ISSN: 3116-3475
International Journal
of Education, Research, and Innovation Perspectives
Volume 2 Issue 5 (May 2026)

Digital Tools in Language Teaching at Marie Vithaya School Towards Faculty Development Program

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Date Submitted:
March 21, 2026

Date Accepted:
April 30, 2026

Date Published:
May 14, 2026

DOI:
10.5281/zenodo.20182688

ABSTRACT

This study examined the use of digital tools in language teaching at Marie Vithaya School as basis for a proposed faculty development program. Specifically, it described the profile of language teachers, identified the digital tools used in instruction, assessed the extent of digital tool use in terms of ease of use, professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence, and tested differences in digital tool use when grouped according to selected profile variables. The study employed a descriptive-correlational quantitative design using an adopted DigCompEdu-based questionnaire administered through Google Forms to 58 Thai and foreign language teachers during the academic year 2022-2023. Data were analyzed using frequency, percentage, ranking, mean, standard deviation, independent samples t-test, and one-way analysis of variance. Findings showed that most respondents were female, foreign language teachers, between 31 and 40 years old, with less than a decade of teaching experience, and with a medium level of ability in handling digital tools. The most commonly used tools were laptops, multimedia projectors, presentation software, search engines, and online dictionaries and translation tools. Across all DigCompEdu domains, teachers reported a high extent of digital tool use, with ease of use receiving the highest group mean and facilitating learners' digital competence receiving the lowest but still high rating. Inferential results generally showed no significant differences in digital tool use according to age, nationality, ability to handle digital tools, and years of teaching experience, although professional engagement differed by gender. The study concludes that digital tools are already integrated into language teaching at Marie Vithaya School, but targeted faculty development remains necessary to strengthen teachers' competence in digital pedagogy, assessment, and learner digital competence.

Keywords: *digital tools, language teaching, DigCompEdu, faculty development, digital competence, educational technology*

INTRODUCTION

The continuing expansion of digital technology has reshaped language teaching by providing teachers with new ways to present content, engage learners, assess learning, and support communication. Language classrooms that previously depended heavily on textbooks and chalkboards now make use of computers, projectors, mobile devices, online platforms, multimedia materials, and web-based applications. These resources have become especially important in contemporary learning environments where digital

ISSN: 3116-3475
International Journal
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access, remote instruction, and blended learning practices influence how teachers design and deliver instruction.

At Marie Vithaya School, teachers have been using technology to deliver language instruction; however, there remains a need to determine which digital tools are actually used, the extent to which these tools are integrated into teaching, and the areas where teachers may still need professional support. This need is particularly important because effective digital tool integration is not merely a matter of access to devices or applications. It also requires teachers to use technology purposefully for professional engagement, digital resource management, teaching and learning, assessment, learner empowerment, and the development of learners' digital competence.

Previous studies have emphasized the value of digital tools in language teaching. Digital tools can improve student engagement, support language learning, provide access to authentic resources, and help teachers diversify classroom activities (Alqahtani, 2019; Huong & Hung, 2021; Moorhouse & Yan, 2023). They also create opportunities for collaboration, multimedia learning, self-regulated learning, and more flexible instructional practices (Haleem et al., 2022; Lamb & Arisandy, 2020). Nevertheless, technology integration also presents challenges related to training, accessibility, time, teacher readiness, and the need to balance digital and face-to-face interaction (Celik & Aytin, 2013; Shatri, 2020; Srivastava & Dey, 2018).

This study was anchored on the European Framework for the Digital Competence of Educators, or DigCompEdu, which identifies the professional and pedagogical competencies teachers need in digitally enhanced education (Redecker, 2017). Using this framework, the study investigated the use of digital tools in language teaching at Marie Vithaya School and used the results as basis for a proposed faculty development program.

Literature Review

Digital Tools in Language Teaching

Digital tools in language teaching refer to hardware, software, online platforms, mobile applications, multimedia resources, and web-based systems that support the teaching and learning of language. Alqahtani (2019) noted that technology has become an important part of English language teaching because it can increase students' active engagement and contribute to better language learning outcomes. Zengulaaru and Nyamekye (2022) similarly described language laboratories, multimedia devices, mobile phones, EdTech solutions, audio-visual content, and social media as tools that can accelerate and enrich language development.

Technology has also extended the range of language teaching resources. Search engines, video platforms, presentation software, learning management systems, online dictionaries, translation tools, and gamified applications can help teachers provide vocabulary practice, listening exposure, speaking tasks, reading materials, writing support, and assessment activities. Google Classroom, Microsoft Office applications, Canva, PowerPoint, Google Slides, YouTube, Zoom, Google Meet, Kahoot, Quizlet, and translation tools are examples of applications that can support different aspects of language instruction when used with clear pedagogical purposes.

Extent of Digital Tool Integration

Digital tool integration involves the purposeful use of technology to improve teaching and learning rather than the simple presence of devices in the classroom. Kurt et al. (2013) emphasized that ICT tools such as computers, the internet, smartphones, and interactive boards can increase engagement, productivity, motivation, and effectiveness when supported by a systematic approach. Gunuç and Babacan (2018) added that technology integration in English teaching helps structure learning in ways that appeal to different senses, support individual needs, save time, and make abstract concepts more concrete.

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International Journal
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Studies have also shown that teachers' use of technology depends on competence, resources, and support. Buabeng-Andoh (2012) identified teacher-level, school-level, and system-level factors that influence ICT use, including attitudes, knowledge, training, hardware, software, and technical support. Ghavifekr et al. (2016) reported that ICT can support motivation and learning, but challenges remain in implementation. These findings suggest that faculty development is necessary to ensure that digital tools are used not only frequently but also meaningfully.

Digital Competence and Faculty Development

The DigCompEdu framework provides a useful lens for examining teachers' digital competence. It highlights professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence as major areas of teacher capability (Redecker, 2017). These areas are relevant to language teaching because teachers need to select and manage digital materials, design interactive learning experiences, evaluate student performance, and prepare learners to use technology responsibly and productively.

Faculty development can help teachers move from basic tool use to pedagogically grounded digital integration. Hrastinski (2021) noted that digital tools can support teacher professional development through collaboration and structured lesson work. Nagel et al. (2023) emphasized that teacher educators and faculty members need opportunities to develop professional digital competence, including technical knowledge, pedagogical strategies, and awareness of ethical and cultural issues. Therefore, a faculty development program based on actual teacher needs can strengthen the quality of digital language instruction.

METHODS

Research Design

The study used a descriptive-correlational quantitative research design. The descriptive component was used to describe the respondents' profile, the digital tools used in language teaching, and the extent of digital tool use. The correlational and comparative components were used to determine whether significant differences existed in the extent of digital tool use when respondents were grouped according to profile variables.

Research Locale

The study was conducted at Marie Vithaya School during the academic year 2022-2023. The study focused on language teachers who handled learners at the primary and secondary levels.

Participants and Sampling Technique

The participants were Thai and foreign language instructors at Marie Vithaya School. A Google Form survey was sent to the target population of language teachers, and 58 respondents completed the questionnaire. The study employed purposive sampling because the participants were selected based on their direct involvement in language teaching and their use of digital tools in instruction.

Research Instrument

The researcher used an adopted questionnaire based on the DigCompEdu framework. The instrument had three parts: the respondents' profile, the digital tools used in language teaching, and the extent of digital tool use in terms of ease of use, professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence. The questionnaire was validated by three experts representing Thai, Filipino, and British language teachers. The reliability of the instrument was established using Cronbach's alpha, with a reliability coefficient of 0.94.

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Data Gathering Procedure

After the instrument was validated and found reliable, the researcher requested permission from the school director and foreign department head to conduct the study. The questionnaire was administered through Google Forms to reduce face-to-face interaction and to allow respondents to complete the survey conveniently. Informed consent was included in the first part of the online questionnaire. After the survey period, the responses were checked for completeness, tabulated, statistically analyzed, and interpreted according to the research questions.

Data Analysis

Frequency and percentage were used to describe the respondents' profile. Frequency and ranking were used to identify the digital tools used in language teaching. Mean and standard deviation were used to determine the extent of digital tool use across the DigCompEdu domains. Independent samples t-test was used to test differences based on gender, nationality, and ability to handle digital tools, while one-way analysis of variance was used to test differences based on age and years of teaching experience. The level of significance was set at 0.05.

Ethical Consideration

The study observed ethical procedures by securing permission to conduct the study, informing respondents of the purpose of the research, and including informed consent in the online survey. Participation was voluntary, and responses were treated with confidentiality. The data were used only for research purposes and as basis for the proposed faculty development program.

RESULTS AND DISCUSSION

Profile of the Respondents

Table 1. *Profile of the Respondents*

Profile Variable	Category	Frequency	Percentage
Age	21-30 years old	17	29.3%
Age	31-40 years old	22	37.9%
Age	41-50 years old	11	19.0%
Age	51 years old and above	8	13.8%
Gender	Male	15	25.9%
Gender	Female	43	74.1%
Years of teaching experience	Below 5 years	13	22.4%
Years of teaching experience	6-10 years	14	24.1%
Years of teaching experience	11-15 years	13	22.4%
Years of teaching experience	16-20 years	9	15.5%
Years of teaching experience	21-25 years	3	5.2%
Years of teaching experience	26 years and above	6	10.3%
Nationality	Local language teacher	18	31.0%
Nationality	Foreigner	40	69.0%
Ability to handle digital tools	Medium	31	53.4%
Ability to handle digital tools	High	27	46.6%

Legend: n = 58.

The profile shows that the largest age group was 31-40 years old, representing 37.9% of the respondents. Most respondents were female (74.1%) and foreign language teachers (69.0%). In terms of experience, the largest group had 6-10 years of teaching experience (24.1%), followed closely by those below 5 years and 11-15 years. The respondents' ability to handle digital tools was generally favorable

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International Journal
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because none reported a low level of ability; 53.4% reported medium ability and 46.6% reported high ability. These findings indicate that Marie Vithaya School has a teaching workforce with diverse age, experience, and nationality profiles, but with generally adequate readiness to use digital tools in language teaching.

Digital Tools Used in Language Teaching

Table 2. *Digital Tools Used at Marie Vithaya School*

Category	Most Frequently Used Tools	Frequency	Rank
Hardware	Laptop	53	1st
Hardware	Multimedia/projector	50	2nd
Hardware	Audio devices/speaker	38	3rd
Hardware	Smartphone/mobile phone; tablet/iPad	32	4th
Software	Presentation software: PowerPoint, Canva, Google Slides	53	1st
Software	Word processing software: MS Word, Google Docs	48	2nd
Software	Spreadsheet software: Excel, Google Sheets	36	3rd
Mobile applications	Search engines: Google, Chrome, Microsoft, Bing	50	1st
Mobile applications	Online streaming services: YouTube, Dailymotion, Netflix	44	2nd
Mobile applications	Video conferencing: Zoom, Google Meet, Skype	30	3rd
Mobile applications	Instant messaging apps: Line, Viber, Messenger, WhatsApp	27	4th
Mobile applications	Email clients: Gmail, Outlook	20	5th
Language teaching applications	Online dictionaries and translation tools	48	1st
Language teaching applications	Gamification tools: Kahoot, Quizlet, Gimkit, Duolingo	31	2nd
Language teaching applications	Presentational tools: Quipper, Prezi, Podcasts, Google Classroom, Poll Everywhere	26	3rd
Language teaching applications	Interpretative tools: Edpuzzle, Audio Lingua, Padlet, TeachVid	19	4th
Language teaching applications	Interpersonal tools: eBook, WheelDecide, FlipGrid, Schoolbright, Lingt, Slack	17	5th

Legend: Tools were ranked according to frequency of use reported by respondents.

The findings show that language teachers relied most heavily on laptops and multimedia projectors for hardware support. Presentation software was the most frequently used software category, suggesting that visual presentation remains a central method for delivering language lessons. Search engines were the most used mobile applications, followed by online streaming services, indicating that teachers often access web-based information and multimedia materials for classroom instruction. Among language teaching applications, online dictionaries and translation tools ranked highest. This reflects the practical needs of language teachers and learners, especially in multilingual classrooms where vocabulary support, translation, and contextual meaning are necessary for instruction.

Extent of Use of Digital Tools

Table 3. *Overall Extent of Use of Digital Tools*

Domain	Group Mean	SD	Interpretation
Ease of Use	4.10	0.11	High Extent
Professional Engagement	3.88	0.09	High Extent
Digital Resources	3.70	0.26	High Extent
Teaching and Learning	3.94	0.09	High Extent
Assessment	3.92	0.11	High Extent

ISSN: 3116-3475
International Journal
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Empowering Learners	4.00	0.07	High Extent
Facilitating Learners' Digital Competence	3.62	0.11	High Extent
Overall	3.88	0.15	High Extent

Legend: 1.00-1.49 = Not Evident; 1.50-2.49 = Less Extent; 2.50-3.49 = Moderate Extent; 3.50-4.49 = High Extent; 4.50-5.00 = Very High Extent.

The respondents reported a high extent of digital tool use across all domains. Ease of use obtained the highest group mean (M = 4.10), followed by empowering learners (M = 4.00), teaching and learning (M = 3.94), assessment (M = 3.92), professional engagement (M = 3.88), digital resources (M = 3.70), and facilitating learners' digital competence (M = 3.62). Although all domains were interpreted as high extent, the relatively lower mean for facilitating learners' digital competence suggests that teachers may still need more support in designing activities that explicitly develop learners' responsible, critical, and productive use of digital technology. This result supports the need for a faculty development program that moves beyond basic tool use and strengthens pedagogical integration.

Differences in the Extent of Digital Tool Use

Table 4. *Summary of Tests of Significant Difference*

Grouping Variable	Domains Tested	Statistical Test	Result
Gender	Ease of use, digital resources, teaching and learning, assessment, empowering learners, facilitating learners' digital competence	Independent samples t-test	Not significant
Gender	Professional engagement	Independent samples t-test	Significant at p = 0.05
Nationality	All seven domains	Independent samples t-test	Not significant
Ability to handle digital tools	All seven domains	Independent samples t-test	Not significant
Age	All seven domains	One-way ANOVA	Not significant
Years of teaching experience	All seven domains	One-way ANOVA	Not significant

Legend: Significance was tested at alpha = 0.05.

The inferential analysis generally showed no significant differences in the extent of digital tool use when respondents were grouped by nationality, ability to handle digital tools, age, and years of teaching experience. Gender also showed no significant differences in most domains, except professional engagement, where a significant difference was reported at p = 0.05. These findings suggest that digital tools are widely used across respondent groups and that technology integration at Marie Vithaya School is not limited to a particular age group, nationality group, or teaching-experience category. The one identified gender-related difference in professional engagement may indicate variation in how male and female teachers use digital tools for communication, collaboration, or professional learning, but the thesis findings do not provide enough basis to make claims beyond this observed difference.

Basis for the Proposed Faculty Development Program

The results indicate that teachers already use digital tools to a high extent, yet the study also identifies areas where structured faculty development can be useful. The proposed program should focus on strengthening teachers' skill in designing interactive digital resources, integrating active learning

ISSN: 3116-3475
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strategies, using digital assessment tools, providing technology-based feedback, and facilitating learners' digital competence. The proposed training may include sessions on understanding digital tools for education, developing interactive digital learning resources, implementing active learning strategies with digital tools, and using technology-based evaluation and feedback. Such a program can help teachers use digital tools more confidently, purposefully, and pedagogically in language instruction.

CONCLUSION

The study concludes that digital tools are already widely integrated into language teaching at Marie Vithaya School. Teachers reported high levels of use across ease of use, professional engagement, digital resources, teaching and learning, assessment, empowering learners, and facilitating learners' digital competence. The most commonly used tools were laptops, projectors, presentation software, search engines, online streaming services, and online dictionaries and translation tools. These findings show that digital resources have become part of the teachers' regular instructional practice and are used to support content delivery, classroom engagement, assessment, and language learning support.

The findings also show that the extent of digital tool use generally did not differ significantly according to age, nationality, ability to handle digital tools, and years of teaching experience. The only noted significant difference was in professional engagement based on gender. Overall, the study indicates that teachers across different profile groups participate in digital tool use, but the lower relative mean in facilitating learners' digital competence suggests a need for continuing professional development. Thus, the proposed faculty development program is necessary to deepen teachers' competence in digital pedagogy and to ensure that the use of technology leads to more meaningful and learner-centered language instruction.

Recommendation

Marie Vithaya School may implement a faculty development program focused on the effective pedagogical use of digital tools in language teaching. The program should begin with a needs assessment to identify teachers' current skills, challenges, and preferred areas of support. Training sessions may prioritize digital content creation, interactive presentations, gamified learning, online collaboration, digital formative assessment, and strategies for developing learners' digital competence.

Teachers may be encouraged to share best practices through peer mentoring, demonstration teaching, and collaborative lesson planning. Since the respondents already use digital tools to a high extent, professional learning activities should focus not only on how to operate tools but also on how to align them with language learning objectives, assessment practices, learner engagement, and ethical technology use. School administrators may also provide continuous technical support, updated resources, and opportunities for teachers to evaluate the impact of digital tools on instruction.

Future researchers may conduct similar studies with larger samples, additional schools, or mixed-method designs to obtain deeper insights into teachers' experiences, challenges, and classroom practices. Further studies may also examine how the use of specific digital tools affects learners' language performance, motivation, autonomy, and digital competence.

Proposed Faculty Development Program

Table 5. *Summary of the Proposed Faculty Development Program*

Component	Description
Title	Optimizing the Utilization of Digital Tools in Language Instruction
Target participants	Language teachers teaching Science, Mathematics, and English in preschool, primary, and secondary levels

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Objectives	Enhance teachers' ability to use digital tools for content creation, assessment, student participation, innovation, collaboration, and individualized support
Session 1	Understanding digital tools for education and exploring hardware, software, mobile applications, and language learning applications
Session 2	Developing interactive digital learning resources such as presentations, multimedia materials, videos, animations, and infographics
Session 3	Implementing active learning strategies, online collaboration, gamification, and interactive digital activities
Session 4	Using technology-based evaluation, feedback, online assessments, data-driven insights, and adaptive learning tools
Expected output	Participants complete a culminating task demonstrating proficiency in using digital tools for language instruction

Legend: The program summary was derived from the faculty development program proposed in the thesis.

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