter-rater reliability for qualitative items (Soyoof, 2022a). The first author coded the data obtained from the interview transcripts and notes on video recordings. This process was double-checked by the second author as well as one knowledgeable colleague. Any potential issues were resolved through discussion and a series of revisions until both authors and their colleague agreed on the coding.

Results and Discussion

The Findings from the Video Recordings and Semi-structured Interviews

Fostering L2WTC Through Sibling Interaction

The first theme shows that the L2WTC of Hamed and Hamid was fostered through communication with each other. As an example, in the first video recording of Hamed and Hamid, they were observed while speaking in English.

Researchers' Video Recording, Field Note 1

Hamid was confused, as he did not understand why "gravity" does not work in space. So, he seeks assistance from his elder twin brother, Hamed. Hamed explains to Hamid in English that since there is "zero gravity in space" everything floats there. He then asked Hamid to give him an example in English. Hamid said "an apple floats in space." Then they both answered the gravity quiz in the game after the lesson. Hamed and Hamid's mother only supervised the communication between her children and nodded her head as a sign of confirmation of her children's communication in English.

Further, during the semi-structured interview with Hamid, he said:

> *My older brother sometimes answers my questions in English. He sometimes gives me some examples and asks me to explain them to him in English. However, sometimes he cannot help me, as we both do not understand some lessons in STEM Buddies.* (Semi-structured interview 1)

Given the information provided by the video recording and the semi-structured interview, it is evident that the twin brothers help each other in understanding the concepts in English through examples and additional explanations. These brothers must understand the lesson to successfully achieve the goal of the serious game. Consistent with these findings, scholars in the literature have stressed the role of having more proficient English-speaking community members assist less proficient English-speaking members in digital games so that the less proficient members will better understand the goal of the games and achieve higher scores on digital games (Soyoof et al., 2023). These communications in English between players promote their L2WTC, as they find a shared interest in negotiation and learn more about the related concepts (Lee, 2019a; Soyoof, 2022a). These negotiations of digital game players in English highlight the idea of sociocultural theory, by which players in digital games learn from one another through peer-to-peer feedback (Soyoof, 2022a; Soyoof et al., 2023).

Promoting L2WTC Through Parental Interaction

The second theme gives witness to the significant role of the sons' mother as a scaffolder or promoter of knowledge construction. For instance, in the second video recording of Hamed and Hamid, when they spoke in English, we observed:

Further, during the semi-structured interview with Hamed, he stated:

Researchers' Video Recording, Field Note 2

Hamed was confused, as he did not understand what the serious game meant by the term, "black hole." So, he asked his younger brother Hamid to see whether he understood what a black hole is in the game. Hamid also said that he did not understand the meaning of "black hole." Thus, their mother intervened and explained that a "black hole is an area in a space that sucks everything inside, including lights and other objects. It is similar to a strong vacuum cleaner that sucks objects." Then she asked her children to explain to her what a black hole is by providing examples in English. She also encouraged her sons to elaborate more about "black hole" through the story contained in the serious game.

I try to answer my younger brother's questions if I can. If we both do not understand, we always ask our mother, and she explains the concepts in the games to us in simple English language, with a clear example. (Semi-structured interview 2)

Considering the information offered by the video recording and semi-structured interview 2, it is apparent that the role of the mother is central in providing directions and additional explanations to the children. These ideas are in alignment with a previous study (Soyoof, 2022b), which underscored the role of mothers in offering cognitive scaffolding to children by using directions and providing further explanations through interactions in English. From a sociocultural perspective, the role of a mother as a more knowledgeable person whose language proficiency is advanced is integral to understanding concepts in serious games, specifically, by simplifying the language of a serious game and ensuring that young children understand clear examples. Further, affective scaffolding in the form of encouragement by the mother enhanced the L2WTC of her sons. As an example, she encouraged her sons to explain the concept of a "black hole" through the storyline of a serious game. Overall, it seems that the role of the mother is essential in children's sibling feedback and communications in English. Figure 5.1 shows the different types of L2WTC in this study, which highlight the role of mothers as supervisors or scaffolders.

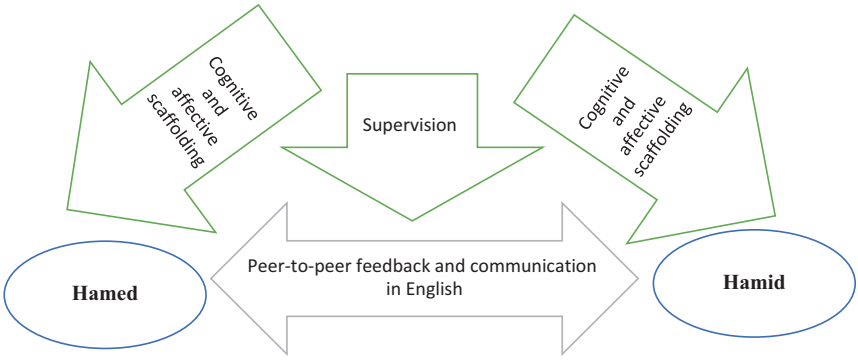

Fig. 5.1 The different ways that mother fosters their children's L2WTC

Limitations, Conclusions, Implications, and Suggestions for Additional Study

While this study revealed two findings about the L2WTC of young students at home, it does have limitations. First, the data collected for this study was limited to one family, and thus, one case. Hence, future studies can recruit multiple cases or families to achieve more comprehensive findings regarding the L2WTC of young students at home. Second, the participants selected for this study were from Shiraz, Iran, one of the southern states of Iran. Thus, it is suggested that in future studies researchers select their participants from different contexts or states since their social, cultural, historical, and economic differences can result in obtaining innovative and unique findings about the L2WTC of young students at home. Furthermore, the results of this study were obtained from two video recordings of 5 minutes each and two semi-structured interviews of 15 minutes each, plus two demographic profiles. Hence, it is proposed that young students' L2WTC would be investigated more thoroughly through multiple semi-structured interviews and hours of video recordings. Finally, this study used a qualitative case study with a small sample size. Accordingly, to achieve generalisable findings, the authors urge scholars to conduct quantitative or mixed-methods studies on young children's L2WTC at home.

The findings of this study suggest that the role of the mother is indispensable in fostering young students' L2WTC at home. In particular, the mother adopted two roles, as supervisor and scaffolder. As a supervisor, the mother double-checked the veracity of her children's peer-to-peer feedback and communication in English during the playing of a serious game. The mother as a scaffolder offered direction, simple explanations, and clear examples for her children so that they could understand important concepts in the game. Therefore, it would be valuable to underscore the role of mothers in discussing and reflecting on content provided by serious games to support their children in making connections between the game and real-world contexts. These discussions can deepen children's understanding of their cultural values, beliefs, and critical thinking practices. In particular, the discussions between mothers and children can help children develop critical thinking skills, such as questioning the concept of Santa Claus riding a sleigh in the sky. Overall, the findings of this study demonstrate that mothers can play an essential role in fostering young students' L2WTC. These findings have several implications. First, establishing a nexus between classroom and home contexts can play a huge role in fostering young students' L2WTC. This is especially true when teachers and parents negotiate how to effectively and consistently help young students by means of feedback offered at home and in schools. In addition, young students' content knowledge and L2WTC can be enhanced more effectively when the types of digital resources, including digital games used at home and in schools, would be negotiated by parents and teachers. In this way, young students can engage with extramural and extracurricular IDLE that are more effective in enhancing their L2WTC as well as content knowledge such as science, technology, engineering, and math (STEM) knowledge.

References

Braun, V., Clarke, V., Hayfield, N., & Terry, G. (2019). Thematic analysis. In P. Liamputtong (Ed.), *Handbook of research methods in health social sciences* (pp. 1–18). Springer. https://doi.org/10.1007/978-981-10-2779-6_103-1

Council of Europe. (2001). *Common European framework of reference for languages: Learning, teaching, assessment*. Cambridge University Press.

Creswell, J. W. (2013). *Steps in conducting a scholarly mixed methods study*. DBER Speaker Series. London.

Lee, J. S. (2019a). EFL students' views of willingness to communicate in the extramural digital context. *Computer Assisted Language Learning, 32*(7), 692–712. https://doi.org/10.1080/09588221.2018.1535509

Lee, J. S. (2019b). Informal digital learning of English and second language vocabulary outcomes: Can quantity conquer quality? *British Journal of Educational Technology, 50*(2), 767–778. https://doi.org/10.1111/bjet.12599

Lee, J. S., & Sylvén, L. K. (2021). The role of Informal Digital Learning of English in Korean and Swedish EFL learners' communication behaviour. *British Journal of Educational Technology, 52*(3), 1279–1296. https://doi.org/10.1111/bjet.13082

Soyoof, A. (2022a). Iranian EFL students' perception of willingness to communicate in an extramural digital context. *Interactive Learning Environments*, 1–18. https://doi.org/10.1080/10494820.2021.2024579

Soyoof, A. (2022b). Unearthing Iranian mothers' mediation strategies during their children's home digital literacy practices in English. *Interactive Learning Environments*, 1–15. https://doi.org/10.1080/10494820.2022.2121732

Soyoof, A., Reynolds, B. L., Vazquez-Calvo, B., & McLay, K. (2021). Informal digital learning of English (IDLE): A scoping review of what has been done and a look towards what is to come. *Computer Assisted Language Learning*, 1–27. https://doi.org/10.1080/09588221.2021.1936562

Soyoof, A., Reynolds, B. L., Shadiev, R., & Vazquez-Calvo, B. (2022). A mixed-methods study of the incidental acquisition of foreign language vocabulary and healthcare knowledge through serious game play. *Computer Assisted Language Learning*, 1–34. https://doi.org/10.1080/09588221.2021.2021242

Soyoof, A., Reynolds, B. L., Chan, K. K., Tseng, W. T., & McLay, K. (2023). Massive online multiplayer games as an environment for English learning among Iranian EFL students. *Computer Assisted Language Learning*, 1–44. https://doi.org/10.1080/09588221.2023.2171065

UCLES. (2001). *Quick placement test*. Oxford University Press and University of Cambridge Local Examinations Syndicate (UCLES).

6

Facilitating Authentic and Creative English as a Foreign Language Expression Through Digital Multimodal Composing

Lanxuan Xie and Lianjiang Jiang

Issue

At a public medical university in southeastern China, English as a Foreign Language (EFL) writing seems to be a "monster" that caused anxiety for many students, as evidenced by some of their comments, for instance:

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"I don't know what to write."

"If I don't rely on the sentence patterns, stories, or samples online, I don't know how to write."

"Sometimes I tried to write my authentic thoughts, but later I found that using the complicated sentence patterns and fake stories helps me get a higher grade in exams and online grading platforms."

Some students exhibited tight frowns while expressing their problems in attempting EFL writing.

Digital Multimodal Composing (DMC) is a semiotic process that uses digital tools to combine multiple modes, which include but are not limited to word, image, and soundtrack (Jiang, 2018). DMC could be a helpful pedagogy that encourages creative and authentic expressions because students perceived DMC activities as helpful in creating a motivational learning environment (Jiang & Luk, 2016) that enhances learner investment in EFL writing (Jiang, 2018), as well as assisting in learning effective expressions (Li & Akoto, 2021). However, since DMC was not regarded as a formal "writing" form in many EFL teaching contexts, there were few opportunities for students to practise DMC in an existing EFL writing curriculum.

To address this issue, the first author designed a creative writing workshop for digital multimodal composing. Centring on the topic of "What have you learned from the COVID-19 pandemic?" students were required to share their experiences with photos, painting, performing, sound theatres, video-making, and essay writing. Seven students, ages 18–20, voluntarily joined this workshop because of their interest in English writing and digital multimodal composing. The students were majoring in English and International Commerce. Although they ranked among the top 10 percent in their own general English classes, their EFL writing levels were lower-intermediate, based on the teachers' assessment of their essays.

Theory

Applying DMC in EFL writing courses is based on two theoretical rationales. First, to prepare students for "the increasing complexity and interrelationship of different modes of meaning" (The New London Group,

1996, p. 78), many scholars have been aware that "writing pedagogy should be viewed as … creating and communicating meaning, with the added benefit of a large semiotic toolkit" (Belcher, 2017, p. 2). This new perspective on writing justifies DMC as a form of writing, encouraging teachers to incorporate other modes of information (e.g., visual, aural, spatial, and gestural modes) into EFL writing. Second, based on the "inter-semiotic complementarity" (Royce, 2007, p. 68) theory, remixing multimodal factors (e.g., photos, videos, field trips, and sound) might be helpful for promoting students' voices and assisting with their expression of ideas in English (Hafner, 2015).

Materials

The school had Wi-Fi, landline connections, desktop computers, and software in every language-teaching classroom. Students brought their mobile phones to the class to present photos and shoot videos. After the class, students were guided to use a video editing software called Jianying (剪映) for video-making. The software is free of charge, user-friendly, and most of the participants knew how to use it; most of the students took a video-making course during their freshmen year. WeChat Channel (微信视频号), WeChat groups (微信群), and WeChat Moments (微信朋友圈) were used for video sharing.

Sequence of Activities

Extracurricular Activities

The teaching objectives and learning activities are summarised in Table 6.1. The first author provided multiple sources of input (e.g., texts, photos, and videos) to raise students' awareness of the differences in multimodal expressions. Students were guided to express their thoughts based on one chosen mode (e.g., oral discussion, painting, textual writing) or multiple modes (e.g., sound theatre), from which they can have a better idea of how to combine different modes of information for a harmonious orchestration (see Fig. 6.1).

Table 6.1 The arrangement of the DMC creative writing workshop

Theme: What have you learned from the COVID-19 pandemic?
Objectives:
After the two sessions, students should be able to

1. Become familiar with the expressions and ideas related to pandemics by reading two excerpts from literary works.
2. Compare and understand the similarities and differences in using various modes for meaning-making.
3. Be able to express authentic feelings and thoughts through text-based English writing and digital multimodal composing.
4. Be able to identify and address problems in the text-based English writing after the interactive feedback session.
5. Know about the influences of the COVID-19 pandemic on human society and people's lives.

Session 1: Quarantine

- **Key Purpose:** to encourage and engage students to experiment with different modes for meaning-making
- **Multimodal Resources:** a short video describing Anne Frank's living circumstances and people's moods during World War II
- **Reading:** selected section of *The Diary of Anne Frank*
- **Multimodal Activities:** picture sharing, painting, sound theatre

Activity 1: Picture Sharing:
Ask the students to share the most impressive photo during the pandemic. They need to describe what happened, how they felt and other important details in the photo. Description guidance and relevant vocabulary were provided. "Think-Pair-Share" was used to stimulate additional peer interactions and linguistic modification.
Activity 2: Video Watching and Close Reading of The Diary of Anne Frank
Guide students to underline the verbs and adjectives. They need to summarise people's feelings and reactions during quarantine conditions, based on the underlined parts. Afterward, they are guided to discuss how the quarantine changed people's lives during World War II.
Activity 3: Group Painting:
Ask the students to brainstorm keywords about their experience during the quarantine and to express them through painting. Painting can create a relaxing and creative space in which students to decide the colours, the content, and the logic of the pictures, which can be transformed into the mood, the content, and the organisation of the textual writing.
Activity 4: Sound Theatre in Groups:
Ask the students to orchestrate sounds to accompany their paintings. Students can use sounds and music they obtained from the Internet. They can also design different roles and perform dialogues for the sound theatre. This activity can help students understand the components of a video, such as scenes, sounds, background music, and scripts. Students could also learn how to use a camera to create special effects such as zooming in and out.

- At the end of the class, students should sketch the main scenes in the video, based on the sound theatre.

(*continued*)

Table 6.1 (continued)

Homework: Make a short video and share it on social media platforms or the class WeChat group. Students have two weeks to finish the one-minute video. Students are allowed to use video resources online for video-making, but they could not use existing resources for all or most of the video. They should also consult the uploader for permission and cite the sources at the end of the videos to avoid committing plagiarism.

Assessment: The teacher regarded video-making as a part of the writing process and did not grade their videos. Instead, the teacher required them to share the videos on social media platforms and invited their peers to share thoughts and feelings about the video. The videos were used as idea sources for students' in-class discussion and after-class textual writing.

Session 2: Reflections on the Plague

- **Key Purpose:** Inspire students to write text-based essays based on multimodal expressions.
- **Multimodal Resources:** a short video introducing the Black Death in Europe, a short video presenting people's joint efforts to combat the COVID-19 pandemic in mainland China, and student-made videos (the video homework in Session 1).
- **Reading:** Selected section of *The Plague* by Albert Camus
- **Multimodal Activities:** Video sharing, still-image (a type of drama activity)

Activity 1: Video Sharing:

Ask the two groups of students to share their videos (see Fig. 6.2). Engage other students in discussing what they have seen in the video and how they felt about it. Stimulate students' thoughts about what they have learned from the pandemic and ask them to jot down the bullet points for the writing outline.

Activity 2: Video Watching + Close Reading of *The Plague* by Albert Camus

Present a video as background information about the Black Death. Guide students to scan the passage and underline people's reactions to the plague. Invite three students to read the most impressive section and share their feelings and thoughts about it.

Activity 3: Video Watching + Still Image

Present a video of people's joint efforts to combat the COVID-19 pandemic in mainland China. Guide students in brainstorming the impressive scenes with regard to the pandemic and describe what people did in these scenes. Ask the students to perform people's efforts during the pandemic and crystallise their gestures at the end of the performance. For example, they can act like a doctor taking a great number of samples for nucleic acid tests on a very hot day and stop at the point of the hand-reaching gesture. While a student was performing, other students should guess what the job is of the person. Then the performer would reveal the answer and explain why the scene was memorable for him or her. This activity can help students empathise with a particular character's feelings to present more authentic details in their video-making or text-based writing.

- Output: At the end of the class, students should create a written outline (text-based).

(*continued*)

Table 6.1 (continued)

Homework: Write a 300-word essayAssessment: After the students finished the essay, the teacher held a personal meeting with each of them and provided interactive feedback on their text-based writing. Referring to IELTS writing grading criteria, the teacher assessed students' performance based on the following aspects: (1) task response, (2) coherence and cohesion, (3) lexical resources, (4) grammatical range and accuracy, and (5) participation in class and self-reflection.

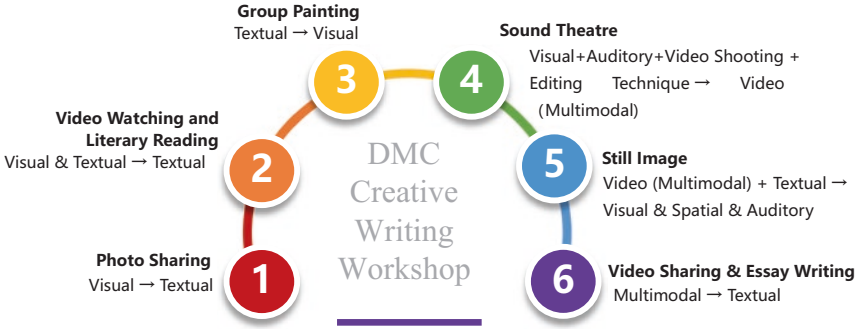

Fig. 6.1 A summary of the multimodal activities in the creative writing workshop

Fig. 6.2 Screenshots of students' videos

Extramural Activities

Otis was a year-two English major. He was 19 years old. His mother tongue was Cantonese, and he learned English as a second language. As a motivated English learner, he actively utilised resources and opportunities to learn English. He shared a self-made video after class. The video concerned a memory of his from high school. He made this video voluntarily in three steps. First, he gathered videos and photos from his teachers, classmates, and his own electronic devices. Second, he ordered materials based on themes and a chronological sequence. Third, he remixed and orchestrated the materials by employing background music, personal narration, and self-made scripts. Special effects were also added in the third stage. In Otis's opinion, video-making, though time-consuming, could be motivating if the creator can come up with an engaging theme. Digital multimodal composing allowed Otis to review and share important moments in high school following his graduation. This task was personally meaningful, so Otis was willing to spend extra hours on it after class.

Reflection

The creative DMC workshop aimed to facilitate students' creative and authentic expressions. After the workshop, the teacher held focus group interviews with the students. The interview recordings were transcribed and coded. Four themes emerged in explaining how DMC can encourage authentic and creative expressions, namely: providing ideas, increasing confidence, establishing rhetorical and structural scaffolding, and amplifying social support.

First, the DMC activities encouraged students to use multiple organs of sensation to explore and reflect on their experiences, which stimulated ideas for students' authentic and creative meaning-making. Students include fake stories in exam-oriented text-based writing, probably because they have limited ideas to write about or they may not know how to express the complicated ideas in English. Allowing students to use

multiple semiotics to facilitate their English expression creates a feasible manner of writing authentically and creatively.

Second, DMC activities increased students' confidence in English writing. Compared with the rigid rules for structure and language style found in text-based writing, DMC activities are more flexible regarding styles of expression, which are perceived as less cognitively demanding. The reduced fear of making mistakes allows students to focus on what they want to express and how to make that expression more creative.

Third, the DMC activities provided scaffolding for rhetorical and structural planning in text-based writing. For example, student Wenky stated that she experienced a feeling of depression, which was conveyed to her by the black and white colours in the video. This, in turn, inspired her to set a depressing tone in the opening paragraph of her text-based essay. This type of "inter-semiotic complementarity" stimulates creative expressions in text-based writing (Royce, 2007, p. 68).

Fourth, the support from peers and teachers provided scaffoldings for the content, linguistic and rhetorical aspects of EFL writing. Compared with text-based writing, DMC requires the remixing and composing of multiple sources of information, which are more difficult to achieve through individual effort. Thus, expanded needs and space for collaboration provide more ideas and support for creative and authentic expression.

Although DMC was perceived as helpful in the aforementioned aspects, not all students reported that they enjoyed this form of writing instruction. Some expressed concerns in the following four aspects: first, the activity seems irrelevant to exams; second, DMC provides little linguistic scaffolding for text-based writing tasks; third, "playing around" with multimodal tasks made it more difficult to concentrate on writing; and fourth, DMC tasks took a relatively long time to complete. These comments echoed Jiang's (2018) finding that ideological structures such as high-stakes testing culture shaped students' views about what they should do and what is helpful in English writing. In addition, students' agencies in negotiating identities such as a multimodal designer and an exam-oriented writer influenced their acceptance of and investment in DMC (Jiang, 2018). These various influential factors shaped a spectrum of acceptance for DMC. For example, Jiang (2018) identified three patterns of investment changes after applying a DMC project: some

students evolved from initially being resistant writers to eventually becoming active composers. Some changed from being exam-oriented writers to becoming multimodal designers, but some presented little change in their level investment in the writing process. It was found that students who wanted to learn skills other than exam preparation better accepted DMC as an engaging task for EFL writing instruction.

The spectrum of acceptance in DMC required teachers to prepare students linguistically, psychologically, technically, and rhetorically. The authors propose several suggestions for future instruction of DMC. First, for teachers who have never conducted DMC in their classrooms, trying out easier multimodal tasks such as poster making might be a good starting point. After students become familiarised with different modes of expression and acquire basic digital skills, teachers can move on to multimodal orchestration, such as sound theatre or video-making. If the students are unfamiliar with the task form and are lacking in digital literacy, teachers should be cautious about including many different forms of multimodal tasks within one session, as this would increase the cognitive load of students. Second, a clear theme and logical flow are essential for combining multiple forms of DMC tasks. For example, the teacher in this workshop tried to make the end product of the previous activities as the starting point for the next DMC task, centring on the theme of the pandemic. This approach can establish a clear focus for a multimodal design. Third, instruction in writing sample essays, teaching writing strategies, and helping students to develop useful sentence patterns are helpful approaches for bridging textbook content with digital multimodal composing. The instructions related to text-based writing can also address the dichotomy between the exam and DMC. Teachers should not view DMC as wholly different from text-based writing. Actually, knowledge and skills that are inherent in text-based writing can make information delivery in DMC clearer and more logical. Fourth, teachers should view students as experts about their personal experiences and encourage them to choose their preferred content and forms of expression. Only with freedom in the choices of content and forms of design can students create individual spaces for authentic and creative expression.

Life is multimodal. By introducing DMC into EFL writing classrooms, students are invited to combine their authentic life experiences

and creativity into their writing. Teaching writing is much more than preparing for exams; it is about cultivating transferable abilities and enabling authentic expression. In this experimental workshop, the authors attempted to explore new possibilities for encouraging authentic and creative EFL expression.

References

Belcher, D. D. (2017). On becoming facilitators of multimodal composing and digital design. *Journal of Second Language Writing, 38*, 80–85. https://doi.org/10.1016/j.jslw.2017.10.004

Hafner, C. A. (2015). Remix culture and English language teaching: The expression of learner voice in digital multimodal compositions. *TESOL Quarterly, 49*(3), 486–509. https://doi.org/10.1002/tesq.238

Jiang, L. (2018). Digital multimodal composing and investment change in learners' writing in English as a foreign language. *Journal of Second Language Writing, 40*, 60–72. https://doi.org/10.1016/j.jslw.2018.03.002

Jiang, L., & Luk, J. (2016). Multimodal composing as a learning activity in English classrooms: Inquiring into the sources of its motivational capacity. *System, 59*, 1–11. https://doi.org/10.1016/j.system.2016.04.001

Li, M., & Akoto, M. (2021). Review of recent research on L2 digital multimodal composing. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 11*(3), 1–16. https://doi.org/10.4018/IJCALLT.2021070101

Royce, T. D. (2007). Inter-semiotic complementarity: A framework for multimodal discourse analysis. In T. D. Royce & W. L. Bowcher (Eds.), *New directions in the analysis of multimodal discourse* (pp. 63–109). Lawrence Erlbaum.

The New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*(1), 60–93.

7

Using Video-Based Shadowing to Develop Students' Speaking Skills

Yo Hamada

Issue

Taro (a pseudonym) had been learning English for 10 years. He began studying it in elementary school and attended junior and senior high schools in Japan. After learning basic grammatical and vocabulary knowledge he acquired more complex grammar, a substantial amount of vocabulary for university entrance examinations, and basic communication skills. Therefore, he could read, listen, and make himself understood in English. However, he was not confident about his pronunciation skills, which made him hesitant to communicate in English.

Dr. Yamada (a pseudonym) was an English teacher at his university, and Taro decided to consult him about his problems. Dr. Yamada identified the following issues:

1. Taro had problems with the segmental features of English.
2. Taro did not know the International Phonetic Alphabet (IPA).

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3. Taro had problems with the suprasegmental features of English.
4. Taro was not confident about his facial expressions and gestures when speaking English.

Dr. Yamada believed that these problems pertained not only to Taro but to most students. Thus, he became aware of a unique teaching and learning technique called shadowing, which is gaining popularity in Japan.

Theory

Originally, shadowing was used as a training technique for interpreters, and it was introduced into Japanese English as a Foreign Language (EFL) contexts in the 1990s (Tamai, 1992). Since then it has gradually garnered researchers' attention—especially in extracurricular and extramural activities during the past two decades—as an effective practice for developing English learners' bottom-up listening skills (Hamada, 2017; Kadota, 2019) and pronunciation development (Foote & McDonough, 2017).

Shadowing is the act of simultaneously repeating what one listens to (Hamada, 2017; Kadota, 2019; Tamai, 1992). This seemingly simple activity is not as effortless as it appears. Suppose learners shadow, "I am looking for an effective way to learn English." The moment they hear the first words (the moment)—or more precisely, the first phonemes (/ðə/)—they start repeating them as simultaneously as possible. Shadowing is often confused with repeating. If learners repeat the same sentence they wait for a chunk to be spoken and then repeat it with a pause (e.g., I'm looking for/an effective way/to learn English). Based on this difference, shadowing is referred to as "online" and repeating as "offline" (Shiki et al., 2010). Shadowing theory can be explained from two perspectives: learners' attention and Skill Acquisition Theory.

First, shadowing controls learners' attention processes. While learners are shadowing their attention is exclusively placed on incoming sounds; when they listen, their attention is generally on content comprehension (Hamada, 2017). Suppose students shadow 50-word sentences. As they listen they try to recognise and repeat the sounds, spending most of their

attention on these processes, with little cognitive resources devoted to understanding the input. In contrast, suppose they only listen to 50-word sentences. They would naturally listen to comprehend the input, reserving their cognitive resources for comprehension rather than sounds. Thus, by shadowing one can focus on incoming sounds that otherwise would be diverted to comprehension. Therefore, if learners' bottom-up listening skills are weak they can exclusively improve them, especially speech perception skills.

Second, Hamada and Suzuki (2022) situate shadowing within the framework of Skill Acquisition Theory (DeKeyser, 2015), proposing three stages of language skill development: declarative, procedural, and automatisation. Briefly, learners acquire the knowledge "THAT" in the declarative stage and knowledge "HOW" in the procedural stage. Next, they automatically use this knowledge in the automatisation stage. Suppose Japanese learners practise "you chose a right light" with the difficult phoneme /ɹ/ (which Japanese does not have). They first learn how to pronounce /ɹ/ (declarative knowledge); then, they practise saying it aloud (proceduralisation) until they can say it correctly without thinking about the rule (automatisation). Shadowing involves simultaneous repetition, progressing "the declarative-procedural-automatisation phrases (p. 3)."

Overall, until learners' bottom-up listening skills have reached the advanced or at least upper-intermediate level, they should focus on improving their bottom-up listening skills. Once they have enough room for extra processing they are ready to improve their pronunciation skills by attending to the output. Hence, they should proceduralise their pronunciation knowledge, heading towards automatisation.

Materials

All students had a computer (preferably a laptop) and smartphone or iPad in a Wi-Fi-free environment. They were required to film their shadowing performance using a smartphone or iPad and bring this to class and submit a digital shadowing file to the instructor on two occasions.

Sequence of Activities

Extracurricular Activities

Extracurricular activities were conducted weekly for three months. The students were at an intermediate proficiency level and were motivated to learn English. The class size was small, ranging from 10 to 20 students annually. In principle, students were asked to practise shadowing outside the class, while a short period (approximately 10 minutes) was spent in each class to assess their learning. This created an effective cycle in which the participants practised outside the class and checked their performance in class with instructors' and peers' feedback to achieve more effective practice. Attention played an important role in the activities: by focusing their attention on pronunciation features, students directed their proceduralised skills to the automatisation of pronunciation features.

In Class 1, Dr. Yamada introduced the shadowing project (Table 7.1), which he had implemented for years, revising and improving it annually. First, he showed a film of some of the best performers from the past year's class for the students to understand what they were expected to do while visualising a clear goal. He then told the students to choose a short video clip that they wanted to shadow throughout the project. Choosing an appropriate target model is the first step in successful learning. The students' priority for choosing a good model was to select one in which they were interested and to have a strong desire to emulate it. They were informed that the final evaluation was based on the following rubric (Table 7.2):

1. It had to be around 250 words and last for one minute.
2. The model pronunciation had to be the one they wanted to model.
3. Its speed had to be within their capability—neither too slow nor too fast.

In Class 2 the students were asked to find one speech model, type the scripts into a Word file, and bring them to class. Dr. Yamada took the time to ensure that everyone had found a suitable model and answered the students' questions.

Table 7.1 The course's weekly procedure (Based on Hamada, 2021, 2022)

Class	Procedure	Assignment by the next class	Focus
1	Project introduction	Find a speech Create its transcript	
2	Confirm that everyone has found a video clip and created its transcript	Create a parallel transcript in English and IPA	Until the fifth class, focus on segmentals
3	Introduction of /l/ and /ɹ/	Practise shadowing with the script and film it	
4	/ ð/ and /θ/ Pair check	Practise shadowing with the script and film it	
5	/v/ and /f/ Group check	Film and submit online	
6	/ʌ/ and /æ/ Instructor's feedback	Practise shadowing and film it	Focus on suprasegmentals from here
7	Pair check	Practise shadowing and film it	
8	Group check	Film and submit online	
9	Feedback	Practise to be ready for presentation	
10	Presentation		

Table 7.2 Shadowing presentation rubric

Target feature(s)	4	3	2	1
Segmentals /l, r ð, q, v, æ, v, f/	Few errors on the target phonemes	Errors to some degree	Noticeable errors to a great degree	Most of them not pronounced properly
Intonation and stress	Similar to the target model	Slightly different from the target model	Often different from the target model	Far from the target model
Fluency	Shadowed everything	Partially missed words but minor	Often missed	Failed to keep up with the speed

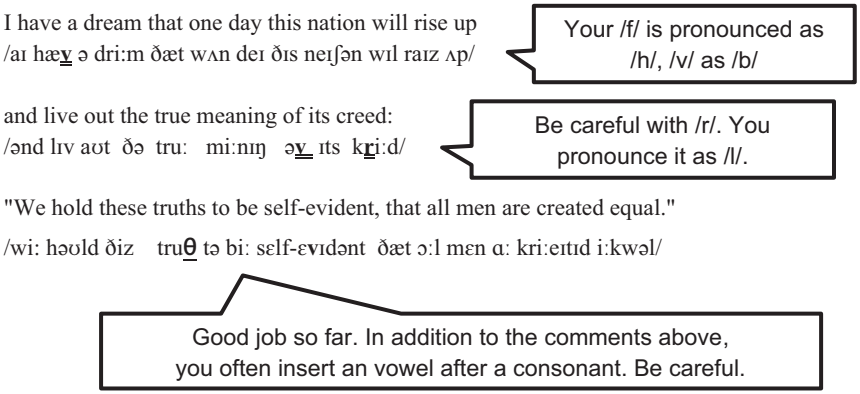

Fig. 7.1 A feedback example from Dr. Yamada to a student on the English/IPA transcript. (Taken from Dr. Martin Luther King Jr.'s speech; Note: This speech is obtainable in various ways. For example, https://www.youtube.com/watch?v=eQ6q2cnVXqQ)

Before Class 3, students were required to create a transcript in both English and International Phonetic Alphabets (Fig. 7.1). In addition, Dr. Yamada prepared a list of segmental features—which Japanese-English learners find difficult—and taught them (Table 7.1). The list included phonemes, such as /l, ɹ ð, θ, ʌ, æ, v, f/ (Saito, 2014). To help the students acquire declarative knowledge of pronunciation he first explained the day's target phonemes and demonstrated how to pronounce them, using a pronunciation website (e.g., BBC Learning English, 2023, https://www.youtube.com/watch?v=PZwKFFp7V50). After practice he checked each student's target phoneme pronunciation to ensure that everyone could pronounce words accurately (i.e., proceduralisation). As some students were not able to do so, Dr. Yamada gave appropriate explanations and advised them individually, including how they should practise outside class. Afterwards, students practised shadowing using the English script and filmed it using their smartphones, bringing it to Class 4.

In Class 4 students were paired, watched each other's recordings, and were asked to give feedback to each other, especially focusing on the segmental features they had learned in Classes 3 and 4. They were told to practise again with the script and film it by Class 5, based on the feedback they had received from within their pair. Notably, attention was critical

in this project. The students were told that they should attend to the features pointed out by their peers.

In Class 5 students were randomly divided into multiple groups of three or four members. All group members watched each other's films and provided feedback, focusing on the segmental features they were learning. They were told to practise again and submit their best performance to the instructor on the cloud drive (e.g., Dropbox) by Class 6.

Before Class 6 Dr. Yamada checked all the recordings and wrote feedback on bilingual (English and IPA) scripts. As segmental errors were prioritised, he underlined the IPA and occasionally gave appropriate feedback (Fig. 7.1). In Class 6 Dr. Yamada provided feedback to the individual students, who were instructed to practise without the script based on this feedback and film it again by Class 7. They were informed that the focus was not only on segmental errors but also on suprasegmental features.

In Class 7 the students were paired and watched films they had taken home together, exchanging feedback and focusing on both segmental and suprasegmental features. They were then told to practise again, paying attention to the features in the feedback they had received, and to film their shadowing performance before Class 8.

In Class 8 the students watched their films in groups of three or four and exchanged feedback. By Class 9 they were instructed to submit their shadowing performance to be assessed by the instructor, especially focusing on the feedback given in Class 6 and on suprasegmental features.

In Class 9 the instructor provided feedback to each student, focusing on the segmental errors made in the first submission and suprasegmental features. By Class 10 the students were expected to practise and finalise their projects and to shadow in front of the class. The presentation was conducted using online real-time tools (e.g., Zoom or Teams).

In Class 10 each student presented their shadowing (Fig. 7.2). The procedure was as follows:

1. Only the presenter listened to the original speech while shadowing it through headphones; thus, classmates and instructors watched the original short video in the presenter's voice.
2. In Zoom the presenter could share the original model with everyone using the "screen share" function and follow the procedure above.

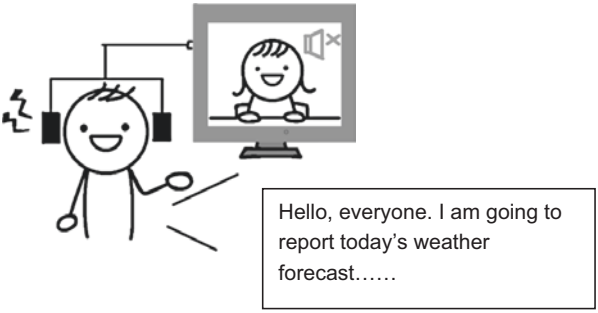

Fig. 7.2 Image of the shadowing presentation

In sum, through this procedure, the students attempted to proceduralise their pronunciation knowledge, shifting towards automatisation. As mentioned, learners had to attend to various pronunciation features each week throughout the project, and their proficiency levels had to be at least intermediate.

Based on the rubric provided (Table 7.2), the instructor evaluated speech performance.

Extramural Activities

Two students approached Dr. Yamada to consult with him about their English learning. Emma (a pseudonym) liked English but was not good at listening. Aya was good at English but was not confident about her pronunciation skills.

Emma's Case

Emma mentioned that she was not confident about listening and often found it difficult to understand, even though she could follow written texts. As shadowing is effective for this learner type, Dr. Yamada recommended listening and shadowing various audio files daily for a month. Emma was interested in learning about world news in English and

decided to read and shadow news articles on the *VOA Learning English* (2023) website (https://learningenglish.voanews.com/z/952).

Every morning for a month she picked up a piece of news and read it to understand its content. After listening, she started shadowing, and after doing so several times she determined what she could not shadow in the script. Sometimes she recorded her shadowing voice to check her accuracy.

After a month, Emma said to Dr. Yamada, "I can't believe that I can listen to English more clearly, and I have some confidence in listening. Initially, it was difficult to shadow, but eventually, I felt I was getting used to it. I started this to improve my listening, and I think I can speak English a little better than before. I want to practise pronunciation as well using shadowing."

Shadowing is effective for this type of English learner to improve their speech perception and save their attention for other listening processes. Moreover, once their listening skills improve they can practise shadowing for pronunciation because they can spare cognitive resources that they would otherwise use for listening.

Aya's Case

Aya asked Dr. Yamada for an effective way to improve her pronunciation. She knew how to pronounce most English phonemes but sometimes mispronounced phonemes that Japanese (her L1) did not have. Though her pronunciation was comprehensible, she said she wished to pronounce more naturally and accurately.

Dr. Yamada advised her to work on *prosody shadowing* (see more in detail in Hamada & Suzuki, 2022), in which shadowers pay attention to prosodic features while shadowing by choosing a favourite movie or TV show. Dr. Yamada told her to do so every day, occasionally record her shadowing performance and listen to it for a few months. Aya liked baseball; thus, she chose a live commentary on the top of the ninth inning of the World Baseball Classic 2023's final game, Japan versus USA.

After two months, Aya reported her progress to Dr. Yamada: "Initially, it was quite difficult to keep up with the commentator, but I tried

shadowing every day multiple times. I sometimes recorded my shadowing and compared it with the actual live comment. Eventually, I remembered sentences. Initially, my mouth and tongue did not move as smoothly as I wished, but now I feel that they do. I can 'speak' like the commentator!" Additionally, her speech delivery was smoother and her segmental and suprasegmental pronunciation features improved.

Dr. Yamada was not surprised. Because she was able to pronounce each phoneme even before the intensive shadowing practice occurred—when she paid careful attention—she needed to automatise her pronunciation, thereby improving suprasegmental features as well. Through the repeated practice of shadowing she finally managed to shadow the commentator.

Reflection

The extracurricular activity was designed to overcome four common problems: problems with the segmental features of English; unfamiliarity with IPA; difficulty with suprasegmental features of English; and low confidence in his facial expressions and gestures when speaking English. Dr. Yamada has included the shadowing project (***Extracurricular Activities***) in his course for several years, and three typical outcomes have been observed.

First, the online features of shadowing connect practice and authenticity. Learners can produce accurate pronunciation when practising slowly at their own pace in the traditional practice style. However, they pronounce in the same way as before when under time pressure. In shadowing practice they need to speak in real time with the model audio and have limited time to "think" about pronunciation when speaking. Thus, they can "speak" by copying the model similar to natural conversation, when they do not worry too much about pronunciation but rather focus on the content they want to express. Dr. Yamada always makes sure that students keep up with the model's speed and successfully imitate its pronunciation, although the level of accomplishment among students varies.

Second, as Skill Acquisition Theory holds, learners can spend hours practising in the proceduralisation stage, aiming towards automatisation. Typically, in traditional pronunciation teaching, instructors teach segmental features, by which students repeat the pronunciation after listening to it. However, students have few opportunities to practise the learned segmental features in natural conversation settings. When they are only paired to practise speaking, they focus on the other speaker's content and less on pronunciation. The shadowing project provides students adequate time to practise by using authentic materials so that they can practise both segmental and suprasegmental features authentically. Dr. Yamada has seen that most students accomplish the task, and some of them dramatically improve their pronunciation, even in daily conversation.

Third, regarding motivation, Dr. Yamada reports that he has discerned a difference between shadowing and traditional pronunciation practice. Unlike simple repetition or individual practice using a "textbook," students practise using authentic material—real speech. Most learners have not undergone much pronunciation training, and pronunciation practice using shadowing is new and unique. Additionally, they collaborate with their peers step-by-step, and their motivation remains high.

Moreover, regarding extramural activities, the theory accounts for Emma and Aya's progress. Emma benefitted from shadowing's basic function of improving learners' bottom-up listening skills. Once learners acquire basic bottom-up listening skills, they can spend more of their cognitive resources on other processing—in this case, pronunciation features. Thus, by doing so, Aya's pronunciation improved.

Although shadowing may appear boring and outdated it is a modern language practice allowing learners to utilise technology to improve their bottom-up listening skills and pronunciation. It ultimately leads to smooth communication. Shadowing has been used mainly in the classroom, where the teacher plays a CD and students only shadow what they hear. This chapter introduced how to use mobile technology for shadowing. Occasionally, learners recorded and reviewed their shadowing performances using smartphones or recording devices. Especially in extracurricular activities, the learners submitted their recordings to the

cloud drive, and the instructor could easily provide feedback. In the final presentation, learners used various technologies (Fig. 7.2) that are essential in extracurricular and extramural activities for effective shadowing. As technology advances in the post-COVID era, students can utilise artificial intelligence (AI) to receive feedback on words pronounced comprehensibly and on detailed pronunciation features. Shadowing—originally a practice for interpreters—is contributing to the advancement of technology for modern language learners.

References

BBC Learning English. (2023). English pronunciation. https://www.youtube.com/watch?v=PZwKFFp7V50

DeKeyser, R. (2015). Skill acquisition theory. In B. Van Patten & J. Williams (Eds.), *Theories in second language acquisition: An introduction* (2nd ed., pp. 94–112). Routledge.

Foote, J. A., & McDonough, K. (2017). Using shadowing with mobile technology to improve L2 pronunciation. *Journal of Second Language Pronunciation, 3*(1), 34–56.

Hamada, Y. (2017). *Teaching EFL learners shadowing for listening: Developing learners' bottom-up skills*. Routledge.

Hamada, Y. (2021). Shadowing procedures in teaching and their future. *The Language Teacher, 45*(6), 32–36.

Hamada, Y. (2022). Developing a New Shadowing Procedure for Japanese EFL Learners. *RELC Journal, 53*(3), 490–504.

Hamada, Y., & Suzuki, Y. (2022). Situating shadowing in the framework of deliberate practice: A guide to using 16 techniques. *RELC Journal, 53*, 1–9.

Kadota, S. (2019). *Shadowing as a practice in second language acquisition: Connecting inputs and outputs*. Routledge.

Saito, K. (2014). Experienced teachers' perspectives on priorities for improved intelligible pronunciation: The case of Japanese learners of English. *International Journal of Applied Linguistics, 24*(2), 250–277.

Shiki, O., Mori, Y., Kadota, S., & Yoshida, S. (2010). Exploring differences between shadowing and repeating practices: An analysis of reproduction rate and types of reproduced words. *Annual Review of English Language Education in Japan, 21*, 81–90.

Tamai, K. (1992). Follow-up no chokairyoku kojo ni oyobosu koka oyobi 'follow-up' noryoku to chokairyoku no kankei. dai 4 kai 'Eiken' kenkyu josei hokoku [The effect of follow-up on listening comprehension]. *STEP Bulletin, 4*, 48–62.

VOA Learning English. (2023). *Lessons of the day.* https://learningenglish.voanews.com/z/952

8

Improving EFL Students' Interdisciplinary and Multimodal Presentation Skills

Artem Zadorozhnyy and Ju Seong Lee

Issue

For the past five years, Mr Kostya (a pseudonym) had been teaching an 'English presentation' course at a private university in Astana, the capital of Kazakhstan. This elective course was primarily intended for freshmen majoring in science, technology, engineering, and mathematics (STEM). Students were expected to work with people from various backgrounds at a multinational corporation or attend an overseas graduate school after graduation. As a result, they were expected to learn interdisciplinary and multimodal presentation skills in order to communicate effectively with

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people from diverse backgrounds. Graphic abstracts in research articles, crowd-funding bids for scientific projects, and scholarly multimodal blogs were just a few examples of increasingly interdisciplinary and multimodal presentation methods. However, Mr. Kostya's English as a Foreign Language (EFL) students had few opportunities in an interdisciplinary setting to practise multimodal presentation.

To address this issue, he began conducting a survey and informal interviews with students about their interdisciplinary and multimodal communication practices in English. The findings showed that students owned at least two digital devices, the majority of which were personal computers and smartphones. On a daily basis, most people listened to English songs, watched English-language movies and dramas, read comic books, and played English-language role-playing games. Some students used English to communicate with close international friends via Messenger or with strangers on fanfiction or gaming communities. Others casually left comments in English or created and shared content in English for others on social media platforms. These analyses indicated that the majority of students were already engaging in digital multimodal practice with people from various backgrounds.

In this context, he added to the course an interdisciplinary and multimodal presentation (IMP) project, which enabled a group of students from the same discipline to explain a discipline-specific concept to people from various backgrounds. Jargon had to be avoided, and the presentation had to include images, audio, video, and hyperlinked web pages. The completed work needed to be uploaded and shared on social media platforms or online communities. As evidence, each group was required to screen-capture and submit audience feedback to the teacher.

Theory

Despite the IMP's pedagogical potential, Mr. Kostya was well aware of his physical classroom's limitations. Because students only attended the English course three hours per week they had limited time and opportunities to practise English in class. Furthermore, students became passive and dependent, as Mr. Kostya dominated class time and frequently intervened in their classroom work. He needed a framework in which students

could work autonomously and collaboratively with their peers in out-of-class environments to assist students in completing the IMP project. Based on his objectives, he identified two frameworks, which are discussed in more detail below.

The first framework was Benson's (2011) Language Learning and Teaching Beyond the Classroom (LBC) model. This framework aided in conceptually broadening the learning space by embracing extracurricular and extramural contexts. LBC consists of four dimensions, which are as follows:

- Formality: the degree to which language learning is formally structured (e.g., formal or informal)
- Location: the place where language learning occurs (e.g., in-class or out-of-class setting)
- Pedagogy: the extent to which formal teaching is involved (e.g., instructed or naturalistic)
- Locus of control: the extent to which students take charge of their own language learning (e.g., other-directed or self-directed)

As shown in Table 8.1, Lee (2019) explained L2 learning in digital environments using the four aspects of LBC, which could extend Mr. Kostya's EFL classroom to digital spaces. Lee's last two categories of LBC in digital environments drew Mr. Kostya's attention. *L2 informal learning in extracurricular digital settings* refers to self-directed, self-instructed L2 learning in digital environments that is linked to a formal language programme. For example, a teacher may assign a project that includes evaluation guidelines and an expected deadline. However, students are

Table 8.1 Four dimensions of L2 learning in out-of-class digital settings

	L2 education in formal digital settings	L2 education in non-formal digital settings	**L2 informal learning in extracurricular digital settings**	**L2 informal learning in extramural digital settings**
Formality	Structured	Structured	Semi-structured	Unstructured
Location	In-class	Out-of-class	Out-of-class	Out-of-class
Pedagogy	Instructed	Instructed	Self-instructed	Naturalistic
Locus of control	Other-directed	Other-directed	Self-directed	Self-directed

primarily responsible for completing a task by devising their own strategies and deciding on their own location. This approach has an 'informal' component because students complete the task using informal learning resources (e.g., YouTube videos) and practices (e.g., seeking advice from the Quora community).

L2 informal learning in extramural digital settings is self-directed, naturalistic L2 learning in digital environments that is unrelated to a formal language programme. For example, Mr. Kostya's female student created and shared an English vlog about her favourite skincare product on her personal YouTube channel, which has more than 1000 subscribers from around the world. Through informal learning, she had to acquire not only content knowledge about a specific topic (e.g., a skincare product), but also video editing, media design, and communication skills. She did the work because she enjoyed it rather than because she felt obligated to. As a result, Mr. Kostya used the LBC framework to develop an IMP project for students to complete in extracurricular digital settings, with implications for L2 informal learning in extramural digital settings (Hubbard, 2020; see Sequence of Activities).

Global Sharing Pedagogy (GSP) comprised the second framework, which had previously been developed and used in collaborative digital storytelling projects (Niemi et al., 2014). According to the GSP model, which is based on Vygotsky's (1978) sociocultural theory, students become more actively engaged in the learning process when they create new knowledge through social interaction and the use of digital resources. GSP, as depicted in Fig. 8.1, consists of knowledge and skill creation, cooperation, networking, and digital literacy, all of which are interconnected.

- *Knowledge and skills creation*: Students are encouraged to become (active) knowledge producers rather than (passive) knowledge consumers. Students must critically evaluate and apply a variety of materials while planning and developing new knowledge. Self-reflection and metacognitive skills promote independent and collaborative learning, allowing students to become more deeply engaged in the learning process.
- *Collaboration*: Every team member contributes to the project in some way. The group divides work to create new knowledge based on its

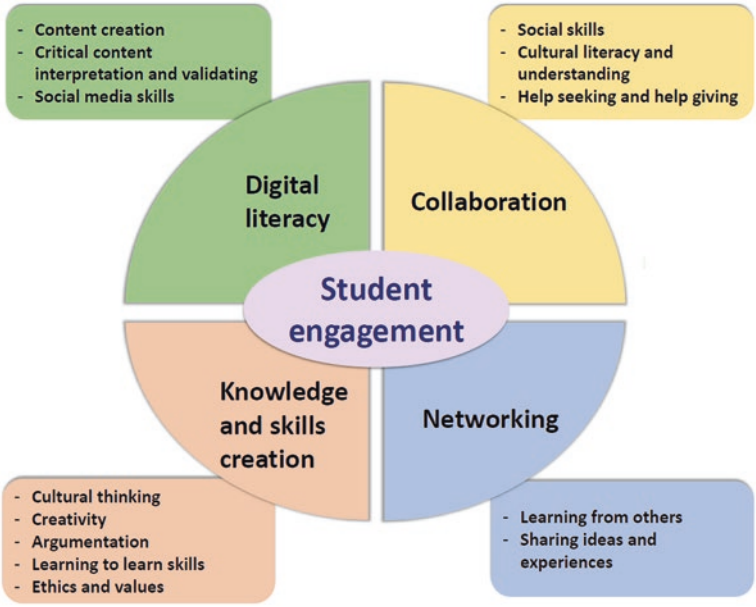

Fig. 8.1 The four components of the Global Sharing Pedagogy model

members' skills and experiences. Members improve their cognitive, social, and cultural skills while seeking and providing assistance.

- *Networking*: Members of the group and teachers collaborate to create new knowledge or products by sharing their ideas, skills, and experiences. Everyone can learn from one another as a result of this.
- *Digital literacy*: Every member of the group must be a content consumer as well as a content producer. Members must assess and verify information obtained from the Internet. They must select appropriate digital tools for content creation. They are expected to follow the discourse norms and ethics of a specific community when sharing new knowledge.

According to the GSP model, the IMP project allows students to actively create knowledge and use digital resources while engaging in ongoing self-reflection and collaboration with a teacher and teammates.

Materials

The school had a computer lab with school Wi-Fi and landline connections, as well as desktop computers, iPads, and software. However, students could bring their own digital devices to class. Students were encouraged to make use of free video and audio editing software (e.g., Vimeo and WeVideo). Google Slides and Sites were also suggested for the IMP project due to their simple, interactive, and cost-effective features, which enable the integration of multiple modes of delivery.

Sequence of Activities

Extracurricular Activities

In Session 1, Mr. Kostya introduced the IMP project. The teacher had previously instructed students to form groups of three to four students from related disciplines and to choose one key concept in the field. This time, he asked each group to devise multimodal methods of explaining the concept to others who had no background knowledge.

In Session 2, the teacher organised a peer sharing session for groups to impart preliminary ideas. A mathematics group would have to explain the concept of 'geometry' to a science group. Engineering students would be presented with a topic on the 'ecological system' by science groups. Students could revise their work following this sharing session.

In Session 3, Mr. Kostya led a workshop on Vimeo and Google Sites. The teacher demonstrated how to create a multimodal presentation using Vimeo and WeVideo by converting text into a multimodal mode of information. In addition, he invited two students—one a Mac user, the other a Windows user—to lead an iMovie and Movie Maker workshop. Following that, students were given an opportunity to practise making multimodal presentations using their preferred editing software and online platforms.

In Session 4, Mr. Kostya led an English presentation skills workshop. He used videos to demonstrate various narrative rhythms, articulation

control, and intonation to teach basic narration skills. He also covered practical skills such as capturing and maintaining an audience's attention.

In Session 5, each group prepared and delivered to their classmates a multimodal presentation on a discipline-specific topic. The material for each multimodal presentation was graded based on its content, design, originality, and language form. Presentation skills were assessed based on delivery, language use, and topic development.

Extramural Activities

Elena, who studied physics and was one of Mr. Kostya's students, voluntarily shared that she applied the knowledge acquired from the IMP project to her life outside the classroom. However, viewing social media posts and YouTube content piqued her interest in social and cultural issues. She also participated in community service by organising cultural festivals and acting as a translator for foreigners living in Kazakhstan. After reviewing digital content related to Kazakhstan, she identified several biases and inaccuracies in the information that was presented. She wanted to provide foreigners with more accurate information about Kazakhstani society and culture.

She gained confidence in creating digital content after completing the IMP project and became eager to create content that could address misinformation related to Kazakhstani social and cultural issues. To this end, she planned to conduct five-minute multimodal interviews with foreigners about various social and cultural issues they experienced in Kazakhstan. It would be easy for her because she already had many international friends in her city and on social media.

The interview process consisted of five steps. To begin, Elena prepared and sent interview questions to the interviewees ahead of time about Kazakhstan-related social and cultural issues. Second, the interview occurred at a mutually agreed-upon time and location (virtually or in person). Third, Elena videotaped the interview while encouraging interviewees to be open and honest about their opinions. Fourth, she edited the video and returned it to the interviewee for feedback and confirmation. Finally, she posted the final product on social media. Elena stated

that the IMP project taught her how to convert interview content into a variety of formats, such as a blog, a video, or even comics. Elena also mentioned that she is now an active producer of digital media, through which she can inform others worldwide about Kazakh social and cultural issues.

Reflection

The IMP project aimed to improve multimodal and interdisciplinary communication skills. To meet the IMP project's goals and optimise her students' learning process, Mr. Kostya combined the LBC and GSP frameworks.

Mr. Kostya used to direct the class in the traditional 'English presentation' course way, serving as both a knowledge disseminator and an evaluator. However, during the IMP project's five sessions, he primarily served as a facilitator, demonstrator, and encourager. For example, he introduced the IMP project with clear evaluation guidelines in terms of multimodal presentation material and interdisciplinary verbal presentation skills. Initially, as student groups were being formed and brainstorming activities took place, Mr. Kostya noted a certain hesitation and reluctance among the students to take charge of the project. Overcoming this resistance required Mr. Kostya to invest additional time and effort in fostering an open and collaborative learning environment. Noting these challenges, Mr. Kostya assisted in the formation of a group and facilitated a peer sharing session for brainstorming and feedback. He in turn provided feedback to each group based on both requirements.

During the first session, students were hesitant to speak up or ask questions. However, Mr. Kostya noticed that as the sessions progressed, students became more active in the project and took a critical and creative approach to design it. In Session 3, he led a workshop on video editing software programs such as Vimeo and Google Sites. When he asked students to lead iMovie and Microsoft Video Editor workshops, he noticed that they became more engaged in sharing their ideas and skills with their

peers. Some students discussed how to detect misinformation on the Internet, while others shared strategies for creating content that would garner more 'likes' from a fanfiction online community. In Session 5, he led a workshop on presentation skills. He said he believed it was interesting that during the practice period of the session, students voluntarily and actively discovered and shared with others additional resources obtained from YouTube videos and the Quora community. Mr. Kostya also reported that he actually gained new skills as a result of the students' sharing. These observations suggest that four aspects of the GSP model (knowledge and skill creation, cooperation, networking, and digital literacy) all aided students in completing the project in extracurricular settings. While considering the challenges that were identified, it is worth noting that diversity in digital skills among students proved to be a minor challenge, a finding that should be taken into account in similar projects in the future. Mr. Kostya suggests that peers in the teaching field should pay closer attention to this aspect and conduct a short initial assessment of students' digital abilities that could enable additional support for those in need.

In Mr. Kostya's own project, students clearly benefitted from this type of support. Elena, the physics student who was noted in the previous section, used her IMP project skills and knowledge to create digital content on Instagram that addressed misinformation about social and cultural issues in Kazakhstan. Another student, Ainar, used his IMP project skills to create short tutorials and walkthrough videos for *World of Warcraft*, a massively multiplayer online role-playing game. He then posted their videos in an online gaming community, through which he interacted and socialised with other gamers.

In future IMP project implementations, teachers may organise collaborative debriefings in which students meet in small groups to discuss their extramural experiences, including the materials they selected, the tools they used, and the processes and strategies that seemed useful (Hubbard, 2020). Because extramural activities are primarily individual pursuits, collaborative debriefings can alleviate the isolation of independent learning and provide opportunities for self-evaluation and spoken interaction.

References

Benson, P. (2011). Language learning and teaching beyond the classroom: An introduction to the field. In P. Benson & H. Reinders (Eds.), *Beyond the language classroom* (pp. 7–16). Palgrave Macmillan.

Hubbard, P. (2020). Leveraging technology to integrate informal language learning within classroom settings. In M. Dressman & R. Sadler (Eds.), *The handbook of informal language learning* (pp. 405–419). Wiley-Blackwell.

Lee, J. S. (2019). Quantity and diversity of informal digital learning of English. *Language Learning & Technology, 23*(1), 114–126. https://doi.org/10125/44675

Niemi, H., Harju, V., Vivitsou, M., Viitanen, K., Multisilta, J., & Kuokkanen, A. (2014). Digital storytelling for 21st-century skills in virtual learning environments. *Creative Education, 5*, 657–671. https://doi.org/10.4236/ce.2014.59078

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Part III

Empowering Teachers' Innovative Teaching

9

Media-Didactic Competence Development in Pre-service Teacher Education: Teaching English Grammar Through Learning Paths and Storytelling

Isabel Martin, Eirini Busack, and Fabian Stober

Issues and Theory

During the Covid-19 pandemic, the sudden transfer to online teaching forced teachers to reconstruct their teaching and learning materials. During this orientation phase, pupils' learning was disrupted, and when schools and universities reopened, more than a third of the learners exhibited learning deficits and a lack of socio-emotive competencies (Ständige wissenschaftliche Kommission der Kultusministerkonferenz, 2021). A €2 billion project by the German Federal Ministry of Education and Research to help pupils read just ended in 2022. A one-year

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programme for university students (€28 million) was launched in the same year by the Federal State of Baden-Wuerttemberg.

Continuing Professional Development and university courses have provided (pre-service) teachers with new knowledge and skills regarding the use of technological devices and applications to enhance their digital teaching competencies, but less so their media-didactic competencies, which would have ensured conscious pedagogical use and integration of tools to enrich their pupils' learning (Gerick, 2021).

We decided to address this issue within the research project, which was titled "Sustainable integration of subject-related didactic digital teaching-and-learning concepts" (InDiKo, 1.5.2020–31.12.2023). The project took place at the Karlsruhe University of Education (Germany) by focussing on the advancement of pre-service English teachers' media-didactic competencies via the guided creation of digital learning scenarios and materials which would be pedagogically appropriate, i.e., useful, engaging, and meaningful for their future pupils (Kitao & Kitao, 1997). Our project-oriented weekly tandem-seminar (2 × 2 hours per week for 14 weeks) gave pre-service English teachers a space in which to experiment with the creation of grammar-focused DLPs for secondary pupils on the Learning Management System (LMS) Moodle, which is embedded in the university's LMS "Innovation Space."

A DLP is a digital arrangement of predefined learning steps that should lead to a specific learning goal (Schmidt, 2009). Depending on the learning goal set, a path can be predefined or open. Each learning step provides a task and an unlimited number of related documents and links. In a learning path (LP), pupils work through new lesson content independently, so DLPs encourage autonomous and differentiated learning.

The foundation of any learning scenario is a well-rounded learning goal. We chose Bloom's Taxonomy, a model that classifies learning via six levels of complexity, from bottom to top while providing clear operators, including:

1. Recalling previously learnt facts and concepts,
2. Understanding new ideas or concepts and constructing the meaning thereof,
3. Applying information in new contexts,

4. Analysing ideas into simpler parts and finding connections,
5. Evaluating information to justify a decision, and
6. Creating a coherent and functioning whole by reorganising (new) artefacts based on previous steps.

This taxonomy divides the six levels into two categories: levels one to three develop "lower thinking" and levels four to six "higher thinking" skills. Our students were asked to create learning content for levels one, two, and three in their DLPs. We encouraged them to work with technology in and outside of class to process and organise their knowledge by following the connectivist approach. Connectivism (Siemens, 2005) sees technology as an important part of learning processes. The focus lies on organising knowledge in a personal network and accessing this knowledge. At the centre of this learning process are the learners themselves with all their (digital) connections to other learners: learning takes place in groups through discussions and collaboration.

The course instructors used the constructivist method. Apart from using technology, students also were encouraged to actively engage in and take responsibility for their own learning progress. This responsibility is shared between the instructor and the actively involved learner: Constructivism sees learning as being constructed by individual learners based on their previous experiences and knowledge (Piaget, 1971).

This chapter describes how media-didactic competence development procedures can be integrated into pre-service English teacher education by means of a new tandem-course that combines media didactics with English grammar teaching (but the subject matter could touch on any number of topics).

The first part outlines the need to develop the media-didactic competencies of pre-service teachers, delineates the project setting of our study, and presents the theoretical background and research methodology. The main part focuses on the seminar: it explains the goals and course structure, the instructional concept (Flipped Classroom), and the learning theories applied (Connectivism and Constructivism). This is followed by a more detailed description of how the learning sequences were organised and carried out and an overview of the learning outcomes. The last part offers a concluding statement.

Research Methodology

Our seminar employs the research design of Collaborative Action Research, which follows a cycle of building knowledge based on theory, generating and collecting data, and improving practice, to provide better structures, teaching/learning materials, and support in the next cycle. Each semester offers an opportunity for reflection upon the quality of our past teaching and support, the structure and organisation of the seminar, the chosen content, the success of our teaching goals, and pre-service teachers' feedback regarding the seminar's shortcomings and benefits for their future work at school. Thus, the "data analysis would lead to a reflective phase" during which the action researchers formulate new plans for their next actions (Riel, 2019, p. 1). The research methods for gathering data over the course of three semesters (2021/22–2022/23) included field notes taken during the sessions and an online course evaluation containing 29 closed and open questions for the last session, with notes stemming from the ensuing open 60-minute discussion of the answers.

Sequence of Activities: Goals, Structure, Tools, Activities, Theories

Goals and Course Structure

We designed this tandem-course to give pre-service English teachers the opportunity to become independent creators of learning content for English grammar topics within one semester (14 weeks) in a purposeful and multimedia-based way. The pedagogical aim of the seminar is to promote the development of technological pedagogical competencies of our pre-service teachers. The secondary learning goals are to justify subject-, media-, and general-didactic decisions that are to be reached in a coherent way and to deal with media-didactic concepts flexibly and creatively.

To ensure a sound concept and implementation of such a scenario, the following topics are included in the course: Basics of media didactics include a taxonomy of learning goals, with a focus on DST and DLPs;

subject-specific knowledge, i.e., English grammar with a focus on the particular challenges faced by German learners, mistake analysis, and intensive practice; formative assessment and (peer-) evaluation of DLPs in-progress. The hybrid course consists of two sessions of 90 minutes per week over the course of 14 weeks. These sessions are held mostly in person, but also online (synchronously and asynchronously).

The first part teaches advanced English grammar. To develop subject-related knowledge, a pre-test is used to identify weak areas in students' grammar knowledge which would require special attention (i.e., the usage of tenses). The second part introduces the basics of media-didactics—how to plan, set up, and use a digital learning environment as a teacher—and the LMS. Students can utilise and assess the DLPs that were created in previous semesters. Afterwards, they create their own DLPs in group work. We used two different LMSs: StudIP,[1] the university's LMS for course administration, and Moodle for creating the DLPs, as it is the LMS used by most secondary schools in Germany. (Moodle itself is embedded in the university project's own LMS "Innovation Space," which was created for sustainability of the "InDiKo" project). For the out-of-class preparation on StudIP, students were assigned digital "Courseware"[2] chapters on the following topics: Instructional Design (ID), learning theories and planning, and designing lessons; DLPs and DST; LMS Moodle and digital tools; competencies; and learning tasks and evaluation of DLPs.

To achieve our teaching goals, high levels of student participation and engagement are necessary, given the limited time spent together in class. With a workload of 10 credit points, students are expected to do a lot of individual and group work outside of class, so class time can be used for in-depth analysis, discussion, and mentoring. Hence, the media-didactic portion of the class is arranged as a "Flipped Mastery Classroom". The challenge is to ensure that students remain motivated to do this work unsupervised—and in fact, they do.

[1] A German LMS that is tailored for university use, i.e., organising classes, distributing files, communicating with students, etc.

[2] Courseware is a plug-in of our university's LMS StudIP and consists of interactive multimedia learning modules. The modules are structured into chapters, subsections, and sections and can consist of text blocks, video sequences, tasks, and communication elements (definition by StudIP).

In a classical Flipped Classroom, the input and homework phases are flipped, so, for instance, students watch an input video about new content at home to prepare for class. Class then starts by discussing the new input as well as students' questions to ensure that they are on the same level.

Within this flipped structure we follow Bloom's taxonomy (e.g., from remembering [1] to understanding [2]): the videos, illustrations, and articles included in the Courseware which the students worked through at home serve as the remembering phase (1), and the tasks or exercises help students to combine their previous knowledge with new knowledge, and further, to understand the connection between the two (2).

A Flipped Mastery classroom takes this one step farther to give students more individual space for their professional development by providing interactive content with immediate feedback, as well as opportunities to explore a concept in more detail. Thus, in the third phase, students are asked to complete tasks in class or to do them as part of the Courseware, e.g., solving a problem in a "dummy learning path," creating learning tasks, or discussing and changing learning objectives, thereby enabling learners to immediately apply their newly acquired knowledge (3). The advantage of this approach is that the lecturer's time is not used for providing content but rather to coach students, i.e., answer questions and help with individual problems (ibid.). The final phase involves creating, which means that students work on creating their DLPs (4). As we incorporate digital media in the seminar ourselves, they also get to know different digital teaching scenarios from the learner's perspective.

During the first few weeks of the semester, the Courseware input demands the most time. Students need a theoretical background on media-didactics and an overview of the digital tools before they can apply them to creating their own DLPs.

Learning Sequence: Tools, Activities, and Theories

Each week the progressive course structure and the Flipped teaching approach brings students closer to the final task. Every Courseware chapter includes a thorough introduction to the topic and exercises/tasks to help them deepen their understanding, e.g., quizzes, sorting tasks, open discussions, group tasks in chat rooms, or shared files.

Week 1

Content: Students are introduced to the instructors and tutors, receive the roadmap of the semester, and are presented with the tasks they need to fulfil to pass the course.

Homework: Students work through Courseware about Instructional Design (ID) and lesson planning, i.e., information about instructional objects, task analysis, ID principles, and components of ID as a planning procedure. While working on individual or group tasks, students can ask questions of the group or their instructor or take part in a (group) discussion later in class. Apart from the mandatory content and the tasks, students are always encouraged to deepen their knowledge by accessing additional readings provided in the Courseware chapter.

Weeks 2 and 3

Content: The instructor first answers and discusses students' questions about the tasks for which they had to prepare (learning goal formulation, revision of Bloom's Taxonomy theory, and the operators involved in an LP). The new topics are learning theories (Connectivism, Constructivism, Behaviourism) and learning approaches (instructive, cognitive and constructivist, sociocultural and interactionist). Students familiarise themselves with the DLPs that were created in groups in previous semesters. At all times the instructor is available to answer students' questions.

Homework: Students familiarise themselves with the concept and components of DLPs. They then move on to the components of a DLP, which consist of multiple resources (e.g., links, pptx files, word files, folders, pictures, videos) and activities (e.g., surveys, tasks, assignments, tests, discussion forums). Finally, opportunities, limitations, and evaluation criteria are thematised (feedback and assessment, graphic design, the presence of a helpdesk, content, and grades of differentiation).

After this introduction to DLPs, students become acquainted with DST as a motivational anchor for the learners, i.e., aspects that must be taken into consideration: the narrative, the author's perspective, a dramatic question, the choice of content, the voice, the speed/pacing of the

narration and its economy, the use of music, the appropriate linguistic and grammatical structure of the narration, and the capabilities pupils can acquire by means of the narrative device (e.g., inquiry-based learning, research skills, writing skills, organisational skills, reading and writing skills, competence in the use of digital media, presentation skills, problem-solving skills, or evaluation skills).

Week 4

Content: The instructor discusses the answers that students submitted regarding tasks stemming from the didactic analysis exercise, the knowledge type exercise, and types of competencies to be acquired by the pupils. One session focuses on practising working on Innovation Space. Students are given input about the functionalities of the LMS, followed by a list of tasks to solve, e.g., "embed a video in your DLP," "create a multiple-choice task in your course," "embed a task by another source in your course."

Homework: Students are given additional tasks, i.e., add files, create a quiz/test, or integrate a support section, to test on Moodle/Innovation Space.

Week 5

Content: Students begin working on their DLP project in class or online, as they may choose; the instructor is present in class and online to provide guidance if needed.

Homework: This Courseware chapter deals with competence orientation, which refers to the importance of didactically justifying teaching content. The following questions are addressed: How are teaching/learning objectives phrased in competence orientation? How can a teaching topic be didactically justified, and can its significance for the learners be analytically determined? What is the importance of different types of knowledge (explicit, implicit, tacit, procedural, declarative, a priori, and a posteriori knowledge) in the analysis and planning of lessons? A central element of competence is so-called transfer. What is it, and what tasks do we know about it that are related to grammar teaching?

Week 6

Content: As before, the instructor first discusses the answers that students submitted in the Courseware: what are competencies, why do we address them, and what is competence orientation in the context of planning a lesson? Then students are asked to create a project outline with important milestones in their groups. This should help them to efficiently plan time and resources. (They set up outlines but are usually unable to maintain deadlines, notoriously underestimating the time and effort required, which later creates time pressure).

Homework: Students discover learning task types: learning tasks, decontextualisation tasks, exercise tasks, transfer tasks, evaluation tasks, and self-differentiating tasks. Then the significance of cognitive activation in digital learning is addressed. Cognitively activating teaching pays particular attention to focusing cognitive activities on learning objectives, especially on key comprehension elements, while connecting to pre-existing "pupil thinking," i.e., prior knowledge taken from lessons and everyday life or stimulating and maintaining demanding cognitive processes—e.g., by explaining or linking. Some aspects of creating cognitive activation in digital learning environments would include activating prior knowledge, inquiry-based learning, constant progress monitoring, and tasks for content-related participation, plus peer feedback. Finally, students are given a series of evaluation criteria on which to base their learning arrangement.

Weeks 7–12

Content: the instructor discusses students' answers to the Courseware task of determining the learning task type, based on a given learning scenario. In the ensuing weekly consultation meetings with the instructor and tutors, students present and discuss their ideas, questions, and challenges they encountered during the construction procedure of their DLPs. During the collaborative creation process, students are encouraged to test and use different applications, such as "Avatar Maker" or "Learning apps.org" to frame their digital tasks and therefore make them more encouraging for pupils. An example of a DLP containing a frame story and 144 sub-chapters/stories on English grammar that was developed by

one of the instructors, TingoLingo (2007–2009), is offered as a model, and its avatar Ingo is available to students, with many images from which to choose (but most groups prefer to create their own). Regarding the narrative framing of the DLPs, the groups must create and implement one, using tools of their choice. To engage learners, groups use narratives such as a journey through an escape room, a visit to a mystery castle, an escape from a cursed village, or helping a foreign exchange student.

Week 10

Content: Students write the diagnostic grammar post-test.

Homework: by Week 10, the groups upload their DLP to the PerusALL[3] software to be evaluated by the other groups as regards their setup, usability, differentiation, quality of material and tasks, and transferability. The other groups comment on and evaluate DLPs during weeks 11 and 12.

Week 13

Content: The groups present their DLPs to their fellow students and instructors; each group has 45 minutes for presentation plus discussion (both course parts are used for this task, which take place one after the other on the same day). The groups explain their learning goal(s) and demonstrate a selection of tasks. They also describe their target group (school grade/class) and any challenges they may have encountered during their work. This is followed by the instructors' feedback.

Week 14

Content: The (usually much improved) diagnostic grammar post-test results are presented and analysed. Then the Google Forms-based evaluation is followed by a detailed open class discussion of the anonymous entries presented.

[3] Used as an LMS Add-On.

Extracurricular Activities

In order to make their DLPs as interesting as possible to the pupils, our pre-service teachers are encouraged to create a multimedia DLP (Table 9.1). Therefore, they always make the effort—and really earn their 8–10 credit points—to support their digital story idea in their DLP by creating their own videos and comics, recording their voices to narrate their videos, and sometimes creating subtitles. The choice of software is left to them, and most groups become somewhat obsessed with finding forever better tools for their LP while spending much time exploring new gadgets rather than the course demands. We repeatedly find this comment mentioned in their course evaluations, namely that they became absorbed by this task, very much enjoying it. (On the critical side, they expressed wonderment as to why, from their perspective, other courses' credit points can be earned so much more easily.)

Creating this type of educational material for their DLP is a perfect practice and can serve as a source of inspiration for their later role as in-service teachers. Teachers face this real task daily if they want to offer their students multimedia and personalised learning. Furthermore, when pre-service teachers try to create their own materials, they usually practise their language and grammar skills, e.g., their pronunciation when they are narrators in a video; their writing skills when they write scripts for videos or instructions in the DLP; and they delve deeper into the grammar topic they must teach through the DLP so as not to present it incorrectly.

Reflection

The creation of DLPs can be very useful to pre-service teachers for gaining experience before they may be asked to switch their teaching mode from face-to-face to online for whatever reasons. DLPs are instructional safe learning spaces. They are designed to promote autonomous and differentiated learning. Through the decisions that must be made when

Table 9.1 Extracurricular activities

Week	Content	Homework
1	Pre-service teachers are introduced to the instructors, to the timetable, and to tasks to be completed in order to pass.	Courseware on ID and lesson planning as well as components of the ID as a planning process.
2	Learning theories (connectivism, constructivism, behaviourism) and learning approaches (instructive, cognitive and constructivist, sociocultural and interactionist).	Courseware on the concept and components of DLPs.
3	Pre-service teachers familiarise themselves with the DLPs created during previous semesters	Courseware on Digital Storytelling
4	Pre-service teachers learn how "Innovation Space" works	Students began to conceptualise their DLP on Innovation Space
5	Pre-service teachers work on their DLP project idea	Courseware on competency-orientation and types of knowledge in analysing and planning a lesson.
6	Pre-service teachers create their DLP project outline, which underscores important milestones in their groups.	Courseware on learning task types.
7	Consultation meetings with tutors and the instructor. During these meetings, pre-service teachers present and discuss their ideas and questions and share challenges they encountered in the process of constructing their DLPs.	DLP work
8	—	DLP work
9	—	DLP work
10	Diagnostic grammar post-test	PerusALL-based peer assessment of the DLP of the other groups regarding design, usability, differentiation, quality of materials and tasks, and transferability.
11	—	DLP work
12	—	DLP work
13	Pre-service teachers present their DLPs to their peers and instructor.	—

(*continued*)

Table 9.1 (continued)

Week	Content	Homework
14	Discussion of grammar post-test results; a Google Forms-based evaluation occurs, followed by a detailed open class discussion of their anonymous submissions.	—

creating a DLP, students develop not only media-didactic competencies, but also practical competencies such as (Kultusministerkonferenz, 2016):

- Searching, processing, and storing,
- Problem-solving and managing/applying solutions,
- Protecting privacy/data/health/nature and navigating safely,
- Analysing and reflecting,
- Producing and presenting,
- Communicating and cooperating.

At the end of the semester, learning outcomes are documented in the completed DLPs and the course evaluation survey. We find that open discussion, combined with open questions in the questionnaire, is beneficial for receiving genuine feedback. Students agree that the more they delve into their topic and the design of the DLP, the more motivated they become. They also enjoy being given a blank canvas on which to design their DLP while using tools of their choice. However, many argue that there is never enough time to satisfactorily complete the DLPs. In the term most recently completed before the writing of this chapter, and, based on student feedback, we decided to use smaller grammar units for groups in the future, and we restructured the seminar to present earlier exposure to the LMS and its features. Each Courseware was also reassessed on scope, i.e., content was removed or moved to the "Further Reading" section to create more time for the main assignment. This is work in progress.

Finally, and importantly, regardless of the content, the same structure a series of resources and activities introduced in a constructivist and connectivist way, whether linear, branched, or complex—and ID principles

can be implemented to build DLPs in other modules in primary, secondary, and higher educational settings. Such learning products aim to ensure knowledge transfer and cognitive acquisition. Working at one's own pace on a range of motivating tasks adapted to the learner's ability level supports differentiation, which helps ensure learner success. To date, we have collected 77 pupils' responses to our students' DLPs, giving us a base level of feedback that encourages us to continue this important work.

Appendix

Access one of our DLPs as a learner by scanning the QR code below:

Guest key: 3juqYON&z@QHkg;&97Is
Access the same DLP in screenshots via the QR code below:

Or via the following URL: https://drive.google.com/drive/folders/16qPquL1xyjjy8bZZ_uBWm0XmKumjNOeC

References

Gerick, J. (2021, April 15). *More devices, insufficient skills: Digital literacy gap adds to educational inequity in Germany*. https://www.boell.de/en/2021/04/15/digital-literacy-gap-adds-to-educational-inequity-in-Germany

Kitao, K., & Kitao, S. K. (1997, April). *Selecting and developing teaching/learning materials*. Retrieved from: Kitao – Selecting and Developing Teaching/Learning Materials (TESL/TEFL) (iteslj.org).

Kultusministerkonferenz. (2016). *Bildung in der digitalen Welt. Strategie der Kultusministerkonferenz*. https://www.kmk.org/fileadmin/Dateien/pdf/PresseUndAktuelles/2017/Strategie_neu_2017_datum_1.pdf

Pädagogische Hochschule Karlsruhe. *Nachhaltige Integration von fachdidaktischen digitalen Lehr-Lern-Konzepten an der PH Karlsruhe* (InDiKo, 1.05.2020–31.12.2023). https://www.ph-karlsruhe.de/projekte/indiko

Piaget, J. (1971). *Psychology and epistemology: Towards a theory of knowledge*. Grossman.

Riel, M. (2019). *Understanding collaborative action research*. Center For Collaborative Action Research. https://base.socioeco.org/docs/center_for_collaborative_action_research.pdf

Schmidt, R. (2009). *Selbstgesteuertes Lernen durch Lernpfade* [Paper presentation]. 100. MNU-Kongress, Regensburg, Germany. https://selbstgesteuertes-lernen-durch-lernpfade-RpmQy6E0Ro.pdf

Siemens, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*. TEIR Center, Duquesne University, Pittsburgh PA.

Ständige wissenschaftliche Kommission der Kultusministerkonferenz. (2021, September 9). *Pandemiebedingte Lernrueckstaende aufholen – Unterstuetzungsmassnahmen fokussieren, verknüpfen und evaluieren*. Retrieved September 9, 2022, from https://www.kmk.org/fileadmin/Dateien/pdf/KMK/SWK/2021/2021_06_11-Pandemiebedingte-Lernruckstaende-aufholen.pdf

10

Transforming English Pre-service Teachers Through a Digital Adventure: Developing Digital Literacy and Pedagogical Skills

Baohua Yu and Wanqing Wang

Issue

In the digital era, knowledge is virtually limitless, which poses significant challenges for teachers. They are expected to assume diverse roles, including fostering students' knowledge acquisition and skill development, addressing social and emotional issues, and keeping abreast of updated information and literacy skills (Amin, 2016). Within the context of English teacher education, the readiness of English pre-service teachers in digital literacy equips them to adapt to the digital teaching landscape (Liza & Andriyanti, 2020) and enhances their employability (Cote & Milliner, 2018). Furthermore, the technology-rich society necessitates

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critical thinking when engaging with information from various sources, demanding discernment and reflection from pre-service teachers to prepare them for future teaching.

Digital storytelling (DST), a prevalent teaching tool, finds widespread use in educational practices across disciplines, such as science, social science, and humanities, at various institutional levels (Wu & Chen, 2020). As a multimodal genre, DST integrates images, graphics, audio, and video to create meaning around a central theme (Buendgens-Kosten, 2021). It effectively facilitates knowledge comprehension and interaction between storytellers and audiences through a range of multimodal expressive elements. Storytellers' content knowledge is actively constructed during the process of story creation and narration with the aid of multimedia (Choo et al., 2020). Additionally, subjectivities are reflected in storytelling due to the inclusive information about story content and personal experiences (Kim & Li, 2021).

To empower pre-service teachers to effectively adapt to a technology-saturated environment, educational DST serves as a valuable tool for motivating teaching and learning. First, DST enriches resources accessible to teachers, enabling the design of a diverse range of class activities (Robin, 2016). Second, DST is frequently employed to enhance specific literacy skills such as listening, speaking, reading, and writing (e.g., Hamdy, 2017; Nair & Yunus, 2021; Sarıca & Usluel, 2016; Tabieh et al., 2021), as well as twenty-first-century literacies such as media and information literacies (e.g., Alismail, 2015; Ribeiro, 2015) and creative and critical thinking (e.g., Chen & Chuang, 2021; Schmoelz, 2018; Tabieh et al., 2021). Third, the multimodal nature of DST remains a prominent feature, widely recognised for its ability to captivate students in educational settings (e.g., Balaman, 2018; Buendgens-Kosten, 2021; Gregori-Signes, 2014). Fourth, digital story-makers and storytellers are encouraged to leverage collaborative learning (Nishioka, 2016) by fostering interactions between students and teachers, or students and computers, and among peers, thereby activating the learning atmosphere and improving communicative skills (O'Byrne et al., 2018). Additionally, the vivid expressions and emotional resonance in DST contribute to higher engagement levels for teachers and students (Lisenbee & Ford, 2018). However, it remains essential to understand DST participants'

perceptions and feedback based on their digital hands-on experiences. To address this issue, this two-year DST project provided English pre-service teachers with opportunities to express their feelings by participating in a digital adventure.

The initiative of this study is directly related to the needs of English pre-service teachers in the digital age. In addition to strong English language abilities, English pre-service teachers seek to gain adept teaching skills to manage their classrooms and garner favourable feedback from students and parents once they become teachers (Yu, 2021). Moreover, having been raised as "digital natives" (Prensky, 2001, p. 1) who are surrounded by digital technologies, they aspire to master various digital tools to enhance their career prospects. Consequently, it is crucial to assist English pre-service teachers in preparing for English language literacy, digital literacy, and pedagogical literacy in an interdisciplinary learning environment. The project aims to achieve four main objectives:

(1) To enhance pre-service teachers' awareness of positive psychology and life values in English language teaching;
(2) To develop pre-service teachers' digital literacy skills through the production of digital story videos, involving the management and synthesis of multimodal resources;
(3) To enhance pre-service teachers' English language proficiency and pedagogical skills concerning the application of DST in teaching practice;
(4) To cultivate pre-service teachers' awareness of DST and foster their confidence in seamlessly integrating it into future teaching endeavours, thereby potentially enriching their professional development.

Theory

This study is underpinned by the Technological Pedagogical Content Knowledge (TPCK) framework proposed by Mishra and Koehler (2006). TPCK underscores the interconnected relationships among three key elements—pedagogy, technology, and content knowledge—leading to the development of three distinct conceptions: "pedagogical content

knowledge (PCK)," "technological content knowledge (TCK)," and "technological pedagogical knowledge (TPK)" (Mishra & Koehler, 2006, p. 1026). PCK involves the representation of pedagogical concepts and techniques that aim to effectively convey knowledge and epistemology to students. TCK centres on the reciprocity between technology and content; it allows instructional methods to adapt, provided that technology enhances the efficacy of content delivery. TPK also revolves around the selection of suitable tools for teaching tasks, considering the affordances and utilisation of specific tools in conjunction with strategies, potentially transforming pedagogical and technology knowledge into practical output. TPCK serves as a constructive approach for achieving efficient teaching with the use of technology. It necessitates a comprehensive understanding of concepts encompassing technology, pedagogy, and subject content, along with the proficiency to effectively apply technology and pedagogy, thereby scaffolding new knowledge or reinforcing existing knowledge.

Drawing upon TPCK, a framework (Fig. 10.1) has been formulated to guide the DST project. The overlapping segments signify four types of interconnected knowledge about technology, pedagogy, and content. First, PCK emphasises pedagogical knowledge, which benefits English pre-service teachers. This knowledge is imparted through the establishment of DST workshops. Second, TCK centres on the technology

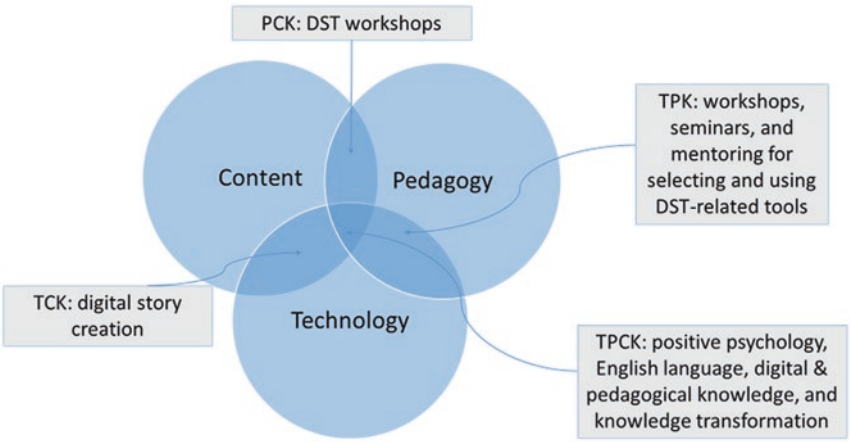

Fig. 10.1 TPCK framework in the DST project

employed to articulate the content of stories by focusing on positive psychology and life values. In this project the researchers have facilitated the experience of creating digital stories, thereby allowing pre-service teachers to narrate stories with subjectivity, aided by technology. Third, TPK enables pre-service teachers to select digital tools for specific teaching objectives. Techniques encompass the methods of appropriately choosing and utilising DST-related tools, for which workshops, seminars, and mentoring have been organised as tools for guidance and support. Fourth, TPCK encompasses knowledge of story content related to positive psychology, DST-related technology, the English language, and pedagogical strategies. Additionally, it accentuates the transformation of existing knowledge into epistemologies. To validate the implications of the DST experience, research surveys, interviews, and tutorial practices were conducted in a local primary school to observe the critical cognition of these pre-service teachers.

Regarding literacy practices, the cohesive relationships among pedagogy, technology, and content knowledge within the TPCK framework likely contribute to English pre-service teachers' enhancement of relevant skills through a reflective adventure. As they engage with the content of the English language, pedagogy, and DST-related tools and apply them in practice, they have the potential to synthesise digital resources, thereby laying the foundation for the development of new knowledge and the cultivation of literacy skills.

Materials

Throughout this project, participants fully utilised DST-related tools to fulfil their assigned tasks. They employed software such as Microsoft Office, WonderShare, and Photoshop to prepare teaching materials and create videos. The web platforms YouTube and WebQuest were utilised to showcase their products. For efficient communication with partners and teacher tutors, instant exchange tools such as WeChat and Zoom were employed.

Sequence of Activities

Extracurricular and extramural activities carried out in the project were designed to explore participants' perceptions of Digital Storytelling (DST), with the primary goal of enhancing their individual literacy competence and academic potential as English pre-service teachers. The sequence of activities is illustrated in Fig. 10.2, which shows the three phases: training workshops, digital story creation, and dissemination of deliverables and practices. A total of 30 participants were recruited from two universities in Hong Kong, most of whom were enrolled in a Bachelor of Education (English language) programme, with a few enrolled in a Master of Education (English language) programme. These English pre-service teachers willingly participated in the project, driven by their interests and needs, without any external pressures, such as academic performance.

Procedure

To facilitate participants in acquiring the requisite knowledge for the Digital Storytelling (DST) experience, targeted training workshops were

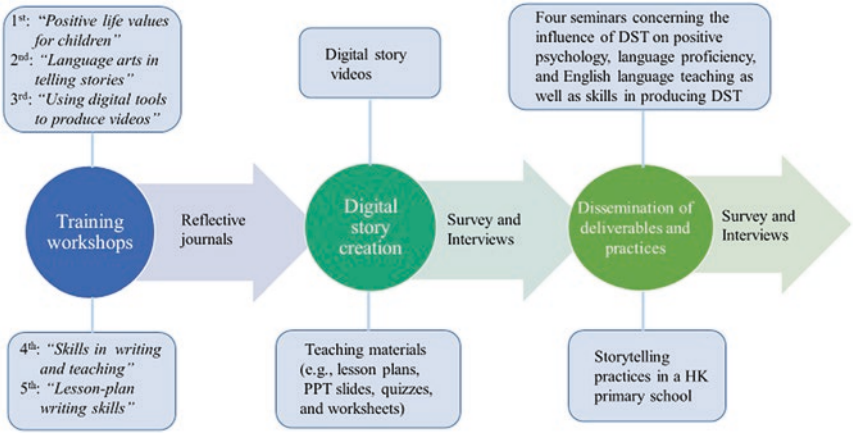

Fig. 10.2 The procedure of the DST project

conducted in preparation for subsequent digital story production. Following the completion of digital story packages, the objectives encompassed the dissemination of digital products and the transfer of participants' own perceived knowledge to educational practice. Throughout the project, data—including reflective journals, surveys, and interviews—were collected (see Fig. 10.2).

Training Workshops

Five training workshops were conducted through Zoom during the initial stage of the study. Invitations were extended to five experienced teachers from a local university in Hong Kong to present on the following topics: "Positive Life Values for Children," "Language Arts in Telling Stories," "Using Digital Tools to Produce Videos," "Skills in Writing and Teaching," and "Lesson-plan Writing Skills." The primary aim of this stage was to equip pre-service teachers with essential knowledge and skills in areas such as positive psychology, digital tools utilisation, lesson-plan design, and storytelling proficiency.

Each workshop lasted approximately one hour, during which the presenters delivered their lectures for 40 minutes, reserving the remaining 20 minutes for interactive sessions. Participants were actively encouraged to engage in reflective practice by composing a blog entry (around 300 words) that encapsulated their knowledge gained from the workshops and how they envisaged applying this newfound knowledge in the subsequent Digital Storytelling (DST) activities. To gain insights into participants' experiences and reflections, we have included below select excerpts from their reflective journals:

> *I learned that it is meaningful to apply positive psychology in education because it can work as an effective approach to preventing children from mental illness. (S 1)*
>
> *To create an engaging atmosphere and make the information accessible for students, we need to consider some strategies like using body language, using intonation and onomatopoeia to attract student's attention. (S 3)*

The most impressive DST tool for me is Book Creator. Dr. gave a very comprehensive demonstration of the functions including the map, background, and insertion. (S 7)

When a book presented to young children is found too difficult in terms of the vocabulary items and sentence structure, we will definitely need to adjust the level of these language features. (S 11)

From the workshop, I learned that lesson-plan plays a vital role in teaching. Objectives are essential in lesson-plan that will guide teachers' ideas to design class activities. (S 15)

To equip these pre-service teachers with positive psychology in teaching children, digital skills to produce videos, and language skills to tell stories and write lesson plans, these workshops provided accessible and recognised knowledge.

Digital Story Creation

Since different types of knowledge have the potential to be transferred through DST (Katuscáková & Katuscák, 2013), participants were invited to produce digital stories by applying knowledge and skills acquired from workshops. Working in pairs, they leveraged their complementary strengths for efficient output, establishing a collaborative framework with a clear division of labour based on negotiations of respective strong and weak points. Twenty digital story packages were created, each composed of a digital story video and relevant teaching materials such as lesson plans, PowerPoint slides, quizzes, and worksheets. Additionally, some stories were developed as WebQuests and are partially exemplified in Fig. 10.3. Each digital story package underwent assessment by teacher tutors, accompanied by comments from peers.

Subsequent to the production of the digital story packages, a survey was distributed through Qualtrics, a widely used online survey platform, to evaluate participants' performance during the creation process. The survey encompassed three sections, which assessed positive psychology, English language, and technological skills. The survey consisted of 33 items, adapted from Diener's scale (2009) and Hafner's survey (2014). It aimed to examine participants' learning motivation, digital literacy,

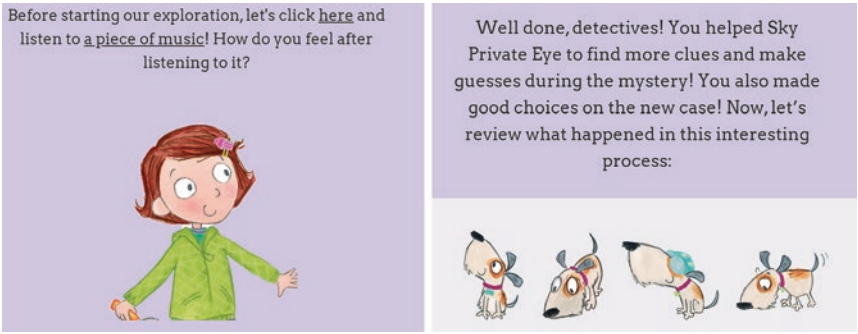

Fig. 10.3 WebQuest of the video story, "Sky Private Eye and the Case of the Sparkly Slipper"

English language skills, cognitive abilities, degree of collaboration with partners, and benefits derived from the project. A total of 28 valid responses were received. Regarding positive psychology, the majority (n = 25) reported a positive shift in their mindsets towards and attitudes about life. Concerning English language skills, 24 participants agreed that their proficiency and motivation had improved. Furthermore, 26 participants confirmed perceived advancements in technological skills while expressing their willingness to incorporate DST into their teaching practices.

Subsequently, follow-up interviews were conducted to delve deeper into participants' reflections on the DST experience. Seventeen English pre-service teachers involved in the project participated in the interviews. The guiding questions mainly explored their gains and challenges that occurred during the DST adventure, as well as their views on formative assessment and peer feedback and their suggestions for DST implementation. Based on the interview data, positive responses were received, corroborating the occurrence of improved learning motivation, English language skills, and digital literacy, as previously indicated in the survey data. Participants also discussed challenges encountered when using digital tools and approaches to address various difficulties, both individually and collaboratively. Additionally, they expressed great satisfaction with the diverse modes of DST, underscoring their contribution to students'

active engagement and their own confidence in integrating this modern tool into future teaching endeavours.

Dissemination of Deliverables and Practices

The dissemination of deliverables began with four seminars conducted via Zoom. During these seminars, speakers presented practical digital skills for video production, as well as language skills for crafting lesson plans and narrating stories. Furthermore, they introduced teaching strategies for implementing DST in English language classrooms, which proved valuable for pre-service teachers' readiness in the digital age. The seminars also underscored the significance of value education, assessment as learning, and collaborative learning within the DST experience.

The second dissemination activity took place in a local primary school, where participants conducted their teaching practices in seven classes, spanning P3 to P4 in collaboration with in-service teachers from the school. The theme of DST focused on seven character strengths for children (i.e., mindfulness, hope and bravery, self-appreciation and uniqueness, teamwork, courage, judgement, and perspective). During the morning assembly, all pupils watched selected digital story videos, followed by seven tutorial sessions. Each tutorial session involved approximately 15 P3–P4 pupils, who actively engaged with the English pre-service teachers, and the producers of the videos and teaching materials. The pre-service teachers elaborated on story details, highlighted language points, and prompted interaction during classroom activities. Throughout each DST trial session, pre-survey and post-survey assessments were conducted to evaluate changes in pupils' character strengths, which encompassed motivation, mindfulness, hope, bravery, teamwork, creativity, and grit. Additionally, face-to-face interviews with the in-service teachers at the school were conducted to comprehend the influence of DST on students' learning and to obtain their viewpoints on the DST project.

Reflection

Overview of the Results

The research outcomes effectively addressed the four proposed aims (outlined in the Issue Part) concerning English pre-service teachers' insights gained from the TPCK scaffolded DST process.

First, the English pre-service teachers demonstrated a progressive acquisition of interdisciplinary content knowledge, encompassing positive psychology, English language, DST technology, and language teaching across the three distinct stages of the DST project, namely, training workshops, digital story creation, and the dissemination of deliverables and practices.

Second, the application of TPCK theory effectively guided the DST procedure, facilitating the transformation of content knowledge into practical epistemologies. Having assimilated essential concepts from the selected stories and DST-related knowledge imparted during the training workshops in the initial stage of the DST procedure, participants adeptly incorporated these insights into the subsequent two stages of the process, namely, digital story-making and English teaching, thus engaging in language and digital literacy practices.

Third, the data collection and analysis carried out throughout the ongoing DST process yielded valuable implications for integrating DST into language education. Pre-service teachers, through reflective exercises, offered insights into transformative aspects, highlighting the gains and challenges encountered during the process. In turn, these reflections provided crucial pedagogical recommendations and insights into the academic application of DST within their prospective careers.

Consequently, the step-by-step DST experience effectively facilitated the attainment of the four targeted aims: (1) fostering knowledge of positive psychology, (2) enhancing digital literacy skills, (3) developing English language proficiency and teaching skills, and (4) fostering recognition of the importance of DST in pre-service teachers' professional development.

Literacy Skills

The practice of DST has proven to be an effective method for fostering literacy skills, including English language and digital skills, as evident from our survey data and individual interviews. Regarding language literacy, participants reported significant improvement in their English language skills, which encompass speaking, listening, and writing. These findings align with the results of other studies. For instance, Nair and Yunus (2021) conducted a systematic review that explicated the positive influence of DST on speaking skills across various educational settings. Other studies also have demonstrated the enhancement of students' listening, reading, and writing skills following their involvement in DST (Hamdy, 2017; Nassim, 2018). Additionally, participants highlighted the role of DST's multimodal representations, particularly in the video-producing process, in facilitating their digital skills, such as creating animation, converting lenses, and using audio clips. This outcome is consistent with research that explores the impact of DST on digital literacy (e.g., Çetin, 2021; Chan et al., 2017; Churchill, 2020).

Pedagogical Suggestions

In addition to literacy skills, these pre-service teachers reported other gains, such as increased learning motivation, confidence, creativity, and critical thinking, as a result of participating in digital story creation. However, they also encountered difficulties when attempting to apply their perceived knowledge to digital and teaching practices. Many participants expressed perplexity regarding DST-related tools while attempting to produce animation, scrolling texts, voiceovers, sound effects, and synchronising animation with narrations. Some also raised concerns about the application of DST to English language teaching. While acknowledging the engaging nature of DST for children due to its rich content and vivid expression, they were apprehensive that DST activities might occupy valuable language learning time and potentially expose children to difficult vocabulary, potentially affecting their respective levels of confidence.

Pre-service teachers acknowledged the essential role of teacher tutors in encouraging them to seek solutions to mitigate potential tension or conflicts during the DST activity. Engaging in discussions with not only their group members but also more experienced students allowed them to exchange opinions about the multimodal DST experience and mutually benefit from peer feedback. Based on their individual explorations and collaborative efforts, they strived to overcome difficulties by transforming language, digital, and teaching knowledge into practical applications. This transformative process bears resemblance to another digital learning trajectory under TPACK (Niess, 2015), in which knowledge transformation was also highlighted to illuminate the development of knowledge, skills, and dispositions in technology-mediated situations. Building upon the transformative results observed in participants' interviews, the following pedagogical suggestions are provided to fully leverage students' self-efficacy while implementing DST in teacher education:

First, during the preparation stage, prioritise themes for digital stories that emphasise positive life values. Simultaneously, ensure that language knowledge, including vocabulary and grammar, aligns with students' English language proficiency. Second, DST is recommended as a complementary activity in conjunction with traditional teaching, aimed at enlivening the classroom atmosphere. Striking a balance between students' degree of motivation and the achievement of teaching objectives is essential. Teachers should employ appropriate teaching techniques while designing activities and arranging for a time to effectively engage students' interests and facilitate their learning. Third, interaction plays a crucial role in DST. Given that DST can be viewed as a novel craft that fosters interactive entertainment in teaching and training young people (Miller, 2019), teachers should endeavour to design diversified interactive activities to encourage students' reflections and obtain responses, thus enabling constant adjustments to teaching methods. Inserting thought-provoking questions into digital story videos or incorporating time pauses for students to digest knowledge and raise questions during DST video play are possible strategies. In addition, activities such as quizzes, group competitions, or digital games can be considered interactive options. Fourth, the role of teacher tutors is vital in conducting DST. Adequate supervision and guidance from tutors can significantly

enhance literacy practices during the DST journey, facilitating students' progress on the right track and mediating information resources to facilitate knowledge transformation.

Professional Development

From the perspective of these pre-service teachers regarding their professional development, the majority agreed with the positive impact of DST on their teaching practices, and they expressed intentions to integrate DST into their future careers. They highlighted several advantages brought about by DST in the following four aspects: First, the multimodal features of DST enriched teaching activities, offering diverse audio-visual formats that captured students' attention and engagement, surpassing traditional paper-based stories. Second, DST proved to be an effective medium for conveying knowledge from various disciplines within a structured teaching plan. Third, DST emerged as an innovative pedagogical approach, skilfully integrating content and language knowledge, particularly suited for medium-aged learners. This engaging tool made vocabulary and grammar learning more intriguing and accessible. Fourth, DST demonstrated its potential to provide reusable teaching resources that align with the ecological demands of modern society.

Having assimilated knowledge from different sources within the project (e.g., training workshops, group discussions, teacher tutoring, and peer feedback), these English pre-service teachers effectively scaffolded their understanding of digital and teaching practices. Through self-reflection on their DST journey, they elucidated the intricate relationships among technology, pedagogy, and subject content, validating the transformative process from content knowledge to literacy practices as advocated by the Technological Pedagogical Content Knowledge (TPCK) framework. The potential of DST extends beyond subject matter knowledge, encompassing innovative methods of learning, presentation, and adept utilisation of digital tools to express ideas and share experiences (Jamissen et al., 2017). Thus, this exploration of English pre-service teachers' perceived knowledge and literacy skills throughout their digital

adventure encourages further discourse on the prospective implementation of DST in language teacher education.

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References

Alismail, H. A. (2015). Integrate digital storytelling in education. *Journal of Education and Practice, 6*(9), 126–129. https://files.eric.ed.gov/fulltext/EJ1082416.pdf

Amin, J. N. (2016). Redefining the role of teachers in the digital era. In I. In (Ed.), *The International Journal of Indian Psychology* (pp. 40–45). RED'SHINE Publication.

Balaman, S. (2018). Digital storytelling: A multimodal narrative writing genre. *Journal of Language and Linguistic Studies, 14*(3), 202–212. https://dergipark.org.tr/en/download/article-file/650695

Buendgens-Kosten, J. (2021). Digital storytelling: Multimodal meaning making. In T. Beaven & F. Rosell-Aguilar (Eds.), *Innovative language pedagogy report* (pp. 103–108). Research-publishing.net. https://doi.org/10.14705/rpnet.2021.50.1243

Çetin, E. (2021). Digital storytelling in teacher education and its effect on the digital literacy of pre-service teachers. *Thinking Skills and Creativity, 39*, 100760. https://doi.org/10.1016/j.tsc.2020.100760

Chan, B. S., Churchill, D., & Chiu, T. K. (2017). Digital literacy learning in higher education through a digital storytelling approach. *Journal of International Education Research (JIER), 13*(1), 1–16. https://doi.org/10.19030/jier.v13i1.9907

Chen, H. L., & Chuang, Y. C. (2021). The effects of digital storytelling games on high school students' critical thinking skills. *Journal of Computer Assisted Learning, 37*(1), 265–274. https://doi.org/10.1111/jcal.12487

Choo, Y. B., Abdullah, T., & Nawi, A. M. (2020). Digital storytelling vs. Oral storytelling: An analysis of the art of telling stories now and then. Universal. *Journal of Educational Research, 8*(5A), 46–50. https://doi.org/10.13189/ujer.2020.081907

Churchill, N. (2020). Development of students' digital literacy skills through digital storytelling with mobile devices. *Educational Media International, 57*(3), 271–284. https://doi.org/10.1080/09523987.2020.1833680

Cote, T., & Milliner, B. (2018). A survey of EFL teacher's digital literacy: A report from a Japanese university. *Teaching English with Technology, 18*(4), 71–89.

Diener, E. (2009). *Assessing well-being: The collected works of Ed Diener* (Vol. 37). Springer Netherlands.

Gregori-Signes, C. (2014). Digital storytelling and multimodal literacy in education. https://doi.org/10.30827/Digibug.53745

Hafner, C. A. (2014). Embedding digital literacies in English language teaching: Students' digital video projects as multimodal ensembles. *Tesol Quarterly, 48*(4), 655–685. https://doi.org/10.1002/tesq.138

Hamdy, M. F. (2017). The effect of using digital storytelling on students' reading comprehension and listening comprehension. *Journal of English and Arabic Language Teaching, 8*(2), 112–123. http://ejournal.uin-suska.ac.id/index.php/jealt

Jamissen, G., Hardy, P., Nordkvelle, Y., & Pleasants, H. (2017). *Digital storytelling in higher education: International perspectives*. Palgrave Macmillan.

Katuscáková, M., & Katuscák, M. (2013, September). The effectiveness of storytelling in transferring different types of knowledge. In *European conference on knowledge management* (p. 341). Academic Conferences International Limited.

Kim, D., & Li, M. (2021). Digital storytelling: Facilitating learning and identity development. *Journal of Computers in Education, 8*, 33–61. https://doi.org/10.1007/s40692-020-00170-9

Lisenbee, P. S., & Ford, C. M. (2018). Engaging students in traditional and digital storytelling to make connections between pedagogy and children's experiences. *Early Childhood Education Journal, 46*, 129–139. https://doi.org/10.1007/s10643-017-0846-x

Liza, K., & Andriyanti, E. (2020). Digital literacy scale of English pre-service teachers and their perceived readiness toward the application of digital technologies. *Journal of Education and Learning (EduLearn), 14*(1), 74–79. https://doi.org/10.11591/edulearn.v14i1.13925

Miller, C. H. (2019). *Digital Storytelling 4e: A creator's guide to interactive entertainment*. CRC Press.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054.

Nair, V., & Yunus, M. M. (2021). A systematic review of digital storytelling in improving speaking skills. *Sustainability, 13*(17), 1–15. https://doi.org/10.3390/su13179829

Nassim, S. (2018). Digital storytelling: An active learning tool for improving students' language skills. *PUPIL: International Journal of Teaching, Education and Learning, 2*(1), 14–27. https://doi.org/10.20319/pijtel.2018.21.1429

Niess, M. L. (2015). Transforming teachers' knowledge: Learning trajectories for advancing teacher education for teaching with technology. In C. Angeli & N. Valanides (Eds.), *Technological pedagogical content knowledge: Exploring, developing, and assessing TPCK* (pp. 19–37). Springer.

Nishioka, H. (2016). Analysing language development in a collaborative digital storytelling project: Sociocultural perspectives. *System, 62*, 39–52. https://doi.org/10.1016/j.system.2016.07.001

O'Byrne, W. I., Houser, K., Stone, R., & White, M. (2018). Digital storytelling in early childhood: Student illustrations shaping social interactions. *Frontiers in Psychology, 1800*. https://doi.org/10.3389/fpsyg.2018.01800

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On The Horizon, 9*(5), 1–6. https://doi.org/10.1108/10748120110424816

Ribeiro, S. (2015). Digital storytelling: An integrated approach to language learning for the 21st-century student. *Teaching English with technology, 15*(2), 39–53. https://www.ceeol.com/search/article-detail?id=408511

Robin, B. R. (2016). The power of digital storytelling to support teaching and learning. *Digital Education Review, 30*, 17–29. http://greav.ub.edu/der/

Sarıca, H. Ç., & Usluel, Y. K. (2016). The effect of digital storytelling on visual memory and writing skills. *Computers & Education, 94*, 298–309. https://doi.org/10.1016/j.compedu.2015.11.016

Schmoelz, A. (2018). Enabling co-creativity through digital storytelling in education. *Thinking Skills and Creativity, 28*, 1–13. https://doi.org/10.1016/j.tsc.2018.02.002

Tabieh, A. A., Al-Hileh, M. M., Abu Afifa, H. M., & Abuzagha, H. Y. (2021). The effect of using digital storytelling on developing active listening and creative thinking skills. *European Journal of Educational Research, 10*(1), 13–21. https://doi.org/10.12973/eu-jer.10.1.13

Wu, J., & Chen, D. T. V. (2020). A systematic review of educational digital storytelling. *Computers & Education, 147*, 103786. https://doi.org/10.1016/j.compedu.2019.103786

Yu, B. (2021, June 19–20). *Fostering digital literacy and professional development through a collaborative digital storytelling project of pre-service teachers in Hong Kong* [Conference presentation]. The 2nd International Conference on Language Teaching and Learning, Hong Kong SAR, China.

11

Using Writing Editor Tools to Improve English Writing Skills

Dennis Murphy Odo

Issue

For the past several years, Mr Smith (pseudonym) has been teaching English academic essay writing to undergraduate students who are preparing to be teachers. The primary aims of the course are intended for them to become proficient enough writing academic English so that they will be able to write essays in English to pass a highly competitive national teacher qualification examination and so that they will feel comfortable teaching their own students how to write in English.

The students in the class had studied English for anywhere from 10 to 15 years, and the majority were roughly at an intermediate level of English proficiency. In general, most students in the class had little difficulty understanding the course concepts and principles with regard to how to structure various types of essay formats (e.g., descriptive vs

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argumentative). However, a number of students continued to struggle with fine-tuning their language skills at the sentence level, as they sometimes used grammatical forms incorrectly and made inappropriate word choices. Initially, discerning how to handle this situation was challenging for Mr Smith because he did not have sufficient time to provide students with detailed ongoing feedback that they would need to help them address all of these issues. However, he eventually became familiar with various AI-supported writing enhancement tools that he could use in his classes, tools that would offer these students additional support through ongoing sentence-level feedback that they needed.

Mr Smith was able to integrate these tools in a way that enabled students to gradually improve their writing while also allowing them to foster their independence as learners by providing them with a means to enhance their learning experience in several ways. First, these tools can provide rapid and ongoing feedback that students can access at any time. Unlike traditional forms of teacher-centred assessment, students no longer have to wait to receive feedback until after an assignment is due, when they are much less likely to review the feedback anyway (Leki, 1990). Second, these tools can enhance learners' powers of self-assessment. As they repeatedly see the patterns of typical errors that they make, students can begin to notice non-target forms that they produce, for which they are provided with automated feedback (Barrot, 2021). As a result, students become better able to identify and correct grammar and vocabulary choice errors in their writing, allowing them to improve their language skills and communicate more effectively. This can give them the confidence they need to express themselves and communicate more effectively in English. This can be particularly beneficial for students who are still learning the language and may feel self-conscious about their overall writing skills.

Informal discussions with his students over the years have led Mr Smith to conclude that students do not do much writing in English outside of class and thus they are not aware of how they might gain access to feedback that they could use to improve their writing. In addition to their difficulties as writers, the students in Mr Smith's class also face a number of other challenges as prospective teachers who one day would be teaching writing to their own students. For instance, must to contend

with their own limitations in English, which can make it difficult for them to identify and correct grammar or word choice errors in their students' writing. This challenges them to accurately assess the quality of students' writing and provide helpful feedback. Accordingly, they also often lack confidence in their own ability to provide effective feedback to students. These automated tools can give these future teachers immediate feedback on student writing that addresses their specific intent to help them to continue to develop as L2 users. It also can serve as a useful resource later when they want to doublecheck feedback that they have given to their students.

Theory

Two theoretical frameworks, known as the interaction and noticing hypotheses, have been used by several researchers to account for how L2 learners can use and learn from automated writing evaluation software. The first of these is Michael Long's (1985) Interaction hypothesis, which suggests that language acquisition occurs through interactions between a learner and a more proficient speaker. Through these interactions the learner is able to negotiate meaning by using techniques such as providing recasts and making clarification requests with the speaker, as they work together to understand and communicate messages. This negotiation of meaning is an essential part of the language learning process, as it ensures that the L2 input that the learner receives is comprehensible. If the input is comprehensible, the learner will learn new language from it. This theory relates to automated written feedback in that it helps explain how learners process and notice gaps in their L2 output through modified input they receive, along with automated written corrective feedback on their writing (Barrot, 2021).

Interactionist theory suggests that language learning is an active process in which individuals construct their understanding of the target language through experience and interaction with others. Writing enhancement software can help students construct this understanding of their target language and its writing system by providing feedback and suggestions for how they can improve their writing, encouraging them to

think critically about their writing and make changes based on their own understanding of language conventions. In the process of doing this, interactionist theory asserts that learners will notice new features of the target language and will also notice the gap between their performance and the target forms. It is argued that this recognition will cause learners to acquire novel features that are contained in the input.

Interactionist theory accounts for the process by which students learn from automated writing feedback by explaining that the error corrections offered by the AWE system are like a form of L2 negotiation of meaning, one that provides modified input that they can then process, which in turn leads to improved knowledge of the L2. This theory explains that there are four stages in the cognitive processing of input to modified output, which include noticed input, interaction, feedback, and output. A key stage in this process is the provision of corrective feedback, which enables learners to notice errors in their L2 writing (Bitchener & Storch, 2016). This interaction and recognition is posited to happen when learners review corrective feedback provided by AWE software, and subsequently compare, process, and connect this feedback with their current knowledge of the L2 (Barrot, 2021).

The results of a number of recent empirical investigations also have offered some valuable insights into the effectiveness of AWE tools. For instance, a number of studies have shown how AWE tools can behave like a writing assistant by continuously assessing student writing and providing helpful guidance in a way that can support classroom instruction (Tang & Rich, 2017) by also correctly assessing the appropriate level of difficulty for learners (Cotos & Huffman, 2013). The corrective feedback given by AWE can help learners to develop their L2 writing accuracy while also giving them confidence about their L2 writing skills (Li et al., 2015). However, while AWE tools can be used to support L2 writing development, they cannot be entirely relied upon without the guidance of a teacher because the programs still exhibit issues with accurate error identification (Bai & Hu, 2017).

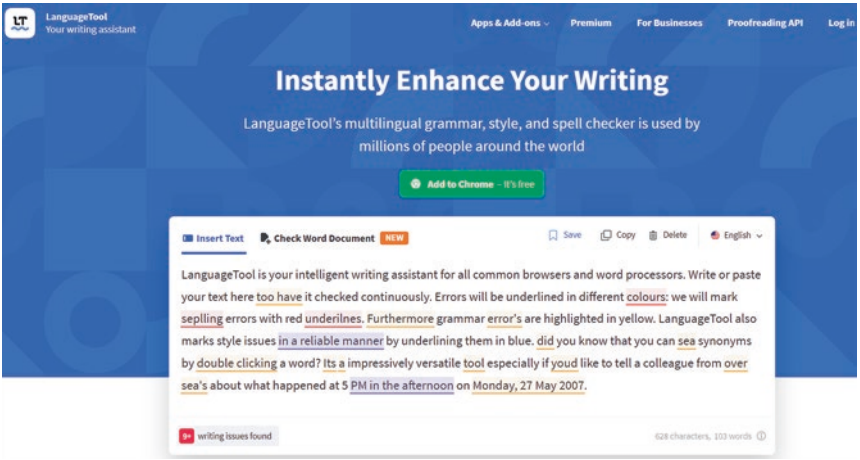
AWE also supports L2 learners' target language and writing development. With regard to the issue of student uptake of feedback, it has been found that access to these tools does improve the grammatical accuracy of students' writing (Liao, 2016). Learners are also able to distinguish

accurate from inaccurate feedback and appropriately integrate the provided feedback into their writing (Bai & Hu, 2017). Student uptake of the feedback that AWE gives them also supports their L2 writing development while supplying them with resources that they need to effectively monitor and correct their own written output (Tang & Rich, 2017). Nevertheless, teachers and learners must realise that the process of writing improvement facilitated by these tools happens slowly over time and that learners will need ongoing practice with AWE tools for them to notice and incorporate previously unknown forms into their subsequent writing (Liao, 2016).

Materials

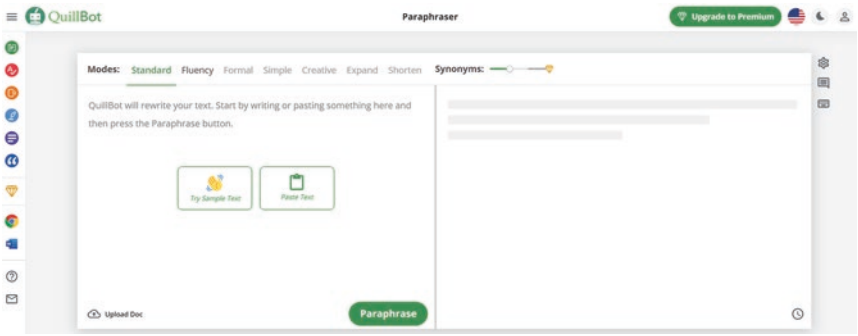
Learners had access to various types of devices that they could use to write and proofread and revise their writing with the aid of AI-powered writing tools. This was because all of these tools are found through a simple Google search online. Most of these learners used their own devices, such as phones, tablets, or laptops to access the writing tool websites. For those who did not have or had forgotten their device, they could use a desktop computer. There were enough desktops available so that students could use them individually. The main versions of automated writing evaluation software that they used were Writing Tool and Grammarly. The digital writing assistant tools that they used most often were Wordtune and Quillbot.

Automated writing evaluation tools such as Language Tool or Grammarly can be used to help students improve their writing skills by offering them a way to check their work for grammar or mechanical and spelling errors. For example, students can use the software to check their writing for correct verb tense, subject-verb agreement, and other grammatical features. This provides them with individualised feedback on their writing. There also are a number of other features that these websites contain that could benefit students, such as writing style suggestions to improve writing style and clarity, vocabulary enhancement suggestions to expand their vocabulary, and writing goals to set specific aims and track their progress over time.



DWA tools like Wordtune and Quillbot likewise offer several potentially useful features. For example, they can be used to help students see alternative ways of presenting the same information. By inputting a piece of writing into a DWA tool, students can see the AI's suggested rephrases and can compare these paraphrases with their own original phrasing to discern how they could make their point using other words. They also can use them to support peer review, as they use the tools to help them decide which suggestions to put forth for each other's writing. That way, as with student-teacher writing conferences, peer evaluation can focus more on organising ideas and communicating intended meaning rather than spending the limited time they have becoming bogged down in discussions about word choice or grammar errors.

Teachers can use DWA tools to more quickly assess student writing and provide more ongoing and fine-grained feedback on areas such as style, grammar, and word choice. This can help students understand the specific areas in which they need to improve and give them a roadmap for revision. This ongoing individualised feedback afforded by DWA tools also gives learners greater independence, allowing them to write more in a workshop-style configuration that facilitates self-directed learning rather than a traditional teacher-centred, lecture-based approach.



Sequence of Activities

Extracurricular Activities

Mr Smith introduced the students to a widely used AWE software tool (LanguageTool) and introduced the most relevant features of that tool by demonstrating how to edit a sample essay by utilising the tool. In a similar manner, he then introduced students to a popular DWA tool (Wordtune) and showed them how to use it. Students were then given some time to try out the tools by using some sample texts. During their experimentation with these tools, Mr Smith circulated and answered student questions and afterwards he shared some answers to questions that he believed would be helpful for the whole class.

In the following session students worked in pairs to practise with these tools by writing a short argumentative essay on a topic of their choosing. This aligns with the Interaction hypothesis, which suggests that language acquisition is enhanced when learners engage in meaningful interactions and negotiate meaning with others. Earlier in the course the students had learned about how to write an argumentative essay. For this assignment they first reviewed the components and structure of argumentative essays, establishing a shared understanding of the task. By discussing and clarifying the requirements, the students actively engaged in interaction and

negotiation of meaning, which, according to the Interaction hypothesis, fosters language development. Then, in pairs, they chose their topic and wrote their essay, collaborating and exchanging ideas throughout the writing process. The collaborative aspect of the task further supports the Interaction hypothesis, as students interact with their partners, engage in peer discussions, and jointly construct their written arguments. After completing their essays the students utilised AI-powered writing tools to check the language they used. This step aligns with the Interaction hypothesis by providing opportunities for learners to receive immediate feedback and engage in language-focused interactions with technology.

By deliberating on the provided feedback and collectively deciding on alterations to their essays, students engaged in negotiation and language-focused interaction, thereby enhancing their writing skills and linguistic competence. Through this collaborative writing and revision process, students not only developed their editing skills but also had an opportunity to observe and learn from their peers' writing processes. The Interaction hypothesis highlights the importance of observing and learning from others' language use, and in this case students had the occasion to engage in peer learning, thus benefiting from each other's insights and strategies. By incorporating these collaborative and interactive elements into the writing task, this implementation aligns with the Interaction hypothesis, facilitating meaningful language interactions and supporting the students' language acquisition and development.

At the end of each writing session a valuable practice was implemented, inspired by the Noticing Hypothesis. Each pair was given a few minutes to present a different new feature of English (e.g., grammar, vocabulary, etc.) that they learned from AI-generated feedback that they received. This helped to reinforce the new features that they noticed from AI-generated feedback and possibly introduce their classmates to some new language that might facilitate their own learning. They also were encouraged to share any tips or tricks that they discovered while working with these tools.

After pairs finished with the first essay they were then given another assignment, namely, to write a new essay individually. Mr Smith provided guidance and support as students worked through the writing process, helping them to think critically about the structure, meaning, and

language of their writing. He encouraged students to use the DWA tools to help them explore alternative possibilities for how they might rephrase some parts of their essays that were not as clear as they had hoped. They also were reminded to use the AWE tools to check for grammatical mistakes in their writing. While students worked on their essays, Mr Smith circulated and discussed suggested fixes with students, corrections resulting from questions various students had asked during this process.

Towards the end of the course learners were given the opportunity to reflect on their writing and offer feedback, via class discussion, on the experience of using the AWE and DWA tools. Students shared what they believed to be some of the main advantages they would obtain from using these tools, as well as some possible limitations that they had discovered. Some advantages they mentioned included the time the tools saved them in receiving feedback about their writing, as well as the customised feedback offered to them. Disadvantages included the current inability of these tools to take a wider context into consideration, which at times resulted in receiving questionable advice regarding possible issues in style and tone. Mr Smith then added an additional caveat about not becoming overly reliant on the tools, to the detriment of their own writing development.

Extramural Activities

Conversations with various students revealed that there are a number of options that they have for using the skills and resources that they acquired from the course. Since the department is English education, many of the students intend to eventually become English teachers. Probably their most common option is to engage in community outreach and volunteering to tutor various groups in the community, such as economically disadvantaged children or seniors. These tools help them improve their English, which makes them more capable and confident teachers and gives them helpful tools that they may one day decide to introduce to their own learners.

For example, during a class discussion one student shared her personal experience with automated writing, expressing her pleasure in seeing

immediate improvement in her written grammar, spelling accuracy, and word choice. She mentioned that in some sense it was "like having (my) own private writing tutor," which, as she explained, made her feel more confident in her English writing than she had been in the past. By using the tools' suggestions and corrections, she noticed a rapid change in the quality of her writing. This not only boosted her confidence but also gave her a sense of empowerment regarding her ability to continue using these tools to independently refine her writing skills beyond a classroom setting. With the tools' immediate feedback and guidance she said she felt more assured in her English writing abilities than ever before. She added that this newfound confidence and the possibility of continued self-improvement renewed her enthusiasm for learning English.

Others have found ways to put their writing skills to use in developing websites and smartphone applications. A female student said that she combined her interest in English with a talent in coding to develop a smartphone application that helped simplify investing for regular people interested in learning about how to invest more safely. Another student noted that he combined his English knowledge and coding know-how to help create online educational platforms (e.g., Blackboard) and smartphone applications. He explained that he began as a self-taught programmer but had already been recruited to a well-known company in his country. Conversations with both students revealed that their experiences in learning English by utilising these tools helped them to learn more quickly than they otherwise would have. It also gave them more rapid access to cutting-edge information from around the world related to software development and online business.

Reflection

The integration of these tools offers much to recommend them for use in the second language writing classroom. First, they provide learners with continuous, specific feedback on their grammatical and word-choice errors while also offering them immediate suggestions on how to improve their writing. Prior to using them a substantial amount of inside and outside class time was being used to give learners low-level feedback on

grammar and word choice errors. Despite all of the time that was spent on this activity, it always seemed as though such advice was never enough. Regardless, this was time that could have been spent more profitably discussing content and organisation with students. With the use of these tools, teachers are freed from spending an inordinate amount of time on the mechanical aspects of writing so that they can focus more on helping students to more effectively generate and organise increasingly creative and compelling content.

The introduction of these tools also somewhat altered Mr Smith's role in the course. The dynamic shifted from a more teacher-centred focus to one in which learners were able to work relatively more independently, at least regarding making decisions about the quality of their written grammar. Conferences with Mr Smith then typically became more oriented towards the content, style, and authorial voice of the writing instead of mechanical or grammatical issues. That is, now the students could rely less on the teacher for questions about grammar, structure, and phrasing and focus more on meaning and content, making them less dependent and more self-directed.

In general, when asked for their opinions of the tools, students mostly approved of them, pointing out that using these tools somewhat reduced their level of stress about writing because they felt that they did not have to worry as much as they used to about the correctness of their language. Several students also mentioned that they were actually able to fix their most commonly reoccurring grammar and word choice errors after being given repeated feedback about them by the software. That is, some students reported that they believed that they could then compare their writing with suggested changes and often notice new features of English that they could possibly integrate into their developing knowledge of the language. Several students also mentioned that they appreciated being able to avoid the awkwardness of being corrected by a teacher for a repeated mistake or what the students perceived to be silly mistakes.

Of course, using these tools also comes with a number of non-trivial risks that teachers must do their best to avoid, or at least minimise. First, there is the potential issue that some students may use these tools unreflectively, only accepting the changes that were suggested without making a sufficient effort to notice and learn from the mistakes that they made.

Indeed, without suitable guidance, some learners may become too reliant on these tools, leading to miss out on opportunities to further develop their critical thinking and self-editing skills. A second concern is that while both tools are designed to improve the grammar and style of writing, they are not perfect and may still miss errors or make inaccurate or inappropriate suggestions. Therefore, it is important that learners learn to use their own judgement and consultation with peers and their teacher rather than blindly follow all suggestions made by the tools. Lastly, these tools can allow students to write better than they would otherwise be able to without their assistance; therefore, it can become challenging for teachers to accurately assess learners' ability because they cannot be sure how much learners relied on the AWE or DWA tools to improve their performance.

Based on what was learned from previous versions of the course, future syllabi will continue building on promising practices and improving upon shortcomings that have been identified to date. For instance, the scope of assignments will be expanded so that learners can receive opportunities to practise using other genres of text besides argumentative essays. Some of these genres could include narratives or descriptive pieces. Additional opportunities could be built into the course for students to share what they learned from using the tools, such as words or expressions they believe may be useful for their classmates, or suggestions they receive for obtaining maximum benefit from using the AWE and DWA tools. This could be achieved by including more post-use reflection and pair or small group work, in which learners can share information with each other.

Lastly, it also is important to ensure that students do not become too dependent upon these tools. This can be addressed by teaching them how to use the tools effectively without coming to rely on them too much by showing strategies that can help make them more careful users of the tools, such as discussing some of the common limitations that the software has and showing students how to confirm the accuracy of automatically generated feedback and of which they may be suspicious. This can be achieved by conferring with peers or a teacher or referring to other grammar reference materials. Ultimately, having access to AWE and

DWA tools will make learners not only better users of English but also more effective teachers as they improve their own English and discover tools that they can share with their students to make them more independent English learners.

References

Bai, L., & Hu, G. (2017). In the face of fallible AWE feedback: How do students respond? *Educational Psychology, 37*(1), 67–81. https://doi.org/10.1080/01443410.2016.1223275

Barrot, J. S. (2021). Using automated written corrective feedback in the writing classrooms: Effects on L2 writing accuracy. *Computer Assisted Language Learning, 36*(4), 1–24. https://doi.org/10.1080/09588221.2021.1936071

Bitchener, J., & Storch, N. (2016). *Written corrective feedback for L2 development*. Multilingual Matters.

Cotos, E., & Huffman, S. (2013). Learner fit in scaling up automated writing evaluation. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT), 3*(3), 77–98. https://doi.org/10.4018/ijcallt.2013070105

Leki, I. (1990). Coaching from the margins: Issues in written response. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 57–68). Cambridge University Press.

Li, J., Link, S., & Hegelheimer, V. (2015). Rethinking the role of automated writing evaluation (AWE) feedback in ESL writing instruction. *Journal of Second Language Writing, 27*, 1–18. https://doi.org/10.1016/j.jslw.2014.10.004

Liao, H.-C. (2016). Enhancing the grammatical accuracy of EFL writing by using an AWE-assisted process approach. *System, 62*, 77–92. https://doi.org/10.1016/j.system.2016.02.007

Long, M. H. (1985). Input and second language acquisition theory. In S. M. Gass & C. G. Madden (Eds.), *Input in second language acquisition* (pp. 377–393). Newbury House.

Tang, J., & Rich, C. S. (2017). Automated writing evaluation in an EFL setting: Lessons from China. *JALT CALL Journal, 13*(2), 117–146.

12

Fan and Ludic Practices for Enhancing EFL Writing and Reflection

Boris Vazquez-Calvo and James York

Issue

First lessons are crucial in setting the tone for entire courses and can greatly impact student engagement and motivation (Lightner, 2017). However, designing a first lesson that achieves these goals can be a difficult undertaking, as it requires balancing relevance to course content, creating positive first impressions, and engaging students in a dynamic and meaningful way. Research suggests that first lessons that go beyond simply outlining the syllabus and course policies tend to produce greater long-term benefits for student engagement and motivation (Anderson et al., 2011). In practice, many teachers may take several years and

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multiple trial-and-error interventions to find an effective activity or classroom dynamic as a first lesson that achieves these goals.

In this chapter we present the lesson plan for *Story by Memes*, an activity that has been used in English as a Foreign Language (EFL) teacher training courses for some years, with continuous adjustments based on evaluations of student performance and reflections. We present this lesson because it bears potential not only for EFL teacher training but also for English teaching in general, with necessary variations. *Story by Memes* is an innovative lesson plan that was developed during the COVID-19 pandemic, when students and teachers were required to engage in online instruction. The goal of this lesson plan is to design an activity that would be relevant and engaging for English as a Foreign Language (EFL) student teachers, particularly in the context of such challenging circumstances as those encountered during the worldwide pandemic. The lesson plan aims not only to provide students with knowledge and skills to become effective English teachers but also to spark their interest and investment in such a vocational profession after four years of theoretical undergraduate English Language and Literature studies.

The lesson plan of *Story by Memes* encourages students to explore their identities as language learners and prospective language teachers through meme creation and video storytelling. This digitally mediated multimodal composition allows students to explore the pedagogical potential of such innovative communication methods in language education. It also connects with Thorne et al.'s (2021, p. 108) notion of *rewilding* education, in which formal learning contexts are infused with the "vibrancy of linguistically and experientially rich engagement occurring elsewhere in the social-material world." Indeed, feedback from participating students suggests that multimedia creation with memes as materials beyond the classroom helps expand their understanding of language education, shifting from traditional literacies to include a variety of digital literacies (Darvin & Hafner, 2022) and vernacular texts such as memes.

Theory

Story by Memes is grounded in four principles: *fan practices*, *ludic practices*, *language learner identity*, and *language teacher identity*. Together, these create a framework for EFL student teachers to engage creatively and playfully while exploring their identities and the potential of multimodal composition in language education. These principles can adapt to (English) language teaching and teacher training across various levels and contexts.

- *Fan and ludic practices*. Ludic practices—which involve the incorporation of playful objects (games, roleplays, puzzles, etc.) and playful approaches (methods, material design, meditation, etc.) into language-teaching environments (York et al., 2021)—may serve as a promising tool for language education. Concurrently, fan practices—which refer to the ways in which individuals interact with popular culture products to express their affinity (Sauro, 2019)—often carry a ludic element. Examples include using memes to comment playfully and critically on pop culture. The ludic use of fan-generated memes can reflect users' identities and are considered part of *new literacies* (Knobel & Lankshear, 2014), a concept that encompasses modern discourse styles and modalities characterised by remixing, multimodal communication, and the creative use of language and digital technologies. *New literacies* crystallise in *Story by Memes* as students leverage memes for creative expression and storytelling in a digital multimodal format. This practice highlights their evolving identities as language learners and future educators, showing a connection between their personal interests and their learning journey. As they understand and remix existing memes, students engage with new and digital literacies' core principles, effectively demonstrating the crossover of their fan and ludic practices.
- *Language learner and teacher identity*. Consideration of participants' identities along these two dimensions is central to the theoretical and pedagogical framework of *Story by Memes*. The creation of stories and memes constitutes a powerful medium for reflective identity work and

analysis because in such digital multimodal composition tasks, learners are engaged in the construction of their (digital) selves (Han & Smith, 2023). Studies have shown the propositional and non-propositional effects of memes on identity-related acts of communication (Yus, 2018). In the context of *Story by Memes*, understanding teacher student identity as a transitional phase is essential. Student teachers are individuals who are in a state of transition, consolidating the learning of a given language to an advanced level while aspiring to gain specialised language teaching knowledge and skills to become language teachers. *Story by Memes* reflects past experiences of participants as language learners, as well as their (imagined) selves as language teachers, including their embryonic theories of language teaching, beliefs, moral stances, and emotions. Through the coherent orchestration of memes and storytelling in a multimodal composition, students can explore and express these diverse dimensions of their identities, which is critical for developing their professional vocation while in training.

Context and Materials

This chapter outlines the implementation of the 2023 edition of *Story by Memes* as implemented in a ten-week master's degree course on English Teaching Pedagogy that was taught by the first author at the University of Málaga, Spain. The class consisted of 57 student teachers (50 female and 7 male), aged between 22 and 40. Given the class's size, individual student introductions proved logistically challenging. *Story by Memes* provided an innovative and creative solution and, as an introductory activity, it also allowed student teachers to express their evolving identities as language learners and prospective language educators. This creative manifestation was achieved by incorporating memes within a digital multimodal composition, offering a unique and interactive platform for identity representation in a large class setting.

The lesson plan and sequence of activities below were specifically designed to suit this context, and one student's story is highlighted as an illustrative example. For the completion of the activity, students were

encouraged to use their own phones and laptops for content creation, including the creation of memes for which they used free meme generators found online such as https://imgflip.com/memegenerator or https://www.memegenerator.es/crear. This active use of technology also extended to video editing, which was a key aspect of the course. To facilitate this, students were recommended to utilise free or university-provided software such as Canva or PowerPoint for their projects due to their user-friendly interfaces, but were free to use any suitable alternative, such as Adobe Express, Genially, or iMovie. This allows for flexibility depending on diverse instructional contexts and the students' comfort and familiarity with different digital tools, underscoring the adaptability of the lesson plan to various technological contexts.

Sequence of Activities

The *Story by Memes* project requires students to produce a three- to five-minute video-narrated story, aided by memes in which they present their selves as language learners and prospective language teachers. Prior editions were less sophisticated and did not include opportunities for metacognitive reflection, as seen in steps 7 and 8. Here is an overview of the steps for the execution of *Story by Memes*:

The steps included in *Story by Memes* are categorised based on the week and location of their execution (Table 12.1): *in class* or *at home*. Based on

Table 12.1 Step-by-step overview of *Story by Memes*

Week	Step	Location
1	**Step 1.** *Introduction of learning outcomes and modelling* **Step 2.** *Brainstorm* **Step 3.** *Organise ideas and create memes* **Step 4.** *Elaborate on each idea-meme dyad and compose script*	In class
1–2	**Step 5.** *Revise script and practice for narration* **Step 6.** *Compose a visual slide-like presentation with memes and video-record narration*	At home
3	**Step 7.** *Debrief and reflect*	In class
10	**Step 8.** *Revise story after ten weeks of English teacher training course*	

course dynamics, instructional context, and student characteristics, *Story by Memes* could also inspire extracurricular and extramural activities for a richer learning experience. A description of each step follows:

First Week: In-Class Activities

Step 1. *Introduction of learning outcomes and modelling*. Step 1 outlines the objectives of *Story by Memes* and underscores the relevance of storytelling in language education and real-life communication. Learning outcomes are to (1) create a storyline that reflects current and future ideas of self, (2) create memes that are self-references to mundane activities and wishes, (3) analyse and consider the value of storytelling as a key component for language teachers and language learners, (4) become acquainted with contemporary communication and discourse genres (video creation, memes, etc.) and examine their potential for language learning and teaching, and (5) develop a sense of self-worth as both past and current language learners and future language teachers. Supplementary to the explicit formulation of learning outcomes, we included an introductory note on the worth of storytelling for language learning and communication.

Due to their wide and pervasive usage, memes may be familiar to most internet users. In our context, the concept of memes required little onboarding. We showcased some teacher-generated memes as potential storytelling drivers. However, a more rigorous instructional phase may be required in other contexts based on students' levels of meme literacy. Instruction would aim to acclimatise participants to various pragmatic conventions of meme literacy, such as substrata for inspiration, communicative purpose, humour appropriateness, and so on. The experience of the second author highlights that the onboarding process in Japan required clarifying individual memes, commonly understood by English speakers, which illustrates that meme literacy differs considerably based on sociocultural context. Institutional policies and expectations also may influence the applicability of meme-based tasks in certain instructional environments, where the use of memes for language instruction is seen as inappropriate.

Step 2. *Brainstorm*. Step 2 encourages critical reflection on learning journeys and digital technologies' role in education, using prompts. The aim is to understand how student teachers see themselves as language learners, project themselves as prospective language teachers, and perceive digital technologies in language teaching and learning. We provide a digital technology definition for clarity. The prompts are: "What type of language learner have I been? How was my language learning process? What type of language teacher do I wish to become? What do you think about digital technologies in language learning and teaching?" Students are encouraged to sketch as many ideas as possible in whatever language they feel comfortable with at this stage: English or any of their L1.

Step 3. *Organise ideas and create memes*. This phase encourages creativity through organising ideas and creating memes using readily available online resources. Students organise their brainstormed ideas, trying to envision how they will tell their stories, and create a storyboard into which they insert their ideas in a sequence of their choice. For each idea they create a meme that directly or indirectly reflects that idea using the meme generators identified in Contexts and Materials. Each generated meme is then inserted into the storyboard, for a graphic draft layout of the story (Fig. 12.1).

Step 4. *Elaborate on each idea-meme dyad and compose script*. Students delve into their personal experiences, refining their ideas into narrative scripts for a more engaging learning experience. They further expand on each idea-meme pair, drafting their narratives in English. Changes made to ideas, their organisation, or associated memes are accounted for. Here

	1	2	3	4	5	6
Meme	[Insert your meme]	[Insert your meme]	[Insert your meme]	[Insert your meme]	[Insert your meme]	[Insert your meme]
Idea	[Write your idea]	[Write your idea]	[Write your idea]	[Write your idea]	[Write your idea]	[Write your idea]

Fig. 12.1 Storyboard connecting underlying ideas and corresponding meme

is an example of how Sergio,[1] one of the students who participated in 2023, transferred his initial ideas of how he was able to learn more English through social interaction online rather than attending class in his English Language and Literature degree.

In Fig. 12.2, the student draws on his initial idea on the role of online social interaction in language learning, in addition to describing his affinity and vocational identities as a gamer and a "language nerd." After reading the script and watching the final video, we can conclude that the meme is utilised as a tool to supplement the meaning and illocutionary force of the propositional act, "I also play competitive videogames, although I'm really bad at it." The meme displays a dichotomy between "learning polite English" depicted by a well-kept castle in a sunny setting, in reference to the standard and formal varieties of English predominantly discussed in English Language and Literature university studies in Spain, and "learning insults in matchmaking," depicted by a run-down castle in a gloomy setting, in reference to the multiplicity of varieties

Initial idea, organisation, and meme orchestration **(Step 2)**

	Idea	Meme
1	I have learnt more English talking to my teammates online than paying attention to class.	

Draft of script **(Step 3)**

Idea/ meme	Text to be narrated
1	HANDSOME! RICH! SUCCESSFUL! THOSE WORDS DESCRIBE HUGH JACKMAN, BUT I'M JUST SERGIO, A LANGUAGE NERD THAT SPENDS MORE TIME LEARNING ABOUT FUN FACTS THAN ACTUAL RELEVANT CONTENT. WANT TO KNOW ME BETTER? I HAVE SEVERAL HOBBIES APART FROM LANGUAGES. FOR INSTANCE, I LOVE PHOTOGRAPHY AND MUSEUMS, I EVEN CONSIDERED BECOMING A WAR PHOTOGRAPHER AT SOME POINT! I THINK I HAVE WATCHED "THE OFFICE" AT LEAST 5 FIMES, IT'S GETTING OUT OF CONTROL. I ALSO PLAY COMPETITIVE VIDEOGAMES, ALTHOUGH I'M REALLY BAD AT IT.

Fig. 12.2 Sergio's dynamic textualisation from idea to meme to script

[1] Consent was sought to use the student's story as an example in this chapter. The student requested that his name be disclosed in the chapter together with his Twitter handle. See Acknowledgements.

(dialectal, sociolectal, etc.) often encountered in multiple phases of online competitive gaming. This dichotomy serves as a subtle critique of traditional language-related university studies and highlights the potential for gaming and online interactions to provide opportunities to deal with real-life communication and non-standard varieties of English, which are relevant and often disregarded in English language education. This example highlights the potential of *Story by Memes* for students to demonstrate a diverse range of engagement and pragmalinguistic competence using memes and script in a multimodal composition, with direct or indirect relations in the idea-meme dyads present in the story.

First Week: At-Home Activities

Step 5. *Revise script and practice for narration*. With one week to conclude their task, students complete steps 5, 6, and 7. Steps 5 and 6 are executed as at-home activities, which allow for independent script refinement and the creation of multimodal presentations, with provided resources aiding the process. Students collate their scripts and revise the text with two purposes: listener comprehension and ease of pronunciation. They are given two resources for the revision before narration practice: a Flesch Kincaid calculator[2] and a Voiceover Estimate calculator.[3] After the final text is revised for readability and voiceover estimation, students are asked to practise narrating the text until they feel sufficiently comfortable to record it.

Step 6. *Compose a visual slide-like presentation with memes and video-record narration*. Students create a visual slide-like presentation with the memes and video-record presenting the slides and narrating their stories. They have the freedom to design transitions, provided that they present the meme-idea pairs and their script. For example, to finalise his first idea-meme pair in Fig. 12.2, Sergio used seven multimodal discourse moves in his final composition:

[2] See https://goodcalculators.com/flesch-kincaid-calculator/.

[3] See https://www.thevoicerealm.com/count-script.php.

Among other strategies, at a multimodal discourse level, the coherent orchestration of the seven discourse moves connecting script, narrated text, written text on screen (moves 1, 4, 5, 6, 7), image in the form of pictures (moves 2, 3), and the requested meme (move 7) produces a skilful presentation of self. At a verbal discourse level, Sergio uses self-deprecating humour that deftly reinforces and references with multimodal devices in moves 1, 2, and 3. At a meta-referential level, Sergio manages to capture visual and verbal explicatures and implicatures (Yus, 2018) to subtly critique his past training as an English philologist and praise his past and ongoing language learning experiences in the competitive gaming sphere while tapping into his fan identities (move 7, meme 1). We can capture the connotative quality of Sergio's meme because of the emphasis *Story by Memes* places on making the cognitive-creative process explicit (Fig. 12.2). In essence, the activity provides opportunities for multilayered discourse and pragmatic performance, which are especially relevant to advanced language learners. For lower-level learners, we believe that multimodal orchestration may serve to provide reference points of scaffolding and remedy strategies for improved output. Future interventions and research could explore these potentials.

Third Week: Reprise in Class After At-Home Activities

Step 7. *Debrief and reflect*. Upon completion of the activity, students engage in a debriefing process that allows for metacognitive reflection. This includes answering a survey in their L1, including questions such as how students perceive the promotion of various language development levels through multimodal composition tasks, and the potential adaptability of the activity to other contexts and proficiency levels, such as their own future teaching contexts. Students also consider how the use of memes in the activity and overall process helped them to use authentic English creatively, rather than a superficial, enunciative use of the language. In Sergio's words, he states that it is "less artificial than writing a composition where you superficially narrate an anecdote using connecting devices from a list" (our translation).

The teacher collects the students' stories and selects a few for group discussion in class after one week of independent work. In that reprise in class, the teacher and students celebrate peer success and address any noteworthy issues that arose from the video-narrated stories. For example, when discussing Sergio's story, the group discussed the implications of his choice to display a slide with the word "philologist" (a word he identifies with), accompanied by four flags (Australia, Canada, UK, and USA). This multimodal choice opens discussions on issues such as global versus Anglocentric English language instruction, English as a lingua franca, or translanguaging as philosophical and methodological choices in language education.

Tenth Week: Final Reprise Before Course End

Step 8. *Revise story after ten weeks of the English teacher training course*. Ten weeks into the course, *Story by Memes* concludes alongside the course with students reassessing their initial stories and charting their development, symbolised creatively through the use of a new meme. Students revise the story they had originally created and reflect on it. They create a brief report on how they think they have changed throughout the course, based on the preliminary information they included in their stories, and choose a meme as a potential continuation for their stories and professional trajectories as language learners and teachers.

Reflection

Story by Memes is underpinned by fan and ludic practices and multimodal discourse. It is first and foremost a digital multimodal composition task that uses meme creation to visualise a storyline of the self humorously. Tasks such as *Story by Memes* are relevant in general for English teacher training courses and English teaching. In English teacher training courses, these tasks allow for the explicit but welcoming representation of the multifaceted identities student teachers bring with them (Figs. 12.2 and 12.3). In English teaching courses, these tasks connect well with online

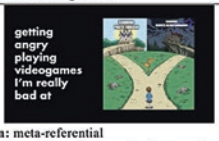
Move (seconds)	Multimodal choices	Script
1 (00:00-00:04)	 **Function:** reinforcing verbal stress	HANDSOME! RICH! SUCCESSFUL! THOSE WORDS DESCRIBE
2 (00:05-00:06)	 **Function:** other-referential	HUGH JACKMAN, BUT I'M JUST SERGIO
3 (00:06-00:14)	 **Function:** self-referential	A LANGUAGE NERD THAT SPENDS MORE TIME LEARNING ABOUT FUN FACTS THAN ACTUAL RELEVANT CONTENT. WANT TO KNOW ME BETTER?
4 (00:15-00:18)	 **Function:** intratextual deixis, additional signposting	I HAVE SEVERAL HOBBIES APART FROM LANGUAGES. FOR INSTANCE
5 (00:19-00:24)	 **Function:** paratextual deixis, multi-referential	I LOVE PHOTOGRAPHY AND MUSEUMS, I EVEN CONSIDERED BECOMING A WAR PHOTOGRAPHER AT SOME POINT!
6 (00:25-00:30)	 **Function:** reinforcing humor	I THINK I HAVE WATCHED "THE OFFICE" AT LEAST 5 FIMES [sic], IT'S GETTING OUT OF CONTROL.
7 (00:31-00:34) **Meme 1**	 **Function:** meta-referential *visual and verbal explicatures* (online gaming provides opportunities to learn non-standard varieties of English) *visual implicatures* (university-based studies offer more limited linguistic experiences than online practices like gaming)	I ALSO PLAY COMPETITIVE VIDEOGAMES, ALTHOUGH I'M REALLY BAD AT IT.

Fig. 12.3 Sergio's multimodal orchestration to support his first idea-meme dyad in the script

discourse practices in the form of new and digital literacies (Darvin & Hafner, 2022). Such literacy practices, including meme literacy, will most likely resonate with the informal types of communication most (young) adults and teenagers are familiar with and use for diverse purposes. It also is a robust example of the *bridging activities* pedagogical approach (Thorne & Reinhardt, 2013), which aspires to connect informal literacies and language practices with formal language education in an effort to "rewild" language education (Thorne et al., 2021).

Story by Memes can be used at any time in a course. The activity has allowed for the creation of positive first impressions between students and the teacher, as well as among students. Through creating, sharing, celebrating, and debating the stories, students are given the opportunity to see their peers in a different light and to empathise with peers' fears, hopes, and dreams. Additionally, students can engage in a technology-enhanced writing/composition activity that encourages dynamic, recursive, and significant reflection. The step-by-step process presented here can be easily replicated or adapted into other EFL teacher training courses, adapted to language teaching across multiple levels of competence, or adjusted to other languages.

We are aware that *Story by Memes* is not the first successful attempt at incorporating digital multimodal composition stories in language education. However, its value lies in how it interweaves the fan knowledge of younger generations, their (meta)languages used for ludic and playful purposes, and, at its core, the identities as language learners—and in our case as prospective language teachers—of those involved in the activity.

We hope that the pedagogical orientation of the proposal will inspire educators to take a creative and engaging approach to language education, and to utilise the power of digital multimodal composition stories to create memorable and meaningful learning experiences for their students.

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References

Anderson, D. M., Mcguire, F. A., & Cory, L. (2011). The first day: it happens only once. *Teaching in Higher Education, 16*(3), 293–303. https://doi.org/10.1080/13562517.2010.546526

Darvin, R., & Hafner, C. A. (2022). Digital literacies in TESOL: Mapping out the Terrain. *TESOL Quarterly, 56*(3), 865–882. https://doi.org/10.1002/tesq.3161

Han, Y., & Smith, B. E. (2023). An ecological perspective on the use of memes for language learning. *Language Learning & Technology, 27*(2), 155–175. https://hdl.handle.net/10125/73507

Knobel, M., & Lankshear, C. (2014). Studying new literacies. *Journal of Adolescent & Adult Literacy, 58*(2), 97–101. https://doi.org/10.1002/jaal.314

Lightner, J. (2017). *Preparing to teach – First day of class*. https://www.kent.edu/ctl/first-day-class

Sauro, S. (2019). Fan fiction and informal language learning. In M. Dressman & R. W. Sadler (Eds.), *The handbook of informal language learning* (pp. 139–151). Wiley-Blackwell.

Thorne, S. L., Hellermann, J., & Jakonen, T. (2021). Rewilding language education: Emergent assemblages and entangled actions. *Modern Language Journal, 105*, 106–125. https://doi.org/10.1111/modl.12687

Thorne, S. L., & Reinhardt, J. (2013). "Bridging Activities," new media literacies, and advanced foreign language proficiency. *CALICO Journal, 25*(3), 558–572. https://doi.org/10.1558/cj.v25i3.558-572

York, J., Poole, F. J., & de Haan, J. W. (2021). Playing a new game – An argument for a teacher-focused field around games and play in language education. *Foreign Language Annals, October 2020*. https://doi.org/10.1111/flan.12585

Yus, F. (2018). Identity-related issues in meme communication. *Internet Pragmatics, 1*(1), 113–133. https://doi.org/10.1075/ip.00006.yus

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13

Teach Less, Learn More: Empowering Pre-service Language Teachers with Technology-Enhanced Microteaching

Junjie Gavin Wu and Kean Wah Lee

Issue

William (pseudonym) received his doctoral degree from a top-notch British university. He has instructed a variety of TESOL courses at public and international universities in Malaysia for more than 20 years. For the past several decades, William has been a passionate university teacher, providing training to numerous pre-service and in-service language teachers in Southeast Asian countries by conducting seminars, workshops, and conferences. In the meantime, as a teacher educator he

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researched his students' perceptions, needs, and experiences regarding the problems and refinement of teacher training courses.

Based on his extensive teacher training experience, William reflected on some major obstacles of current language teacher education in his classes. First, *how might teacher educators bridge the gap between theory and practice for pre-service teachers?* The pre-service teachers in his classes often find second language acquisition (SLA) theories and pedagogical approaches difficult to understand and use in their future teaching. One of William's former students commented that although she could understand the basics of SLA, she had never understood how she could transform theoretical knowledge into practical knowledge when designing learning activities. Similar concerns were expressed by other pre-service teachers based on William's past teaching experiences.

Second, *how can a teacher education programme improve training based on the latest developments in language learning?* Language learning is experiencing a multilingual, multimodal, and multisensory turn, largely due to the advancement of technologies (Wu et al., 2021). Meanwhile, thanks to various initiatives from the government, a great number of Malaysian schools are now smart schools, equipped with modern technological equipment. However, the effective use of technology in language learning has often been overlooked in teacher education courses, in which pre-service language teachers are often lacking in sufficient knowledge and expertise to seamlessly integrate technology into their future teaching.

To improve the quality of teacher training, William decided to make fundamental changes to his course. First, William adopted the 'teach less and learn more' (TLLM) principle in guiding the design of his training (Ministry of Education, 2005). Rather than having himself monopolise the lessons throughout the semester, William followed the TLLM principle so that pre-service teachers would be guaranteed more time for learning, teaching, and reflecting on their teaching practices. To realize this goal, he made use of the 'reflection in microteaching approach' to provide more opportunities for pre-service teachers to reflect on their teaching via the use of evidence (video recordings and a teaching evaluation checklist—see Appendix A) to make informed decisions about their teaching. William also attempted to include the use of technology in student assignments by asking the students to explore utilising

normalized technologies (Bax, 2011), i.e., without being consciously aware of the role those technologies played in their teaching, but to reflect on their use in teaching.

Theory

Returning from his doctoral study, William attended a teacher education conference in Singapore in 2006, during which he encountered the concept of TLLM, a movement instigated by the Ministry of Education Singapore and "aimed at improving the quality of teaching in the classroom, to make learning engaging, enjoyable and meaningful for the student" (Ministry of Education, 2005, p. 2). The core philosophy of TLLM was built on a foundation that posited that instead of solely using teaching skills to help students pass various examinations, teachers should invest more effort in contemplating and creating effective learning environments to support learner autonomy. In other words, passive learners should become engaged learners and teachers would need to re-think the meaning of education by offering a socio-constructive way of learning and teaching in the direction of lifelong learning (Teo et al., 2013).

Guided by the idea of TLLM, William decided to transform his TESOL course by reducing the number of lectures and instead engaging pre-service teachers in improving their teaching competencies and their technological, pedagogical, and content knowledge (TPACK). Microteaching was thus adopted in his course to encourage pre-service teachers to 'learn by teaching' in a series of methodology topics presented throughout the semester. By doing so, this approach demonstrates the benefits of reducing the pre-service teachers' level of anxiety while increasing confidence, as well as bridging theory and practice, allowing them to reflect on and refine their practices and deepen their understanding of the art of language teaching (Fernandez, 2010). According to Remesh (2013), microteaching usually consists of three phases, including knowledge acquisition, skill acquisition, and knowledge and skill transfer. In the first phase, pre-service teachers receive training regarding theories, methods, and principles of learning and teaching. This is to arm pre-service teachers with the theoretical background needed to make informed decisions

later in their own teaching practices. In the second phase, pre-service teachers attempt to make plans for their microlessons, conduct microteaching, and evaluate and receive feedback on microteaching. The final phase is usually marked with the application and transfer of knowledge and skills acquired in microteaching in actual classroom teaching.

Due to an insufficient level of overall digital literacy among Malaysian language teachers (see a discussion in James & Lee, 2021), William also attempted to incorporate technology into microteaching. Teachers' digital literacies have been much neglected, thus, it also was important to develop teachers' technological competencies to organize teaching around technology (Lee & Wu, 2023; Miller & Wu, 2022). In their most recent book, Pegrum et al. (2022) proposed a framework of digital literacies, which imparts great value to teacher training programmes. It entails four dimensions of digital literacies, including communicating, informing, collaborating, and designing. Put simply, the framework invites learners, teachers, and teacher educators to utilize technology not only for the purpose of replacing hardcopy textbooks, but it also informs how learning can happen in a more social, critical, multimodal, safe, and ethical way. Bearing this framework in mind, William also tried to cultivate pre-service language teachers' digital literacies by asking students to co-produce videos, having pre-service teachers conduct microteaching with the assistance of technology, and making use of learning management systems.

Materials

The class uses lecture delivery systems such as Moodle with school Wi-Fi and landline connections, as well as an Echo360 lecture capture system and speakers, with access to the complete Microsoft suite software. However, students typically bring their own digital devices to class. For projects, students make use of free video and audio editing software (e.g., Vimeo), Microsoft Forms, Teams, OneDrive, Sway, and One Note due to their simple, interactive, and cost-effective features that enable the integration of multiple modes of delivery.

Sequence of Activities

Extracurricular Activities

Based on the course design, William included the following steps to arrange his training for pre-service language teachers.

1. Pre-service language teachers worked in groups and produced videos to introduce a specific pedagogical approach. Based on the adopted textbook, *Approaches and Methods in Language Teaching*, by Richards and Rodgers (2014), each group is randomly provided with one teaching approach or method (Chapters 5–13, pp. 81–258). In addition to reading the assigned topic from the textbook, pre-service teachers were encouraged to also refer to other reading materials, whether in a library or on the Internet, in order to produce an introductory video of approximately ten minutes in length on a topic. At this stage, the pre-service teachers were learning and increasing their knowledge about language education.
2. In the next stage, William attempted to invite pre-service teachers to consider how learning theories, technologies, and pedagogies can be put into use. Based on the self-made videos, each group worked on a lesson plan by using the approach shown in the video. For example, one group prepared a lesson by referring to the communicative language teaching approach, which they introduced in their own video. This was a way for pre-service teachers to begin brainstorming different ways to transfer theory into practice.
3. The third stage involved pre-service teachers implementing their lesson plans, i.e., putting theory into teaching practice. Each group of pre-service teachers conducted microteaching in class based on their lesson plans, each of which focused on an assigned topic. Before in-class teaching, each group would hold a pre-conference with William to fine-tune its microteaching implementation to ensure its lesson plan was constructively aligned with its instructional strategies, based on the Sheltered Instruction Observation Protocol (SIOP) model evaluation checklist (Vogt et al., 2010). Specifically, SIOP is a

research-based instructional framework that teachers can use when planning, teaching, and reflecting upon their lessons. Thereafter, the pre-service teacher implemented the lesson plan via microteaching. The microteaching session was video-recorded and later uploaded to the learning management system (LMS) for peer assessment and comments.

4. Peer evaluations of microteaching practices were carried out in the LMS by watching the recordings. Every group was required to peer-evaluate one other group using the SIOP model checklist. This was an essential stage for pre-service teachers to objectively analyze and evaluate 'effective' and 'not so effective' teaching lessons by improving their metacognitive awareness and skills related to teaching. They were encouraged to carry out appraisals of their classmates' microteaching based on the criteria listed in the SIOP model checklist (https://public.wsu.edu/~egbert/413/SIOPChecklist.htm), and to provide constructive suggestions.
5. Each group reflected on its own microteaching by discussing its strengths and areas of weaknesses for improvement. To support pre-service teachers in systematically dissecting their microteaching, Williams required them to analyse and reflect on their own teaching by writing reflective journals. Adopting the theoretical lens of Vygotsky's Socio-Cultural learning (1978) and Engestrőm's Activity theory (1987), the pre-service teachers carried out a detailed analysis of their own teaching behaviours and moments.
6. Through the practice of conducting critical reflections, the pre-service teachers honed their skills and competencies in preparation for their final year of a teaching practicum in Malaysian schools. After the abovementioned stages, the pre-service teachers were afforded opportunities to implement teaching in local schools.

Extramural Activities

As previously mentioned, William's course design was significantly impacted by TLLM; therefore, it was valuable to understand how his pre-service students applied their pedagogical knowledge and skills beyond

the course. Here, the authors offer three examples to showcase how technology-enhanced microteaching empowers students in their future teaching.

Tanya, a 22-year-old Year 3 student of the BEd in TESOL programme, reflected on her initial challenge to break down difficult tasks for her students. Through her involvement in some voluntary summer internship programmes with local schools, she has always been aware of the importance of breaking down units of learning into smaller 'digestible' chunks for her students. She was initially unclear about how she could do that, as this principle was "very abstract and theoretical." Yet, by participating in microteaching, she believed that her teaching skills improved mainly due to having the opportunity to co-design the lesson with her teammates, practice teaching in a safe environment, and receive targeted suggestions from her lecturer and her peers. During this process she also developed her content knowledge and pedagogical skills by using relevant technological tools. She remarked that the effective use of technology improved her autonomy and engagement in microteaching, although it was challenging for novice teachers such as herself to fully utilize the technological tools. Despite this challenge, Tanya shared that she made use of what she had learned from William's course by incorporating mainstream technologies into her lessons.

Sue, a 21-year-old Year 3 student of the BEd in TESOL programme, discussed the application of authenticity, reflections, and peer feedback in how she taught the principles of debate to her Malaysian students. By developing authentic learning tasks, Sue caused her students to reflect on the gains and shortcomings inherent in their learning. She argued that she learned about the importance of authenticity and reflections when she took a TESOL course, in combination with her microteaching experience, both of which contributed to her development of developing a pedagogical repertoire. In addition, her students were required to provide constructive feedback to their peers through technological platforms. She reflected on how the use of technology enhanced the efficiency of learning via microteaching, and thus she became more willing to use technology to improve the learning and teaching process.

Interestingly, **Fran**, a 21-year-old classmate of Tanya and Sue, offered a case about how she transformed the language teaching skills acquired in

class into other fields. Fran was a lead singer in her music society; however, her clubmates usually depended on her to "demonstrat[ing] the song, listen[ing] to them repeat the phrases, and point[ing] out mistakes individually." This was troubling for Fran, as she said she found it extremely difficult and exhausting to offer such detailed and customized guidance to each singer. Yet, based on the experiences gained being involved in microteaching in William's course, she became more aware of the principles, the benefits of TLLM, and the technological tools she used in her learning. She applied the TLLM principle with her teammates during microteaching by encouraging the singers to shoulder more responsibility in practising, monitoring, and guiding fellow singers' performances by using her mobile phone to create a video recording of the core features of good singing. She reflected that it was more effective in "building their independence and relying less on me to provide step-by-step instruction." Fran used technology, coupled with the principles of TLLM in her coaching of fellow music clubmates, to be more analytical in developing their sense of autonomy. This showed how the course had contributed to the development of her personal practical knowledge, as she had developed greater awareness in eclectically discerning how to best combine content with pedagogical and technological knowledge to develop learner autonomy while also realising how the learning process occurs.

Reflection

The present chapter demonstrates how William designed his teacher education course in order to empower pre-service language teachers to understand how to use technology-enhanced microteaching. Based on the reflections collected from pre-service students, two major themes emerge.

First, microteaching supports pre-service language teachers in bridging theory and practice and transferring skills into future teaching. According to students' reflections, when self-studying the textbook they experienced obstacles in putting to use theoretical knowledge in their future teaching.

Due to the lack of contextualized teaching practice, the instruction of pedagogical knowledge alone seemed insufficient for improving pre-service teachers' teaching expertise. Microteaching, as an experiential approach, provided contexts for pre-service teachers who participated in this study to actively take part in teacher training, seriously contemplate the relationship between theory and practice, and critically reflect on teaching practices (Fernandez, 2010). Moreover, in line with Remesh (2013), the students reported that their self-efficacy in teaching was improved through microteaching, as they were given opportunities to hone different teaching skills. Furthermore, students discussed how microteaching enabled them to transfer some skills to other aspects of living. For example, Fran, an abovementioned student, shared her story of applying pedagogical and technological skills to her management of a choir. This indeed offered some preliminary evidence of the development of lifelong learning, whereby teachers were able to make judgements and apply skills and knowledge to effectively achieve goals.

Second, by incorporating technology into microteaching, students demonstrated advanced levels of digital literacy. William made use of some technological tools to support his students in conducting and assessing microteaching. Students reflected that William's use of technology in teaching demonstrated some effective teaching methods they could follow. Thus, they also tried to leverage the technology they had in order to benefit their students. According to William, lessons designed by the pre-service teachers in this study mirrored the advanced levels of Pegrum et al.'s (2022) framework. That is, they did not use the technology to simply replace the textbook, but instead brainstormed innovative ways to incorporate different technologies into their microteaching, and these tools were appropriately used to support collaborative, authentic, and immersive learning. However, lacking access to new technologies, such as virtual reality, most of the pre-service language teachers did not consider using them in their teaching. Apparently, more serious attention should be paid to supporting future language teachers in capitalizing on the affordances of diverse new technologies (Wu et al., 2023).

Appendix A

SIOP model checklist for peer evaluation of microteaching[a]

	Evident		Evident		Evident	NA
Preparation	4	3	2	1	0	
1. Content objectives clearly defined, displayed, and reviewed with students	☐	☐	☐	☐	☐	☐
2. Language objectives clearly defined, displayed, and reviewed with students	☐	☐	☐	☐	☐	☐
3. Content concepts appropriate for age and educational background level of students	☐	☐	☐	☐	☐	☐
4. **Supplementary materials** used to a high degree, making the lesson clear and meaningful (e.g. computer programs, graphs, models, visuals)	☐	☐	☐	☐	☐	☐
5. **Adaptation of content** (e.g. text, assignment) to all levels of student proficiency	☐	☐	☐	☐	☐	☐
6. Meaningful activities that integrate lesson concepts (e.g. interviews, letter writing, simulations, models) with language practice opportunities for reading, writing, listening, and/or speaking	☐	☐	☐	☐	☐	☐
Comments						
Building background						
7. **Concepts explicitly linked** to students' background experiences	☐	☐	☐	☐	☐	☐
8. **Links explicitly made** between past learning and new concepts	☐	☐	☐	☐	☐	☐
9. Key vocabulary emphasised (e.g. introduced, written, repeated, and highlighted for students to see)	☐	☐	☐	☐	☐	☐
Comments						
Comprehensible input						
10. **Speech** appropriate for students' proficiency level (e.g. slower rate, enunciation, and simple sentence structure for beginners)	☐	☐	☐	☐	☐	☐
11. **Clear explanations** of academic tasks	☐	☐	☐	☐	☐	☐

(*continued*)

(continued)

	Evident		Evident		Evident	NA
Preparation	4	3	2	1	0	
12. A variety of techniques used to make **content concepts clear** (e.g. modelling, visuals, hands-on activities, demonstrations, gestures, body language)	☐	☐	☐	☐	☐	☐
Comments						
Strategies						
13. Ample opportunities for students to use **learning strategies**	☐	☐	☐	☐	☐	☐
14. **Scaffolding techniques** consistently used, assisting and supporting student understanding (e.g. think-alouds)	☐	☐	☐	☐	☐	☐
15. A variety of questions or tasks that promotes **higher-order thinking** skills (e.g. literal, analytical, and interpretive questions)	☐	☐	☐	☐	☐	☐
Comments						
16. Frequent opportunities for **interactions** and discussion between teacher/student and among students, which encourage elaborated responses about lesson concepts	☐	☐	☐	☐	☐	☐
17. **Grouping configurations** support language and content objectives of the lesson	☐	☐	☐	☐	☐	☐
18. Sufficient **wait time for student response** consistently provided	☐	☐	☐	☐	☐	☐
19. Ample opportunities for students to **clarify key concepts in L1** as needed with aide, peer, or L1 text	☐	☐	☐	☐	☐	☐
Comments						
Practice/application						
20. **Hands-on materials and/or manipulatives** provided for students to practise using new content knowledge	☐	☐	☐	☐	☐	☐
21. Activities provided for students to **apply content and language knowledge** in the classroom	☐	☐	☐	☐	☐	☐

(*continued*)

(continued)

	Evident		Evident		Evident	NA
Preparation	4	3	2	1	0	
22. Activities integrate all **language skills** (i.e. reading, writing, listening, and speaking)	☐	☐	☐	☐	☐	☐
Comments						
Lesson delivery						
23. **Content objectives** clearly supported by lesson delivery	☐	☐	☐	☐	☐	☐
24. **Language objectives** clearly supported by lesson delivery	☐	☐	☐	☐	☐	☐
25. **Students engaged** approximately 90–100% of the period	☐	☐	☐	☐	☐	☐
26. **Pacing** of the lesson appropriate to the students' ability level	☐	☐	☐	☐	☐	☐
Comments						
Review/assessment						
27. Comprehensive review of **key vocabulary**	☐	☐	☐	☐	☐	☐
28. Comprehensive review of **key content concepts**	☐	☐	☐	☐	☐	☐
29. Regular **feedback provided** to students on their output (e.g. language, content, work)	☐	☐	☐	☐	☐	☐
30. **Assessment of student comprehension** and learning of all lesson objectives (e.g. spot checking, group response) throughout the lesson	☐	☐	☐	☐	☐	☐
Comments						

[a]Echevarría, J., Vogt, M., & Short, D. (2017). Making content comprehensible for English learners: The SIOP Model. Pearson

References

Bax, S. (2011). Normalisation revisited: The effective use of technology in language education. *International Journal of Computer-Assisted Language Learning and Teaching, 1*(2), 1–15.

Engeström, Y. (1987). *Learning by expanding: An activity theoretical approach to developmental research*. Orienta-Konsultit.

Fernandez, M. L. (2010). Investigating how and what prospective teachers learn through microteaching lesson study. *Teaching and Teacher Education, 26*(2), 351–362.

James, C. C., & Lee, K. W. (2021). Narrative inquiry into teacher identity, context, andtechnology integration in low-resource ESL classrooms. In L. Miller & G. J. Wu (Eds.), *Language learning with technology: Perspectives from Asia* (pp. 65–76). Springer.

Lee, S. M., & Wu, J. G. (2023). Teaching with immersive virtual reality: Perceptions of Korean trainee teachers. *International Journal of Computer-Assisted Language Learning and Teaching, 13*(1), 1–14. https://doi.org/10.4018/IJCALLT.334362

Miller, L., & Wu, G. J. (2022). Reacting, re-learning, and reflecting on sudden pedagogical adaptations. In J. Pun, S. Curle, & Y. Dogan (Eds.), *The use of technology in English medium education* (pp. 145–158). Springer.

Ministry of Education. (2005). *Engaging our learners: Teach less, learn more*. Singapore Ministry of Education.

Pegrum, M., Hockly, N., & Dudeney, G. (2022). *Digital literacies*. Routledge.

Remesh, A. (2013). Microteaching, an efficient technique for learning effective teaching. *Journal of Research in Medical Sciences, 18*(2), 158–163.

Richards, J. C., & Rodgers, T. S. (2014). *Approaches and methods in language teaching*. Cambridge University Press.

Teo, J. E., Deng, Z., Lee, C., & Lim-Ratnam, C. (2013). Teach less, learn more: Lost in translation. In Z. Deng & S. Gopinathan (Eds.), *Globalisation and the Singapore curriculum: From policy to classroom* (pp. 99–117). Springer.

Vogt, M. E., Echevarría, J., & Short, D. (2010). *The SIOP model for teaching English-language arts to English learners*. Pearson.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Wu, J. G., Miller, L., Huang, Q., & Wang, M. (2021). Learning with immersive virtual reality: An exploratory study of Chinese college nursing students. *RELC Journal*. https://doi.org/10.1177/00336882211044860

Wu, J. G., Zhang, D., & Lee, S. M. (2023). Into the brave new Metaverse: Envisaging future language teaching and learning. *IEEE Transactions on Learning Technologies*. https://doi.org/10.1109/TLT.2023.3259470

Part IV

Conclusion and Future Directions

14

Future Directions in English Language Teacher Education in a Changing World

Philip Hubbard

Introduction

This chapter concludes the volume by looking at future directions for English language teacher education and professional development. This consideration is important because we can no longer simply prepare teachers for the present and think that our job (and theirs) is done. The COVID-19 crisis taught that lesson. Technology has changed, is changing, and will continue to change the lives of language teachers and learners in unpredictable ways. Consider the following:

> The rise of Artificial Intelligence (AI) in language teaching is undeniable, with AI-powered language learning platforms providing personalized learning, real-time feedback, and accurate language assessment. However, the impact of AI on language teachers cannot be ignored.

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> On one hand, AI can free up language teachers from routine administrative tasks, such as grading papers and tracking student progress, allowing them to focus more on teaching and providing individualized support to their students. AI can also serve as a valuable tool for language teachers, providing them with data-driven insights into their students' learning patterns and areas of improvement.
>
> On the other hand, there is a concern that AI could replace language teachers entirely, leading to job losses and a lack of human interaction in language education. While AI can provide personalized learning and real-time feedback, it cannot yet replicate the social and emotional support that language teachers provide to their students. Language teachers have a unique ability to understand their students' individual needs and learning styles, and to provide a supportive learning environment that motivates students to learn and practice a new language.
>
> In my opinion, AI should be seen as a complementary tool to language teachers rather than a replacement. The integration of AI in language teaching can enhance the learning experience for students and provide valuable insights for language teachers, but it cannot replace the vital role that language teachers play in fostering a supportive and engaging learning environment. Therefore, it is important to strike a balance between the use of AI and the human touch in language teaching to provide a well-rounded language education.
>
> (ChatGPT, March 29, 2023, responding to the prompt, "Write a 200 word opinion piece on the impact of AI on language teachers." https://chat.openai.com/chat)

So, this is what an AI (ChatGPT) was thinking about AI and language teachers in March 2023–I have no idea what changes may come between then and when this book is published and eventually read by you (assuming you are not also an AI, having indeed replaced the language teacher). Whatever these changes may be, we can confidently predict that they will occur, so how do we—teachers, teacher educators, and language programme administrators—prepare for them? Most of this chapter is targeted at the first two groups, but programme administrators also have a significant role to play in ensuring that the requisite technical and pedagogical support and professional development opportunities are provided to in-service teachers at their institutions. The first section looks briefly at the history of educating teachers in using technology, revisiting a set of

challenges first noted in Hubbard (2008) that largely remain with us today. The next section discusses some current topics of interest in the field, including those presented in the current volume. The final section looks ahead, noting emerging challenges and offering five principles to help guide teachers and teacher educators as they face an unpredictable future.

Where We Have Been and Where We Are

Helping language teachers use technology has a long history. Early books by Kenning and Kenning (1983), Wyatt (1984), Ahmad et al. (1985), and numerous articles by others provided advice for practising teachers and teacher educators interested in exploring this realm. Special issues of journals on the topic of formal teacher education began appearing more than 20 years ago (Zhao & Tella, 2002), followed by dedicated edited volumes (Hubbard & Levy, 2006; Kassen et al., 2007). In 2015, *Language Learning & Technology* published a second special issue on technology and language teacher education. Professional organizations played a role as well: interest groups for technology in language teacher education were formed in CALICO (2008: see https://calico.org/sigs/teacher-education/) and EUROCALL (2009: https://www.eurocall-languages.org/sigs/call-teacher-education-sig-homepage). These groups continue to constitute communities of practice for teacher educators and sponsor symposia at their organizations' annual conferences. For in-service teachers seeking professional development opportunities, O'Dowd (2015) reported on the value of participation in a telecollaboration if one is available. Tai (2015) recommended an approach employing workshops in technological pedagogical content knowledge (TPACK) for language teachers.

The same year CALICO formed its teacher education group, I wrote about how computer-assisted language learning (CALL) would be an integral part of future language teaching (Hubbard, 2008). That paper noted a set of seven challenges facing the language teaching field at that time. I returned to those challenges recently in Hubbard (2023), finding that although significant progress has been made, we continue to face the same challenges, often in new forms, including:

- *Inertia*. Like objects in space, humans tend to follow the same paths they have before, especially if they have achieved some success with that path. In 2020, we saw how easy it was for external forces surrounding COVID-19 to knock language teachers and teacher educators off their familiar paths. Although we can hope that many learned useful lessons from that experience, inertia will continue to be a force influencing teachers—and teacher educators—in future decades. One way to break that inertia is through experiences that place teachers in the role of language learners using technology (Kolaitis et al., 2006). Another is to prepare teachers early in their education for expecting change and to become more competent and confident at facing it.
- *Ignorance*. Ignorance of available options and how to implement them is inevitable—no one can keep up with the pace of technology integration in language teaching. A more addressable form of ignorance is the assumption that the appropriate technology itself will do all the work. A bit of critical thinking and study of relevant literature shows that it is not the technology itself but how it is used that often distinguishes success from failure (see Murray & Barnes, 1998). A third form is to mandate well-meaning top-down curricula and policies at the institutional or government level that ignore the realities of local contexts (Moore et al., 2023).
- *Insufficient time*. It is already difficult to find the time in teacher education programmes to acquire the necessary background in theory, research, and methodology. Rather than including work on technology competence as an additional burden (or making it an elective course), perhaps teacher education curricula need to be completely revised from beginning to end to incorporate it.
- *Insufficient infrastructure*. We have made great strides in expanding technology access and reliability since 2008, but problems remain. Williams et al. (2021) reported on how equity issues surfaced dramatically during the COVID crisis. Programme administrators should ensure that adequate devices, applications, and network facilities are available to the teachers they are responsible for, and teachers must be aware of not only their own technology's possible limitations but also that of their students'.

- *Insufficient standards*. A major challenge in teacher education and professional development is having clear objectives, and these can be provided through technology standards. TESOL published such standards for language teachers and learners (TESOL, 2008), but they do not appear to have been widely implemented. Yet despite their age, they continue to be seen as useful in the absence of other dedicated language teaching standards (Sun, 2022). Teachers and teacher educators are thus encouraged to review them and adapt them as needed for their current contexts.
- *Lack of established methodology*. Although in 2008 this was a major challenge, the ensuing years have brought in a number of options that have proven useful for teacher education (Son, 2020; Son & Windeatt, 2017). It is increasingly accepted that more than lectures and demonstrations alone are needed.
- *Lack of experienced, knowledgeable teacher educators*. Teacher educators of today are much more likely to have taught languages and even learned them with technology than was the case 15 years ago. However, the COVID crisis made it clear that many language teachers were not prepared to teach online only. Training-for-trainers programmes like those described in Rickard et al. (2006) are still needed so that teacher educators can provide the necessary technology foundations to teacher candidates.

To set the stage for what teachers will need in the future, it is useful to explore the present. This volume is a good place to start because it includes a number of topics that are either already well-established or emerging at the time of this writing. A dominant one is that of game-based learning, which is a central theme of four chapters. Vazquez-Calvo and York (this volume) build on work in fan-based interaction, suggesting translation of video games as a language learning task that can be integrated into later classroom gameplay. Soyoof and Reynolds (this volume) explore how engaging in so-called serious games can enhance a learner's willingness to communicate. Sundqvist and Nilsson (this volume) investigate using commercial off-the-shelf games to support intentional vocabulary learning. Zou, Lee, and Zhang (this volume) discuss the use of digital role-playing games in supporting young EFL learners' vocabulary development.

The last two also tap into another common theme: vocabulary learning. Another chapter doing so is Drajati and Wijaya (this volume), covering the use of captioned TED-Ed talks for vocabulary development. Along with Sundqvist and Nilsson, it also involves the theme of moving outside the classroom into extracurricular or extramural learning.

Other areas covered include reading, writing, and speaking. Fathali (this volume) covers reading, showing how creating e-portfolios can enhance reading skills. For writing, Murphy Odo (this volume) discusses using machine translation and editing tools to improve written production. Xie and Jiang (this volume) report on the efficacy of video-making on getting students through writing tasks more autonomously. Three chapters target development of various speaking skills. Hamada (this volume) shows how pairing available technology applications with the "shadowing" technique can improve pronunciation. Wu and Lee (this volume) incorporate mobile-assisted peer-feedback to develop oral proficiency. Zadorozhnyy and Lee (this volume) discuss a project allowing Kazakh students to give online multimodal presentations in their field to peers from different disciplinary backgrounds, leading them to expand their English communication skills.

Finally, there is one chapter directly linked to teacher education rather than student language learning. Yu and Wang (this volume) report on a project demonstrating how to train teachers to design digital stories in a way that supports language learning and the students' well-being.

Beyond this volume and its set of examples that can inspire teachers, there are other recent sources useful to teacher educators and to teachers wishing to engage in informal professional development. Gillespie (2020) extracts the topics found in three top language learning and technology journals for a 10-year period. Besides many of the topics noted in this volume, he lists computer-mediated communication, working with corpora, natural language processing, design, Web 2.0 (e.g., social media), grammar, and feedback as among the most researched areas. Son (2020) proposes a "digital language teacher framework" that captures the process of teacher growth through beginning, intermediate, and expert stages. A recent volume edited by Kayi-Aydar and Reinhardt (2022) explores a range of contexts in which language teacher education takes place online and how that impacts the educational process. Pham (2023) looks at the

emerging area of language teacher identity and how in the post-COVID "new normal" there can be a clash between tradition and the novelty of technology.

How to Thrive in the Coming Decades

This section focuses on the role of formal language teacher education and deliberate professional development by teachers in providing the skills and knowledge necessary to support the language teacher of today and tomorrow. First, it notes several areas that teachers need greater awareness of than was the case in traditional language teaching scenarios. Then, it offers five principles to weave through formal training and professional development to give pre-service and in-service teachers a pathway to address the realities of language teaching with and through technology.

In the spring of 2020 we moved into a setting where in many places *all* education shifted from the classroom to online. In the future, it seems likely that online or at least blended language teaching will be commonplace, and teachers should no longer consider online language instruction as an "emergency" response. Additionally, in our increasingly interconnected world, language learners will likely be using technology in their second language just as they do in their first. That means that technology-mediated language learning may be more authentic contextually for learners as they will likely be engaging in communication using messaging apps, social media, and the like in addition to engaging in face-to-face interactions. It also means that current and future teachers need to be knowledgeable in a range of digital literacies to support their learners appropriately (Pegrum et al., 2022), Indeed, writing similarly on the topic of the future of language teacher education Kessler (2018) noted that the important ties between teachers' and learners' everyday connections with social media, AI, big data, and augmented reality should be recognized and leveraged in teacher education programmes. Finally, teachers need to be ready to move themselves and their students from simple text or voice-based communication to multimodal options (Dressman, 2019), especially for interacting outside the classroom.

Accommodating these and other changes to the contexts in which students live and learn is not a simple task. To succeed, teachers—and teacher educators—should embrace technology as an integral part of the language teaching and learning experience. As a first step, language teachers should have a foundational set of skills and knowledge such as those outlined by the TESOL Technology Standards (TESOL, 2008). Beyond that the following principles offer guidance in how to expand and renew that foundation.

Model a flexible mindset towards technology integration. If we learned one key lesson from the COVID-19 era, it was that we need to expect the unexpected. Having a flexible mindset means being able to move rapidly and effectively from one way of thinking to another in the face of new data. It also means being willing to see challenges as opportunities. A teacher educator can encourage a flexible mindset by modelling it and by engaging teachers in specific tasks that require it, such as setting up opportunities for technology troubleshooting.

Foster a willingness to experiment. Due to the changing nature of technology and the contexts in which it can be used, teachers need to become comfortable with regularly trying new tools and tasks. This willingness to experiment is especially important because the learners' personal and social use of technology is changing along with the technology itself. An excellent source of ideas for areas to experiment with is the Emerging Technologies column of *Language Learning & Technology* (www.lltjournal.org): see Godwin-Jones (2022) for an example. Importantly, a willingness to experiment is not limited to looking at new and emerging technologies. There is perhaps greater value in experimenting with established applications, tools, and resources, seeking new ways to use them more effectively in language instruction and learning tasks.

Enhance critical thinking skills. Critical thinking in our field involves the key distinction between the technology itself and how teachers and learners use it. Technology is often presented in a non-critical stance (e.g., mobile devices provide anytime, anywhere learning, social media offers learning affordances, etc.). For example, the following appeared in an article touting a future driven by iPhone and iPad-based education:

> Students of the near future may never experience the classroom of today. They may never have to buy or carry textbooks to class. They may never study in classrooms that are not completely wireless and interactive. They will be issued with iPads as standard upon entering university and this iPad will be everything they need for study throughout their university life. (Ireland & Woollerton, 2010, p. 47)

We know in hindsight that the iPad is just one of a number of modern tools for education. This tendency to jump on a new technology with a primarily positive mindset (rather than a more flexible one) has been noted for some time. Murray and Barnes (1998) called it the "wow" factor in their paper arguing for a more pedagogical approach to evaluating multimedia for language learning. More generally, this tendency is captured in the opening stage of the "hype cycle" (originally from Gartner: see Linden & Fenn, 2003), a recurring phenomenon where the impact of a new technology is distorted. At the time of this writing, we are seeing that initial hype stage with ChatGPT and similar AI applications. Language teachers should be taught to think critically beyond this stage when the novelty of new tools fades: this is connected to the following principle.

Targeted reflective teaching. Teaching reflectively is arguably better than teaching naively (Brookfield, 1995), a situation in which a teacher simply assumes everything is going as expected. Teaching reflectively is especially important when incorporating technology, since the impact of the mediating properties of the technology is often difficult to assess (Hubbard & Ioannou-Georgiou, 2017). However, reflective teaching takes time and significant cognitive resources, and it is unreasonable to expect a teacher to be reflective all the time about everything in a teaching and learning environment. A possible compromise is to consider *targeted reflective teaching* as it relates to technology integration. This concept entails engaging in a reflective cycle whenever trying something new. It could be a new application or tool, or a new implementation of an existing one.

Encourage active participation in communities of practice. During the crucial period of early teacher education, the notion of communities of practice should be introduced and nurtured. This can begin with peers in the classroom but can expand into various online informal and formal

professional groups. For an in-service teacher, the community can begin with some peers in the same institution but should later include external groups. Importantly, *active* participation ultimately entails being more than being simply a passive consumer of the group's knowledge, sharing one's own ideas and collaborating with others. That said, a teacher can begin with what Lave and Wenger (1991) call "legitimate peripheral participation" prior to becoming a full participant.

Note that these five principles are presented as examples of guides for teachers heading into an uncertain future. I confess they are not particularly original; they have been around in one form or another since before we brought computers into the language classroom. They undoubtedly can be amended and expanded, but they should not be ignored.

Conclusion

Once upon a time, I was invited to write a thought piece looking 20 years into the future of language teaching (Hubbard, 2012). It began as follows:

> Students are sitting in a classroom in pairs engaging in an information gap activity. They each wear stylish, though still somewhat bulky, glasses: these are wearable computers that include a visual display of their portion of the paired activity. As they speak, everything they say is recorded and sent through an intelligent speech recognition system that builds a model of their current proficiency in terms of pronunciation, grammar, vocabulary, and pragmatics, and presents suggestions to the teacher. (Hubbard, 2012, p. 7)

The class description continues for another few sentences, but the point that follows is that we cannot possibly predict what is going to happen in 20 years, or even 10. Yet a young language teacher candidate being educated now can likely look forward to a career of 40 years or more in a world that is changing even more rapidly than it was in 2012. In answering that opening question, then, of how to prepare teachers for an uncertain future, I have argued that the path ahead for them lies in first achieving a comprehensive foundation in the skills and knowledge to

integrate technology effectively. That foundation can then be sustained and expanded through enacting the five principles described here. How these principles are implemented will vary depending on a teacher's contexts and circumstances, but I predict that those who attend to these principles appropriately will fare far better as technology inevitably changes. And crucially, so will their students.

References

Ahmad, K., Corbett, G., Rogers, M., & Sussex, R. (1985). *Computers, language learning and language teaching* (Vol. 1). Cambridge University Press.

Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. Jossey-Bass.

Dressman, M. (2019). Multimodality and language learning. In M. Dressman & R. Sadler (Eds.), *The handbook of informal language learning* (pp. 39–55). John Wiley & Sons.

Gillespie, J. (2020). CALL research: Where are we now? *ReCALL, 32*(2), 127–144.

Godwin-Jones, R. (2022). Partnering with AI: Intelligent writing assistance and instructed language learning. *Language Learning & Technology, 26*, 5–24.

Hubbard, P. (2008). CALL and the future of language teacher education. *CALICO Journal, 25*, 175–188.

Hubbard, P. (2012). English teaching in the year 2032. *TESOL Connections*, May 2012, 7–14. http://newsmanager.commpartners.com/tesolc/issues/2012-05-01/3.html

Hubbard, P. (2023). Contextualizing and adapting teacher education on d professional development. In D. Tafazoli & M. Picard (Eds.), *Handbook of CALL teacher education and professional development: Voices from under-represented contexts* (pp. 1–18). Springer.

Hubbard, P., & Ioannou-Georgiou, S. (2017). An introduction to teaching languages reflectively with technology. In P. Hubbard & S. Ioannou-Georgiou (Eds.), *Teaching English reflectively with technology* (pp. 9–19). IATEFL.

Hubbard, P., & Levy, M. (Eds.). (2006). *Teacher education in CALL*. John Benjamins.

Ireland, G. V., & Woollerton, M. (2010). The impact of the iPad and iPhone on education. *Journal of Bunkyo Gakuin University Department of Foreign Languages and Bunkyo Gakuin College, 10*, 31–48.

Kassen, M. A., Lavine, R. Z., Murphy-Judy, K., & Peters, M. (Eds.). (2007). *Preparing and developing technology-proficient L2 teachers*. CALICO.

Kayi-Aydar, H., & Reinhardt, J. (Eds.). (2022). *Language teacher development in digital contexts*. John Benjamins.

Kenning, M. J., & Kenning, M. M. (1983). *Introduction to computer assisted language teaching*. Oxford University Press.

Kessler, G. (2018). Technology and the future of language teaching. *Foreign Language Annals, 51*(1), 205–218.

Kolaitis, M., Mahoney, M. A., Pomann, H., & Hubbard, P. (2006). Training ourselves to train our students for CALL. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 317–332). John Benjamins.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

Linden, A., & Fenn, J. (2003). Understanding Gartner's hype cycles. *Strategic Analysis Report N° R-20-1971. Gartner, Inc*, 88.

Moore, P., Nguyen, G. H., & Nguyen, Q. V. (2023). The role of professional standards in CALL teacher training in Vietnam – Towards an ecological approach to CALL integration. In D. Tafazoli & M. Picard (Eds.), *Handbook of CALL teacher education and professional development: Voices from underrepresented contexts*. Springer.

Murray, L., & Barnes, A. (1998). Beyond the "wow" factor – Evaluating multimedia language learning software from a pedagogical viewpoint. *System, 26*(2), 249–259.

O'Dowd, R. (2015). Supporting in-service language educators in learning to telecollaborate. *Language Learning & Technology, 19*(1), 63–82.

Pegrum, M., Hockly, N., & Dudeney, G. (2022). *Digital literacies*. Routledge.

Pham, D. H. (2023). Perspectives on language teacher identity in the context of a post-pandemic "New Normal" Epoch. In S. Karpava (Ed.), *Handbook of research on language teacher identity* (pp. 98–115). IGI Global.

Rickard, A., Blin, F., & Appel, C. (2006). Training for trainers: Challenges, outcomes, and principles of in-service training across the Irish education system. In P. Hubbard & M. Levy (Eds.), *Teacher education in CALL* (pp. 203–218). John Benjamins.

Son, J.-B. (2020). Digital language teaching and teacher development. In J.-B. Son (Ed.), *Technology-enhanced language teaching in action* (pp. 3–13). APACALL. https://www.apacall.org/research/books/5/

Son, J. B., & Windeatt, S. (Eds.). (2017). *Language teacher education and technology: Approaches and practices*. Bloomsbury Publishing.

Sun, X. (2022). Ten years later: Reexamining the TESOL Technology Standards for Language Teachers. *TESOL Journal, 13*(4), e684.

Tai, S. J. D. (2015). From TPACK-in-action workshops to classrooms: CALL competency developed and integrated. *Language Learning & Technology, 19*(1), 139–164.

TESOL. (2008). *TESOL technology standards framework*. https://www.call-is.org/WP/2023/06/12/tesol-technology-standards-framework/

Williams, T. K., McIntosh, R. W., & Russell, W. B., III. (2021). Equity in distance education during COVID-19. *Research in Social Sciences and Technology, 6*(1), 1–24.

Wyatt, D. H. (1984). *Computers and ESL*. Harcourt Brace Jovanovich.

Zhao, Y., & Tella, S. (2002). Introduction to the special issue on Teacher education and technology. *Language Learning & Technology, 6*(1), 1–4.

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