https://doi.org/10.3126/nelta.v30i1.87842 NELTA

Digital Citizenship in EFL Education: Evaluating Learners' Competencies and Teaching Practices in Private Universities in Bangladesh

Zohur Ahmed
Khaled Mahmud

Abstract

Digital citizenship has emerged as an important aspect of English language teaching (ELT) in the 21st century. This study investigates the digital citizenship skills of EFL students at private universities in Bangladesh as well as the strategies teachers use to help them develop their skills. In this study, a mixed-methods approach was followed. The quantitative data were collected from 123 undergraduate EFL students from the department of English of three private universities in Dhaka, Bangladesh, through a Likert-scale survey evaluating their pro-ficiency in information and data literacy, communication, content creation, digital safety, and problem-solving. Qualitative data were collected from 13 EFL teachers from four private universities in Bangladesh through an online qualitative survey using a Google Form, focusing on pedagogical strategies for promoting digital citizenship. The findings indicate that the students demonstrate moderate competency, with the highest scores in digital safety (3.73/5) and the lowest in digital content creation (3.37/5). Besides, no significant differences were found between male and female participants in total scores and in subscale scores in the digital competence scale. The findings also show that the teachers' instructions include critical source evaluation of information and digital content, use of collaborative digital tools, practice of online responsibilities and digital etiquette, development and management of digital identity, ethical use of information and digital content, and protection of personal information and student well-being, all aligned with the DigComp 2.2: The Digital Competence Framework for Citizens. However, gaps remain in terms of content creation, improved collaboration tools, and methodological guidance on institutional digital literacy policies. This study emphasizes the need for structural integration of digital citizenship in EFL curricula, faculty training, and institutional support to better prepare students for academic and professional digital environments.

Keywords: *Digital citizenship, information and data literacy, collaboration, communication, content creation, digital safety, problem-solving*

Introduction

In the context of 21st century education, digital citizenship has gained significant importance due to the widespread integration of technology in both the educational environment and the wider society (Prasetiyo et al., 2023). It includes the necessary knowledge, skills, and responsible behavior in the digital environment, which is essential for both teachers and students (Prasetiyo et al., 2023; von Gillern et al., 2024). Digital citizenship skills are required to be integrated into higher education to equip students with critical thinking, ethical online behaviour, information literacy, and the ability to safely and responsibly navi-gate digital environments, which are essential for academic success, professional readiness, and participation in a global digital society (Alkhalaf, 2024; Althibyani & Al-Zahrani, 2023; Bal & Akcil, 2024). Furthermore, during the COVID-19 pandemic, a positive relationship was found between students' digital citizenship behavior and their attitudes toward e-learning (Akcil & Baştaş, 2020).

Digital citizenship is of considerable importance in EFL education, especially in technologyenhanced language learning environments. Digital tools and digital literacy are key components of language skill development (Alakrash & Razak, 2021). Digital citizenship includes practicing ethical online behavior, increasing intercultural understanding, and addressing issues such as preventing cybercrime (Fajri et al., 2022; Althibyani & Al-Zahrani, 2023).

Within EFL settings, it is associated with the advancement of critical thinking, media literacy, and intercultural skills (Simões et al., 2024). Although a strong relationship exists between digital literacy and critical thinking among EFL students, digital literacy alone does not increase critical thinking abilities (Indah et al., 2022).

Therefore, digital citizenship has been conceptualized not as a neutral inventory of decontextualized skills but as a set of observables that must be interpreted through three complementary lenses. First, a digital literacy-as-social-practice perspective foregrounds how power, context, and purpose shape what counts as competent action, positioning digital citizenship indicators as situated practices embedded in institutional norms and platform logics (Street, 1995; Lankshear & Knobel, 2011). Second, the digital citizenship domains are treated as observables that require interpretation through critical and sociocultural lenses: a critical pedagogy and critical digital literacy lens emphasizes agency, critique, and civic participation, using the framework to interrogate issues of equity, datafication, and the public uses of digital texts rather than merely procedural correctness (Pandya, 2018; Selwyn, 2022). Third, a sociocultural learning perspective highlights mediation, participation, and scaffolding in digitally networked contexts, understanding competence as emergent through tools, communities, and joint activity (Lave & Wenger, 1991; Gee, 2004). In the Bangladeshi EFL context, where learners' digital actions are shaped by mobile access, platform restrictions, and English-language dominance, digital citizenship scores capture context-bound practices rather than neutral skills, showing how technology, language, and social power shape online participation.

Despite the increasing emphasis on incorporating digital citizenship into EFL education, there is a lack of empirical evidence on the effectiveness of digital citizenship integration, especially within English language courses in private university English departments in Bangladesh. Therefore, the present study attempts to answer the following research questions:

a. To what extent do EFL learners in private universities in Bangladesh demonstrate key competencies of digital citizenship particularly in the areas of information literacy, communication, content creation, digital safety, and problem-solving?

b. Are there any significant differences in digital citizenship competence among EFL learners?

c. How do EFL teachers in the English departments of private universities in Bangladesh incorporate digital citizenship into their teaching practices?

Literature Review

Digital Citizenship

Digital citizenship refers to the knowledge, skills, and behaviors necessary for responsible and ethical participation in the digital world (Heath, 2020). As digital technology is increasingly shaping the way people work, communicate, and interact with society, the concept has evolved to reflect the transformation of traditional citizenship in the digital age (Jæger, 2021). It encompasses various dimensions such as media literacy, digital collaboration, and ethical online behavior, highlighting the need to actively engage with global and civic communities through digital means (Heath, 2020). Digital citizenship includes skilled and positive engagement with digital technology and information, active and responsible participation in the community at all levels, and participation in the dual process of lifelong learning (Council of Europe, 2017).

Despite its growing significance, digital citizenship remains a complex and multifaceted concept with no universally accepted definition (Yue & Beta, 2022). Researchers emphasize different aspects—some focus on digital skills and technical proficiency, while others emphasize critical thinking, online activism, and civic engagement (Fernández-Prados et al., 2021). Besides, the European Commission's DigComp 2.2: The Digital Competence Framework for Citizens (Vuorikari, Kluzer, & Punie, 2022) defines five core digital competence areas:

1. **Information and Data Literacy:** Information and data literacy focuses on the ability to effectively identify, evaluate, and manage digital information. This includes browsing, searching and filtering relevant data and digital content, critically evaluating the reliability and credibility of sources, and efficiently organizing and managing information for future use.

2. **Communication and Collaboration:** Communication and collaboration emphasize effective digital interaction and participation. This includes communicating and sharing

information through digital technologies, engaging responsibly in online communities and citizenship activities, and collaborating on digital platforms. This also includes following online etiquette or netiquette and managing one's digital identity and reputation.

3. **Digital Content Creation:** Digital content creation refers to the ability to create and modify digital content. This includes creating original digital materials, integrating and redistributing existing content, understanding copyright and licensing rules, and basic programming skills for creating and customizing digital tools.

4. **Safety:** Protecting users and devices safe in the digital environment includes maintaining device security, protecting personal information and privacy, ensuring physical and psychological wellbeing while using technology, and promoting environmentally responsible digital practices.

5. **Problem Solving:** Problem solving includes effectively addressing and managing digital challenges. This includes solving technical problems, identifying personal and organizational technical needs, using digital tools creatively for innovation, and identifying gaps in one's digital skills for continuous learning.

Importance of Digital Citizenship in 21st-Century Education

Digital citizenship has become a cornerstone of 21st-century education, promoting responsible behavior and critical thinking in digital environments (Senos et al., 2024). Educational institutions play a central role in cultivating these competencies through civic education and project-based learning models such as ―The Internet as we see it‖ (Prasetiyo et al., 2023; Senos et al., 2024). Teacher perceptions, as measured by the T-PODS scale, highlight varied levels of understanding across dimensions like ethics, civic knowhow, and informed participation (von Gillern et al., 2024). Despite growing awareness, gaps remain in students' and faculty members' understanding of digital rights and ethical conduct (Hawamdeh et al., 2022).

Digital citizenship is integral to achieving the UN Sustainable Development Goals (SDGs), as it fosters political engagement, social justice, and environmental awareness through digital platforms (Lozano-Díaz & Fernández-Prados, 2020; Bal & Akcil, 2024). Teaching digital citizenship contributes to cybersecurity awareness, with responsible digital behavior acting as a safeguard against cybercrime (Althibyani & AlZahrani, 2023).

Digital Citizenship and Language Education

Digital Citizenship Education (DCE) is increasingly interwoven with language learning, particularly in English as a Foreign Language (EFL) context, where it enhances both linguistic and digital literacies (Jeanneau & Ollivier, 2023; Simões et al., 2024). Authentic, real-world communication tasks promote meaningful engagement and help learners develop critical digital competencies alongside language proficiency (Jeanneau & Ollivier, 2023). Teacher training

programs significantly influence classroom outcomes, as teachers' digital competence directly impacts student performance (Cao et al., 2023).

Studies show varied levels of digital competence among EFL learners worldwide. Iranian EFL learners, for instance, lack core digital citizenship skills, underscoring the urgency of integrating DCE into curricula (Karimi Alavijeh & Abdollahi, 2021). In contrast, Turkish ELT students demonstrate strength in digital responsibility and commerce (Şenel, 2022), while Vietnamese students exhibit knowledge gaps in technical skills with notable gender and academic year disparities (Nguyen & Habók, 2021).

COVID-19 pushed learners to use platforms like YouTube and WhatsApp for informal digital learning, which many reported as positive and effective (Nugroho & Atmojo, 2020). Informal Digital Learning of English (IDLE) has been linked to improved intercultural competence and communication willingness (Rezai, 2023). Programs like PERMATA-SAKTI in Indonesia have shown effectiveness in strengthening cultural and citizenship literacy among EFL pre-service teachers by fostering values of solidarity, tolerance, and diversity through online learning processes (Dewi et al., 2023). However, infrastructural limitations and gender-based disparities remain significant obstacles (Mudra, 2020; Nguyen & Habók, 2021).

Methodology

This study adopted a mixed-methods design to investigate EFL students' digital citizenship competencies and the associated teaching methods adopted by teachers of the department of English in private universities in Bangladesh. A total of 123 undergraduate (48 male, 75 female) EFL students from three private universities in Bangladesh participated in the survey of the study. A purposive sampling strategy was adopted to select undergraduate students enrolled in English language courses during the Spring 2025 semester. The qualitative sample consists of 13 EFL teachers of the department of English from four private universities. The sample included students from first year (n=70), second year (n=40), third year (n=5), and fourth year (n=8). All participants had regular access to digital devices for academic purposes. A structured Likert-scale questionnaire was developed to assess students' competencies across five key dimensions of digital citizenship adapted and aligned with the European Commission's DigComp 2.2: The Digital Competence Framework for Citizens proposed by Vuorikari, Kluzer, and Punie (2022). A qualitative open-ended survey was administered to the EFL teachers via Google Forms. The questions were designed based on the DigComp 2.2 framework to explore the pedagogical strategies used to promote digital citizenship, with a focus on instructional practices that alignment with digital citizenship competencies. The instrument assessed five domains: Information and Data Literacy (3 items), Communication and Collaboration (5 items), Digital Content Creation (4 items), Safety (5 items), and Problem Solving (4 items). Domain scores were calculated by summing constituent items. Descriptive statistics were computed for all domains. Welch's t-test examined gender differences. Internal consistency reliability was evaluated using

Cronbach's alpha. All analyses were conducted using Python with significance set at $p < .05$. The EFL Teachers' responses were analyzed using thematic analysis, following the six-step process outlined by Kiger and Varpio (2020). The analysis process includes getting familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and reporting the findings.

Findings

This section presents the reliability and item-level analyses, followed by findings addressing three core inquiries: the extent to which EFL learners in private universities in Bangladesh exhibit digital citizenship competencies; whether notable differences exist in these competencies among learners; and how EFL teachers integrate digital citizenship principles into their pedagogical practices.

Reliability Analysis

Internal consistency reliability of the survey was assessed using Cronbach's alpha for each competence domain. All domains demonstrated good to excellent reliability: 'Information & Data Literacy' needs to be written instead of 'Information & Digital Literacy' (a = .89), Communication & Collaboration (a = .89), Digital Content Creation (a = .83), Digital Safety (a = .89, and Problem Solving (a = .90). These values exceed the conventional threshold of .70, indicating that items within each domain consistently measure the intended construct.

Competence Area	Items	Cronbach's
Information & Digital Literacy	4	.881
Communication & Collaboration	5	.895
Digital Content Creation	4	.826
Digital Safety	4	.889
Problem Solving	4	.904

"Table 1. Internal Consistency Reliability for Digital Citizenship Competence Areas"

Item-Level Analysis

We conducted item-level analysis to move beyond overall scores and pinpoint exactly where learners excel or struggle within Digital Citizenship competencies. To identify specific areas of strength and weakness, item-level performance was examined across all 21 competencies.

i. Information and Digital Literacy

SL	Competencies	Frequency & Percentage	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree	Mean (Out of 5)
			1	2	3	4	5	
1	I can identify information needs, search for data, information and content in digital environments.	F	14	5	15	50	39	3.77
		P	11.4%	4.1%	12.2%	40.7%	31.7%	
2	I can analyze, compare and critically evaluate the credibility and reliability of sources of data, information and digital content.	F	13	16	30	47	17	3.32
		P	10.6%	13%	24.4%	38.2%	13.8%	
3	I can organize, store and retrieve data, information, and content in digital environments.	F	13	6	16	51	37	3.76
		P	10.6%	4.9%	13%	41.5%	30.1%	
4	I can interact through a variety of digital technologies and understand appropriate digital communication means for a given context.	F	11	14	13	45	40	3.75
		P	8.9%	11.4%	10.6%	36.6%	32.5%	
Average								**3.65**

Table 2: Information and Digital Literacy

a. Digital Citizenship Competencies of EFL Learners in Private Universities

The findings regarding the extent to which EFL learners demonstrate key digital citizenship competencies are presented in below in tables, detailing the frequency, percentage, and mean scores (out of 5) for the core areas of information literacy, communication, content creation, digital safety, and problem-solving.

ii. Communication and Collaboration Literacy

SL	Competencies	Frequency & Percentage	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree	Mean (Out of 5)
			1	2	3	4	5	
1	I can share data, information and digital content with others through appropriate digital technologies.	F	9	12	6	50	46	3.91
		P	7.3%	9.8%	4.9%	40.7%	37.4%	
2	I feel comfortable participating in society through the use of public and private digital services.	F	14	12	31	43	23	3.40
		P	11.4%	9.8%	25.2%	35%	18.7%	
3	I can use digital tools and technologies for collaborative processes, and for co- construction and co-creation of data, resources and knowledge.	F	8	22	25	49	19	2.59
		6.5%	7.9%	20.3%	39.8%	15.4%	43.1%	
4	I am aware of behavioural norms and know-how while using digital technologies and interacting in digital environments.	F	9	14	20	46	34	3.67
		P	7.3%	11.4%	16.3%	37.4%	27.6%	
5	I can create and manage one or multiple digital identities, protect my online reputation, and handle the data I produce across various digital tools, environments, and services.	F	9	14	20	46	34	3.67
		P	7.3%	11.4%	16.3%	37.4%	27.6%	
Average								**3.50**

Table 3: Communication and collaboration literacy

iii. Digital Content Creation

SL	Competencies	Frequency & Percentage	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree	Mean (Out of 5)
			1	2	3	4	5	
1	I can create and edit digital content in different formats to express myself through digital means.	F	12	19	27	40	25	3.38
		P	9.8%	15.4%	22%	32.5%	20.3%	
2	I can modify, refine and integrate new information and content into an existing body of knowledge and resources to create new,original and relevant content and knowledge.	F	9	18	31	46	19	3.39
		P	7.3%	14.6%	25.2%	37.4%	15.4%	
3	I understand how copyright and licenses apply to digital information and content.	F	13	14	21	45	30	3.53
		P	10.6%	11.4%	17.1%	36.6%	24.4%	
4	I plan and develop a sequence of understandable instructions for a computing system to solve a given problem or to perform a specific task.	F	15	22	30	38	18	3.18
		P	12.2%	17.9%	24.4%	30.9%	14.6%	
Average								**3.37**

Table 4: Digital content creation

iv. Digital Safety

SL	Competencies	Frequency & Percentage	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree	Mean (Out of 5)
			1	2	3	4	5	
1	I know how to protect devices and digital content, and understand risks and threats in digital nvironments.	F	11	12	21	43	36	3.66
		P	8.9%	9.8%	17.1%	35%	29.3%	
2	I know how to protect personal data and privacy in digital environments.	F	10	7	21	36	49	3.87
		P	8.1%	5.7%	17.1%	29.3%	39.8%	
3	I am able to avoid health risks and threats to physical and psychological well-being while using digital technologies.	F	15	5	17	47	39	3.73
		P	12.2%	4.1%	13.8%	38.2%	31.7%	
4	I am aware of the environmental impact of digital technologies and their use.	F	9	16	20	42	36	3.65
		P	7.3%	13%	16.3%	34.1%	29.3%	
Average								**3.37**

Table 5: Digital safety

v. Problem-solving

SL	Competencies	Frequency & Percentage	Strongly Agree	Disagree	Neutral	Agree	Strongly Agree	Mean (Out of 5)
			1	2	3	4	5	
1	I can identify technical problems when operating devices and using digital environments, and to solve them.	F	10	18	28	42	25	3.44
		P	8.1%	14.6%	22.8%	34.1%	20.3%	
2	I can assess needs and to identify, evaluate, select and use digital tools and possible technological responses and to solve them.	F	9	17	26	45	26	3.50
		P	7.3%	13.8%	21.1%	36.6%	21.1%	
3	I can use digital tools and technologies to create knowledge and to innovate processes and products	F	10	13	27	46	27	3.54
		P	8.1%	10.6%	22%	37.4%	22%	
4	I understand where one's own digital competence needs to be improved or updated.	F	11	12	23	52	25	3.55
		P	8.9%	9.8%	18.7%	42.3%	20.3%	
Average								**3.37**

Table 5: Problem solving

Table 5: Problem solving Descriptive Statistics and Overall Performance

Table 7 presents descriptive statistics for all five digital competence areas. Students demonstrated moderate to high proficiency across all domains, with mean scores ranging from 13.48 (67.4%) to 18.32 (73.3%) out of maximum possible scores of 20-25 points. Communication and Collaboration showed the highest performance (M = 18.32, SD = 4.76), while Digital Content Creation showed the lowest (M = 13.48, SD = 3.97).

Competence Area	M	SD	Max Score	% of Max
Information & Digital Literacy	14.57	4.18	20	72.85%
Communication & Collaboration	18.32	4.76	25	73.27%
Digital Content Creation	13.48	3.97	20	67.40%
Digital Safety	14.91	4.33	20	74.55%
Problem Solving	14.04	4.09	20	70.20%

TTable 6. Descriptive Statistics for Digital Citizenship Competence Areas"

b. Gender Differences in Digital Citizenship Competence

Table 8 shows descriptive statistics across gender category. The mean total scores of digital citizenship competence were compared between independent gender groups with unequal sample sizes (Female n = 86; Male n = 37) and different dispersions (Female SD ≈ 18.89; Male SD ≈ 23.00). Given these unequal variances and sample sizes, the equal-variance assumption of the classic Student's t-test is questionable. Therefore, Welch's t-test is the appropriate and robust choice for testing whether the group means differ. We report Hedges' g as the effect size because it is a biascorrected version of Cohen's d that provides more accurate estimates with unequal and relatively modest sample sizes, as in this study.

Gender	Count	Mean	SD
Female	86	75.94	18.89
Male	37	73.86	23.00

Table 7: Descriptive statistics across male and female participants

Table 8 shows none of the comparisons reached statistical significance (all $p > .34$), and all Hedges' g values were small in magnitude (absolute $g < 0.20$), indicating negligible practical differences. Taken together, these results suggest no meaningful gender-based disparities in digital citizenship competence within this EFL cohort.

Measure	Male	Female	Male_ mean	Female_ mean	t	p	Hedges_g
Information and Digital Literacy Score	37	86	14.405	14.64	-0.258	0.797	-0.053
Communication and Collaboration Literacy Score	37	86	7.176	7.314	-0.323	0.7479	-0.069
Digital Content	37	86	8.108	8.581	-0.943	0.3495	-0.192
Creation Score Digital Safety Score	37	86	9.122	9.279	-0.28	0.7806	-0.059
Problem Solving Score	37	86	9.014	9.238	-0.398	0.6919	-0.084
Total Score (5subscale mean)	37	86	9.565	9.81	-0.436	0.6647	-0.092

Table 8: Inferential statistics across male and female participants

c. Incorporation of Digital Citizenship in EFL Teaching Practices

Applying the six-phase approach to thematic analysis outlined by Kiger and Varpio (2020), consisting of familiarization, coding, theme identification, theme review, theme definition and naming, and report production, the analysis of the responses from 13 teachers reveal the following findings:

1. Information and Digital Literacy

To develop information and digital literacy, the EFL teachers apply a range of strategies to guide students in searching for, filtering, and evaluating the credibility of information and digital content:

1.1 Source & Tool Identification: Most of the EFL teachers (n=8) guide students where to search for information, prioritizing the use of specific reliable platforms and search techniques. Multiple teachers guide students toward Google Scholar (Participant 1 & 9) and academic databases (Participants 9 & 13) for searching credible information. Participant 9 noted, *"I show them how to use Google's Advance Search, Google scholar, and other academic database for reliable information and explain the importance of using academic database for scholarly research."* Besides, several responses from teachers indicate recognizing and prioritizing reliable websites based on their type, such as academic journals (Participant 4) and specific domains (.gov, .edu, .mil), academic institutions, and reputable news organizations

(Participant 5). Besides, Participant-3 mentioned dependable webpages, and Participant 11 suggested authentic sources. Furthermore, Participant-13 said, *"I guide students in*

using advanced search techniques, academic databases, and domain credibility checks." Some teachers teach the use of keywords (Participant 5 & 9), search engine filters (date, document type) (Participant 5), Google's Advance Search (Participant 9), and advanced search techniques (Participant 13). Participant 13 shared, *"They evaluate sources using the CRAAP test, compare multiple perspectives, and practice digital literacy to identify misinformation."*

1.2 Credibility & Filtering Strategies: A good number of EFL teachers (n=5) instruct students to use the methods to assess reliability and filter content. Some teachers guide students in using multiple sources for comparison (Participants 4, 5) and crossreferencing information (Participant 7) to look for consensus (Participant 5) or compare multiple perspectives (Participant 13). Participant 7 said, ―By encouraging them to use reliable and reputed sources/websites/articles and by suggesting cross-referencing information across multiple sources for accuracy.

Teachers teach students to check for author expertise, publication date (Participant 4), and to understand the difference between primary and secondary sources (Participant 9). Participant 4 mentioned, *"I instruct student to check multiple sources for comparison and checking for author expertise and publication date and also demonstrate how to spot bias or misinformation by analyzing content's tone and purpose."*

The EFL use various digital tools and strategies to help students effectively organize and manage information and digital content:

1.3 Centralized Management via Ed-Tech Platforms: Almost half of the EFL teachers (n=7) apply the Google Suite, specifically Google Classroom and Google Drive to provide a unified, accessible space for resources, assignments, and announcements, facilitating streamlined access for students. Participant-5 mentioned, *"I use platforms like Google Classroom or Microsoft Teams to provide centralized spaces for students to access assignments, resources, and announcements."*

1.4 Instruction in Digital Content Organization: Few teachers (n=3) use direct instruction to implement logical file structures (folders, subfolders), categorization (tags, colorcoding), and descriptive file naming conventions to ensure easy retrieval of works. Participant-4 stated,―*I normally encourage students how to categorize information using folders, tags, or color-coding. I also promote note-taking system for structuring notes.*‖

1.5 Tools for Time and Task Management: A few teachers (n=3) use digital calendars to track deadlines and appointments, alongside the soft skills of setting goals, prioritizing tasks, and regularly reviewing content. Participant 5 shared,*"I ask them (students) to use digital calendars to track deadlines, appointments, and other important dates"*

2. Communication and Collaboration Literacy

For developing learners' communication and collaboration literacy, the EFL teachers recommended digital technologies and platforms for communication, content sharing, and collaboration.

2.1 Synchronous Communication: For formal meetings or classes, all the EFL teachers use tools like Zoom and Google Meet. Participant 4 mentioned, ―*I recommend using Zoom or Google Meet for virtual meetings which I think enhance communication and collaboration among them, especially for remote learning.*‖

2.2 Instant Communication: For quick text-based communication, WhatsApp and Messenger (Participant-1, 2, 3, 7, 8, 9, 10, 11) are highly used, often alongside more professional platforms like Slack or Microsoft Teams (Participant 4,13) as teachers mentioned. Participant 3 use Teams, WhatsApp, Messenger, while Participant 13 specified the use of ―*Slack or Microsoft Teams to support professional communication and teamwork.*‖

2.3 Centralized Learning Management: The EFL teachers use Google Classroom for structured learning, assignment management, and content distribution. Participant 4 stated, ―*I recommend platforms like Google Classroom for content sharing and collaboration,*‖ while Participant 9 mentioned its use ―*for information and content sharing, submitting assignments.*‖

2.4 Collaborative Documentation Tools: Some teachers (n=4) recommended the use of Google Docs (Participant 5, 12, 13) or Microsoft OneNote (Participant 5) is essential for group assignments and peer feedback. Participant 5 noted, ―*Google Docs or Microsoft OneNote is used to facilitate real-time collaboration on projects, instructing students to share, edit, and manage documents together.*‖

2.5 Interactive Brainstorming: An EFL teacher use specialized platforms used for visual, dynamic group interaction and idea generation, which is separate from traditional document editing. Participant 13 clearly stated, ―*Padlet and Jam board enhance interactive brainstorming*‖.

The EFL Teachers educate students about online responsibilities and digital etiquette following applied pedagogical methods, fostering respectful and mindful communication, promoting academic integrity and source acknowledgment:

2.6 Direct and Applied Pedagogical Methods: Most of the EFL teachers (n=10) use structured and interactive techniques educators use to deliver content. Many teachers depend on lectures, rules, and dedicated curriculums (Participant 2, 3, 5 & 10). Among them, one teacher provides practical examples (Participant 10), while another uses ―*Google Classroom discussions, interactive case studies, and role-playing activities on cyber ethics*‖ (Participant 13). Participant 5 states, ―*I train them (learners) through dedicated*

curriculums that cover topics like online safety, ethical behavior, responsible information sharing, and understanding of digital footprints.‖

2.7 Fostering Respectful and Mindful Communication: Almost half of the EFL teachers (n=6) focus on netiquette. They guide students on how to engage with others respectfully. This practice in an EFL online session includes ―nourishing respectful behavior, like using appropriate language, being careful of tone, and respecting others' opinions‖ (Participant 4). An effort of the teachers is encouraging students to consider the feelings of others and ensuring students understand that *"online interactions should be as respectful as face-to-face interactions*‖ (Participant 9).

2.8 Promoting Academic Integrity and Source Acknowledgment : Some EFL teachers (n=4) focus on plagiarism and source validity. One teacher noted, ―*In guiding them thesis as a thesis supervisor, I always make them aware to keep the information of references and acknowledge the sources in the said paper*‖ (Participant 6). Furthermore, another teacher said, ―*I try to make them conscious about valid, and reliable sources, and avoid plagiarism.*‖ (Participant 12). Participant 7 also said, *"I focus on ethical practices, including copyright, privacy, and responsible sharing."*

2.9 Teaching Digital Citizenship and Personal Impact: The teachers (n=5) teach students to be aware of their online presence and actions. This instruction involves discussion of the protection of personal information (Participant 4) and the philosophical dimension of digital identity, with one educator focusing on how ―*It always helps to unfold the fake identity that digital spaces create*‖ (Participant 1). In addition, Participant 5 stated, ―*I present real-world examples of online issues and discuss potential consequences to help students understand the impact of their actions.*

EFL teachers follow strategies such as strategic identity construction, digital stewardship, to develop and manage students' digital identities:

2.10 Cultivating a Professional and Targeted Online Presence: Some EFL teachers (n=4) advise students to proactively construct a digital identity. They suggest students to create professional profiles (Participant 4 & 7), make profiles target-oriented and goal-based (Participant 5), to distinguish themselves from others (Participant 6). Participant 5 said, ―*I ask them to maintain a target-oriented profile which is specific and attracts the target audience. They should regularly update it, set goals and showcase their skills.*‖

2.11 Digital Stewardship: Teachers (n=5) focus on risk management and ethics in the digital realm. Strategies include teaching students the long-term impact of their digital footprints (Participant 7 & 13), diligently managing privacy settings (P4 & 13), and promoting ethical content sharing (P1 & 13). Besides, participant 4 emphasized the need for ―*separating personal from academic or professional content*‖.

3. Digital Content Creation

The EFL teachers give instruction on creating and evaluating digital content to their students:

3.1 Teaching Critical Evaluation and Fact-Checking: Strategies adopted by a good number of teachers (n=6) focused on the technical steps of validation, teaching students to check sources, verify facts, identify biases, and assess the credibility of digital materials. Teachers guide students to ―*assess sources, verify information before using*‖ (Participant 9) and to implement ―*factchecking techniques*‖ (participant 13). Teachers mentioned contextual evaluation, requiring students to ―*analyse the content from different perspectives, contextualize, relate to their lives, etc.*‖ (Participant 12), and consider the ―*sociocultural context*‖ (Participant 6) of the materials.

3.2 Utilizing Diverse Formats and Project-Based Creation: Some teachers (n=5) focus on the production process, as they instruct students on using various formats (videos, podcasts, blogs), tools, multimedia skills, and using collaborative methods like project-based learning as Participant 13 noted, where students create blogs, presentations, or videos while considering factors like audience awareness. In addition, participant 5 said, ―*I instruct them to make use of different formats and tools to create digital content. For example, they use videos, podcasts, infographics, or animations to present information.*‖

The EFL teacher teach students the ethical use of information and digital/AI-generated content:

3.3 Enforcing Academic Honesty and Plagiarism Prevention: Many teachers (n=8) focused on the core ethical requirement of academic honesty, highlighting the consequences and illegality of plagiarism. One teacher guides student to acknowledge the sources properly (Participant 12), often through the use of a reference system (Participant10). In addition, ―*the consequences of plagiarism and copy-pasting*‖ was mentioned by participant 9. Furthermore, participant 3 said, ―*I educate students by teaching proper citation for avoiding plagiarism, and hence respecting intellectual property.*‖ (Participant 3)

3.4 Management of AI Tool Usage: Many teachers (n=8) help students navigate AI's role in learning, including defining acceptable use and forbidden use. Besides, teachers mentioned the transparency of information and awareness of AI bias. Participant 4 instructs students that these powerful technologies should ―*help, rather than harm, the learning experience*‖. While another teacher suggest students should ―*not use AI tools*‖ (Participant 12), others advise students to ―*expand their boundary of ideas*‖ (Participant 5). Furthermore, Participant 4 stated, ―*I instruct them not to use AI or other immediate generating Apps for their production of English but they can use it for learning rules and methods.*‖

3.5 Foundational Documentation Practices: Almost half of the EFL teachers (n=7) referred the practical skill of referencing, teaching proper citation methods for both traditional and digital/AI sources, and acknowledging intellectual property. Participant 3 teaches proper citation for avoiding plagiarism and ―*respecting intellectual property*‖. In addition, Students

are guided by participant 12 ―*to acknowledge the sources properly*‖ and participant 4 to ―*cite it properly where ever applicable*‖.

4. Digital Safety

The EFL teachers teach students on protecting their devices and safeguarding personal information while using digital tools:

4.1 Foundational Access Security: Some EFL teachers (n=5) focus on the practices for protecting accounts and data access, specifically teaching strong passwords, multi-factor authentication, and having backup files. Participant 4 said, ―*I tell students to use strong, unique passwords and enable two-factor authentication for accounts.*‖

4.2 Device Protection & Cyber Hygiene: A few teachers (n=4) make aware students of the physical security of devices and operating environments, including using antivirus/ encryption, updating software, avoiding public Wi-Fi for sensitive tasks. Besides, Participant 13 focused on ―*password management, recognizing phishing attempts, enabling two-factor authentication, and securing personal data.*‖

4.3 Caution on Information Sharing & Privacy: Some teachers (n=5) give instruction to the students related to the conscious control of personal data, advising students on the need for privacy settings, being wary of giving access to sites, and avoiding sharing sensitive information online. In this regard participant 5 said, ―*I encourage open communication about online experiences and emphasize the importance of only sharing personal information with trusted sources.*‖

4.4 Strategy Barriers and Absence: Responses from other teachers (n=5) indicate a lack of specific methods due to perceived constraints, such as the adult status of students, the subject area (nonCSE), or simply having no significant strategy in place. *"Since we deal with tertiary level students advising on these issues may seem invading personal space. They are all adults."* (Participant 1).

The EFL teachers Promoting student well-being, screen time management, and sustainable digital resource use:

4.5 Active Management of Screen Time: Teachers (n=8) use some direct strategies to address the physical and mental strain of constant screen exposure by setting limits and encouraging rest. They focus on well-being by ―*encouraging regular breaks and setting screen time limits*‖ (Participant 4) and emphasize ―*balanced screen time*‖ (Participant 13). In online classes, Participant 12 mentioned, ―*I would give them short breaks of 2 -5 minutes when they would be writing on their notebook or brainstorming*‖. Furthermore, Participant- 7 said, ―*I recommend setting time limits on digital resources like YouTube and Messenger to ensure healthy usage.*

Additionally, I encooure the use of sustainable digital resource.‖

4.6 Digital-Life Balance: Some teachers (n=5) encourage students to get disconnected from digital devices and actively engage in physical and social activities. One teacher prioritizes ―*offline activities and physical exercise*‖ (Participant 4). Participant 1 said, ―*I encourage them (learners) to read, be involved in sports, debating, club activities etc. within the campus*‖. Besides, participant-6 noted, ―*To avoid monotony I sometimes play music or make them engaged in any vocab games.*‖

4.7 Sustainable Digital Resource Use: Few teachers (n=3) guide students towards efficient and quality use of digital materials, prioritizing valuable, consistent content over aimless browsing or blindly trusting all online platforms. Participant 4 instructs students to ―*use digital resources efficiently and prioritize quality over quantity.*‖ Participant 7 recommends *"educational YouTube channels that provide consistent, quality content without wasting time on unproductive browsing."* The guidance warns students against *"blindly trusting anything online platforms offer"* (Participant 4) and against promoting technology "for positive purposes" (Participant 9).

5. Problem-solving:

Through practical instruction, peer collaboration, and resource sharing, English language teachers collaborate with students to solve technical problems and develop digital skills.

5.1 Self-Directed and Peer Learning: The EFL teachers (n=6) focus learner autonomy. Teachers prioritize "collaboration with peers" (Participants 4 and 13) and instruct students to *"use resources such as video tutorials and forums for self-learning"* (Participants 4 and 9). Participants 7 and 9 also recommend some tools such as YouTube, TED-Ed, and Grammarly. Furthermore, Participant 4 said, ―*I help students by encouraging peer collaboration and developing a problemsolving mindset. I teach them how to use resources like video tutorials and forums for selflearning.*‖ and Participant 5 incorporates *"real-world problem-solving scenarios"* into activities.

5.2 Direct and Scaffolded Platform Instruction: Some EFL teachers (n=4) demonstrate platform features, provide step-by-step guidance for troubleshooting, and provide guided handling of technical issues. They practical ―*demo"* (P2), such as showing students *"how to use the features of the google classroom, like submitting files, how to check comments"* (Participant 12). In addition, Participant 13 stated, *"I support students by providing step-by-step guides on troubleshooting common technical issues through Google Classroom and shared resources."*

5.3 Formal Assessment and Individualized Support: Few teachers (n=2) focus on digital competency as a gap requiring formal identification through assessments, followed by targeted, individualized support, mentorship, or recommended workshops. Participant 4 instructs students to "identify digital competency gaps through assessments" and

recommends them ―*tools and workshops to strengthen their skills*‖. Besides, participant 5 offers ―*individualized support through mentorship or online tutoring*‖.

5.4 Strategy Barriers and Assumed Competency: Responses from some EFL teacher (n=4) that indicate no specific strategy and believe that students already possess greater technical knowledge than the instructors that limits the need for instruction. A teacher expressed, ―S*tudents know better than us to solve technical problems. Often then end up helping teachers*‖ (Participant 1).

Discussion

The findings of the research indicate the state of digital citizenship proficiency among EFL students at private universities in Bangladesh as well as the strategies used by English language teachers in assisting students develop these skills. The quantitative data indicate that students possess moderate competency across the five key dimensions of DigComp 2.2 framework, with the highest scores in digital safety (3.73/5) and the lowest in digital content creation (3.37/5). These findings correspond to prior research (Nguyen & Habók, 2021; Şenel, 2022), that put forward that students are usually cognizant of digital safety, but they grapple with digital skills such as content creation and critical evaluation of information and content. The remarkable performance in digital safety may be traced to increased cybersecurity awareness (Althibyani & Al-Zahrani, 2023), whereas the lower scores in content creation indicate a gap in digital authorship, multimedia production, and ethical publishing (Jeanneau & Ollivier, 2023). The moderate scores in information literacy (3.65/5) and problem-solving (3.51/5) manifest a progressive but partial integration of digital skills in terms of research in EFL curricula. Though students may gain entry to digital resources, they may lack awareness and practice in source evaluation, fact-checking, and synthesizing digital information skills that are paramount for academic integrity (FernándezPrados et al., 2021). The results align with research carried out in Vietnam (Nguyen & Habók, 2021) and Iran (Alavijeh & Abdollahi, 2021), where EFL students displayed comparable deficiencies in digital literacy.

The study also investigated whether significant gender-based differences exist in EFL learners' citizenship competence at private universities in Dhaka, Bangladesh. The result indicated gender does not play a meaningful role in predicting digital citizenship competence differences across any of the five sub themes, information and digital literacy, communication and collaboration, digital content creation, digital safety, and problem solving within this cohort. Although female learners demonstrated marginally higher mean scores in all dimensions, these differences were negligible in magnitude (all $p > .34$, $g < 0.20$).

The qualitative responses from English teachers accentuated a range of effective pedagogical strategies for promoting digital citizenship, but inconsistency has been reflected in their practice. Many teachers reinforce critical source evaluation, digital etiquette, and ethical use information and digital content. However, the lack of methodical instruction in content creation, collaboration tools, and institutional policies indicate a custom-made practice where curriculum-integrated

approach to digital citizenship in EFL education is not asserted. Because most students depend on mobile phones, have limited data, and face unstable campus Wi-Fi, they tend to focus on low-data activities like messaging and sharing instead of higher-level tasks such as checking information sources or creating multimedia content.

Notably, the teachers mostly depend on some common platforms like Google Classroom, WhatsApp, etc. for academic communication, but they may not fully help learners develop advanced digital competencies. These platforms ensure basic collaboration (Fan, 2022). Teachers could promote multimodal content creation (e.g., podcasts, infographics, digital storytelling), which is indispensable for modern digital literacy (Jiang & Gao, 2020). The absence of structured instruction in digital identity management further indicates a gap in preparing students for their academic and professional online engagement (Henry et al., 2021). National and institutional digital literacy standards primarily focus on functional and safety-oriented skills, such as information retrieval, communication, and online etiquette, while largely neglecting productive and creative dimensions of digital literacy and citizenship. Without policy mandates prioritizing content creation, universities rarely provide curricular space, assessment incentives, or technological support for such practices.

Conclusion

In the 21st century, digital citizenship has become a significant component of modern education including English as a Foreign Language (EFL) context, where digital literacy intersects with language learning. This research examined the digital competencies of EFL learners in private universities in Dhaka in Bangladesh explored the pedagogical strategies applied by English language educators to promote these competencies. The findings of the study reflected that while students possess moderate proficiency in areas such as digital safety and information literacy, significant gaps exist in digital content creation, collaboration, and critical evaluation of information and digital/AI-generated content. Besides, there is no significant gender-based difference in digital citizenship competence among EFL learners in private universities in Dhaka, Bangladesh where male and female learners demonstrated comparable proficiency across all dimen-sions of digital citizenship, including in-formation and data literacy, collaboration, content creation, safety, and problem solving.

Digital citizenship should be integrated in EFL curriculum instead of being left to English educators' initiatives. Institutions of higher education may adopt frameworks such as DigComp 2.2 or ISTE Standards (International Society for Tech-nology in Education), as both of these frameworks highlight the need for struc-tured curriculum-integrated digital citizen-ship education, while ISTE places a more explicit emphasis on ethical and civic en-gagements (Bal & Akcil, 2024; Buchholz et al., 2020). Besides, as according to Çukur (2023) many English language educators lack training in advanced digital pedagogies, professional skill development sessions in EFL education in higher education should focus more on AI literacy, digital storytelling, digital

identity management, ethical AI use, misinformation resistance and cybersecurity. Furthermore, institutions should provide access to collaborative platforms (e.g., Padlet, Jamboard, Slack) in order to improving interactive learning for students (Jeanneau & Ollivier, 2023). In EFL learning environment, more importance should be placed on project-based learning (PBL) and Digital Multimodal Composing (DMC) to improve content creation skills (Jiang & Gao, 2020).

Future research would explore the long-term impact of digital citizenship interventions and comparative studies across different educational contexts including public universities to refine best practices. The findings are derived from participants' self-reported data, which may be subject to respondent bias. Therefore, further investigation may include observational data such as classroom observation and assessment documents.

The Authors:

Zohur Ahmed is an Assistant Professor at East West University, Bangladesh. Currently, he is pursuing his PhD from Universiti Sains Malaysia. He holds MA English (TESL) and M.Phil. in ELE from Central Institute of English and Foreign Languages, Hyderabad, India. His research interests include ICT in Language Teaching, SLA, Curricular Innovations, Language Testing and Evaluation.

Khaled Mahmud is a lecturer in the Department of English at Eastern University, Bangladesh. He is pursuing an M.Ed. in TESOL at the Institute of Education and Research (IER), University of Dhaka. He also holds an MA in English Language Teaching from East West University. His research interests include the integration of technology in ELT, assessment, and inclusive language education.

References

Akcil, U., & Baştaş, M. (2020). Examination of university students' attitudes towards e-learning during the COVID-19 pandemic process and the relationship of digital citizenship. *Contemporary Educational Technology*.

Alakrash, H. M., & Abdul Razak, N. (2021). Technology-based language learning: Investigation of digital technology and digital literacy. *Sustainability.*

Alavijeh, K. K., & Abdollahi, A. (2021). Awareness and incorporation of digital citizenship by the Iranian EFL learners and teachers.

Althibyani, H. A., & Al-Zahrani, A. M. (2023). Investigating the effect of students' knowledge, beliefs, and digital citizenship skills on the prevention of cybercrime. *Sustainability.*

Alkhalaf, A. K. (2024). University Students' Perceptions and Prac-tices of online co-construction of digital citizenship competencies. *International Journal of Emerg-ing Technologies in Learning (iJET), 19*(08), 32–47. https://doi.org/10.3991/ijet.v19i08.52543

Buchholz, B. A., DeHart, J., & Moorman, G. (2020). Digital Citi-zenship During a Global Pandem-ic: Moving beyond digital literacy. *Journal of Adolescent & Adult Literacy, 64*(1), 11–17. https://doi.org/10.1002/jaal.1076

Bal, E., & Akcil, U. (2024). The implementation of a sustainable online course for the development of digital citizenship skills in higher education. *Sustainability.*

Cao, J., Bhuvaneswari, G., Arumugam, T., & Aravind, B. R. (2023). The digital edge: Examining the relationship between digital competency and language learning outcomes. *Frontiers in Psychology, 14*, 1187909. https://doi.org/10.3389/fpsyg.2023.1187909

Council of Europe. (2017). *Digital citizenship education: Working conference "Empowering digital citizens".* Council of Europe.

Çukur, H. S. (2023). Technology integration beliefs and practices of Turkish novice EFL teachers after online practicum. *The Turkish Online Journal of Distance Education.*

Dewi, S., Misnawati, M., Hayati, R., Zuhra, I., & Misnar, M. (2023). Merdeka Belajar–Kampus Merdeka (MBKM) to strengthen the culture and citizenship literacy of EFL pre-service teachers. *Studies in English Language and Education.*

Fajri, I., Budimansyah, D., & Komalasari, K. (2022). Digital citizenship in civic education learning: A systematic literature review. *Jurnal Ilmiah Peuradeun.*

Fan, X. (2022). The development of EFL learners' willingness to communicate and self-efficacy: The role of flipped learning approach with the use of social media. *Frontiers in Psychology.*

Fernández-Prados, J. S., Lozano-Díaz, A., & Ainz-Galende, A. (2021). Measuring digital citizenship: A comparative analysis. *Informatics, 8*(1), 18. https://doi.org/10.3390/informatics8010018

Gee, J. P. (2004). *Situated language and learning: A critique of traditional* schooling. Routledge.

Gillern, S. V., Rose, C., & Hutchison, A. (2024). How students can be effective citizens in the digital age: Establishing the Teachers' Perceptions on Digital Citizenship Scale. *British Journal of Educational Technology, 55*, 2093–2109.

Heath, M. K. (2020). *Digital citizenship. Education.*

Indah, R. N., Toyyibah, Budhiningrum, A. S., & Afifi, N. (2022). The research competence, critical thinking skills, and digital literacy of Indonesian EFL students. *Journal of Language Teaching and Research.*

Jæger, B. (2021). Digital citizenship – A review of the academic literature. *Der moderne Staat – Zeitschrift für Public Policy, Recht und Management.*

Jeanneau, C., & Ollivier, C. (2023). Training citizens as users of languages and digital technology: Real-world tasks to tame the digital wilds. *Language Learning in Higher Education, 13*, 591–598.

Jiang, L., & Gao, J. (2020). Fostering EFL learners' digital empathy through multimodal composing. *RELC Journal.*

Kiger, M. E., & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher, 42*(8), 846–854. https://doi.org/10.1080/0142159X.2020.1755030

Lankshear, C., & Knobel, M. (2011). *New literacies: Everyday practices and social learning (3rd ed.).* Open University Press.

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

Lozano-Díaz, A., & Fernández-Prados, J. S. (2020). Educating digital citizens: An opportunity to critical and activist perspective of Sustainable Development Goals. *Sustainability, 12*(18), 7313. https://doi.org/10.3390/su12187313

Michelle E. Kiger, & Lara Varpio. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. *Medical Teacher, 42*(8), 846–854. https://doi.org/10.1080/0142159X.2020.1755030

Mudra, H. (2020). Digital literacy among young learners: How do EFL teachers and learners view its benefits and barriers? *Teaching English with Technology, 20*, 3–24.

Nguyen, L., & Habók, A. (2021). Digital literacy of EFL students: An empirical study in Vietnamese universities. *Libri.*

Nugroho, A., & Atmojo, A. E. (2020). Digital learning of English beyond classroom: EFL learners' perception and teaching activities. *JEELS (Journal of English Education and Linguistics Studies).*

Pandya, J. Z. (2018). *Exploring critical digital literacy practices: Everyday video in a dual language context.* Routledge.

Prasetiyo, W. H., Sumardjoko, B., Muhibbin, A., Naidu, N. B. M., & Muthali'in, A. (2023). Promoting digital citizenship among student-teachers: The role of project-based learning in improving appropriate online behaviors. *Participatory Educational Research.*

Rezai, A. (2023). Investigating the association of informal digital learning of English with EFL learners' intercultural competence and willingness to communicate: A SEM study. *BMC Psychology.*

Senos, S., João, G., Loureiro, M. J., Torres, J., & do Rosário, R. M. (2024). Digital citizenship in secondary education: The project ―The Internet as we see it‖. *Educational Media International, 61*, 368–382.

Şenel, M. (2022). Investigating the digital citizenship levels of ELT students within the scope of remote learning. *Journal of English Language Teaching and Linguistics, 7*(2), 323–339. https://doi.org/10.21462/jeltl.v7i2.845

Selwyn, N. (2022). *Education and technology: Key issues and debates (3rd ed.).* Bloomsbury Academic.

Simões, A. R., Senos, S., & Coronha, M. (2024). Digital citizenship education – Training opportunities for foreign language teachers. *Educational Media International.*

Street, B. V. (1995). *Social literacies: Critical approaches to literacy in development, ethnography and education.* Longman.

Vuorikari, R., Kluzer, S., & Punie, Y. (2022). *DigComp 2.2: The Digital Competence Framework for citizens – With new examples of knowledge, skills and attitudes* (EUR 31006 EN). Publications Office of the European Union. https://doi.org/10.2760/115376

Yue, A., & Beta, A. R. (2022). Digital citizenship in Asia: A critical introduction. *International Communication Gazette, 84,* 279–286.