DIDACTIC OPPORTUNITIES FOR DEVELOPING DIGITAL LITERACY IN TEACHING ENGLISH

Sherimbetova Nasiba Ravshanbek qizi
Teacher at Everest Educational Center
sherimbetovanasibaa@gmail.com

Abstract. Digital literacy has become a key learning outcome of higher education, and English language teaching (ELT) offers particularly rich conditions for its development because the English-language internet is simultaneously a source of input, a space for interaction and a medium for creative production. The purpose of this article is to identify and systematise the didactic opportunities of ELT for developing students' digital literacy and to test their effectiveness in practice. The theoretical basis combines the four-foci model of digital literacies proposed by Dudeney, Hockly and Pegrum, the DigComp 2.2 framework, the TPACK model and the SAMR model of technology integration.

Keywords: *digital literacy, ELT, didactic opportunities, DigComp, SAMR, TPACK, multimodal literacy, EFL students*

1. INTRODUCTION

The concept of digital literacy was introduced by Gilster (1997) as the ability to understand and use information in multiple formats from a wide range of sources presented via computers. Since then it has expanded to encompass technical, cognitive, socio-emotional and creative dimensions (Eshet-Alkalai, 2004). The European DigComp 2.2 framework (Vuorikari et al., 2022) describes digital competence through five areas: information and data literacy, communication and collaboration, digital content creation, safety and problem solving. For teachers, the DigCompEdu framework (Redecker, 2017) specifies that educators should not only use technology themselves but also facilitate learners' digital competence.

English occupies a special position in this landscape. It is the dominant language of online content, software interfaces, scientific databases and international digital communities. Consequently, the English lesson is a natural space where language learning and digital literacy development can reinforce each other (Chun, Kern & Smith, 2016). Dudeney, Hockly and Pegrum (2013) argue that language teachers are responsible for helping learners develop digital literacies because "to teach language solely through print literacy is, in the early 21st century, to shortchange our students". In Uzbekistan, the Digital Uzbekistan – 2030 Strategy and national measures on improving foreign language teaching create a policy basis for such integration.

Yet the integration of technology into ELT is often limited to the *substitution* level: printed texts are replaced by PDF files, and blackboards by slides. Puentedura's (2006) SAMR model and Mishra and Koehler's (2006) TPACK framework show that technology changes learning only when it is connected with content and pedagogy in a purposeful way. The research problem, therefore, is not whether digital tools should be used in ELT, but which didactic opportunities of the English lesson can be systematically employed to develop students' digital literacy.

The aim of the study was (1) to systematise the didactic opportunities of ELT for developing digital literacy, (2) to examine how EFL teachers perceive these opportunities, and (3) to evaluate the effectiveness of a model based on these opportunities.

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1.1. Theoretical framework

The study draws on the four-foci model of Dudeney et al. (2013), which groups digital literacies around language, information, connections and (re-)design (Figure 1). The *language focus* covers print, texting, hypertext, multimedia, gaming, mobile and code literacies; the *information focus* includes tagging, search, information and filtering literacies; the *connections focus* includes personal, network, participatory and intercultural literacies; and the *(re-)design focus* refers to remix literacy, the ability to create new meanings from existing content. Each focus corresponds to specific communicative activities described in the CEFR, which makes the model especially suitable for language education.

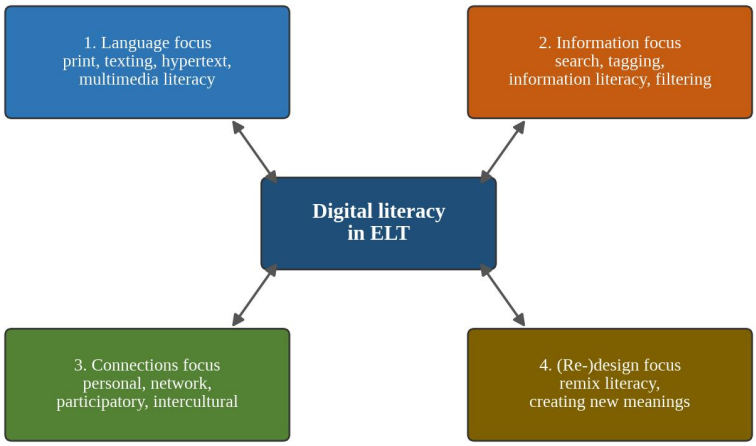

Figure 1. *Four foci of digital literacies in ELT (adapted from Dudeney, Hockly & Pegrum, 2013)*

The SAMR model (Figure 2) was used to describe the depth of technology integration. At the enhancement levels (substitution and augmentation) technology makes existing tasks more convenient; at the transformation levels (modification and redefinition) it enables tasks that were previously impossible, such as co-authoring texts with peers in real time or publishing a podcast for an international audience. Digital literacy develops most intensively at the transformation levels, where learners must search, evaluate, communicate, create and act responsibly online.

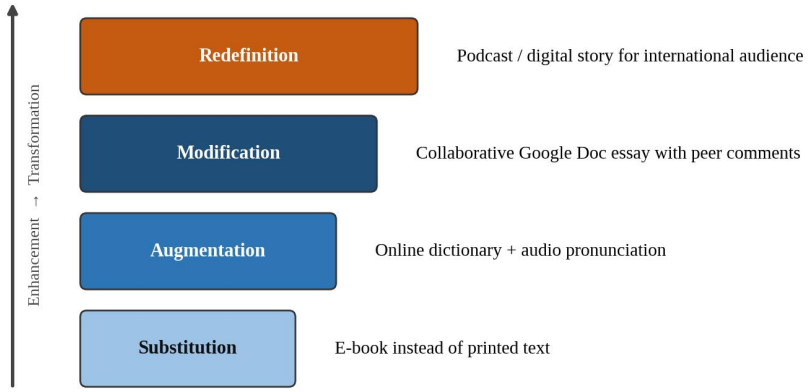

Figure 2. *SAMR levels of technology integration with ELT examples (based on Puentedura, 2006)*

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2. MATERIALS AND METHODS

A convergent mixed-methods design was applied. **Stage 1** consisted of a survey of 84 EFL teachers from schools, academic lyceums and universities in five regions of Uzbekistan (teaching experience 2–31 years, M = 11.4). The questionnaire contained 21 Likert-scale items on perceived opportunities and barriers and three open questions (Cronbach's α = .86). **Stage 2** was a 12-week quasi-experiment with 55 first-year students of a pedagogical university (B1 level): the experimental group (EG, n = 28) studied according to the proposed model, and the control group (CG, n = 27) followed the standard programme with the same topics.

Digital literacy was measured with a 25-item self-assessment and performance instrument adapted from DigComp 2.2 proficiency descriptors and covering five areas (information, communication, content creation, safety, problem solving). The resulting *digital literacy index* was calculated as the mean score on a five-point scale and measured four times (weeks 0, 4, 8 and 12). Performance tasks (e.g., finding and evaluating a source, creating a short multimodal text) were scored by two raters (κ = .81). Data were analysed using descriptive statistics, t-tests and repeated-measures ANOVA; open answers were analysed thematically.

The experimental model was built on a matrix that links each language skill with specific digital literacy components and tools (Table 1). Tasks were designed to move gradually from the enhancement to the transformation levels of SAMR.

Table 1. *Matrix of didactic opportunities: language skills and digital literacy components*

Language skill	**Digital literacy component (DigComp area)**	**Example of a didactic task**	**SAMR level**
Reading	Browsing, searching, evaluating information (1.1–1.2)	WebQuest: find three sources on a topic and justify their reliability	Augmentation / Modification
Listening	Multimedia literacy; managing content (1.3)	Curate a playlist of podcasts with annotations in English	Modification
Speaking	Interacting and collaborating through digital technologies (2.1, 2.4)	Video exchange with partner students abroad; online debate	Redefinition
Writing	Developing and integrating content; copyright (3.1–3.3)	Collaborative blog with peer comments and correct licensing of images	Modification / Redefinition
Vocabulary	Tagging and filtering; problem solving (5.2)	Build a shared digital glossary using corpus tools and online dictionaries	Augmentation

3. RESULTS

3.1. Teachers' perceptions of didactic opportunities

Figure 3 shows the share of teachers who agreed or strongly agreed that the English lesson provides a particular opportunity for developing digital literacy. Teachers clearly recognised the

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motivational and resource-related potential of ELT, but paid less attention to critical and ethical components. Only 47% saw the English lesson as a place for developing digital safety and netiquette, although these topics are closely connected with online communication in English.

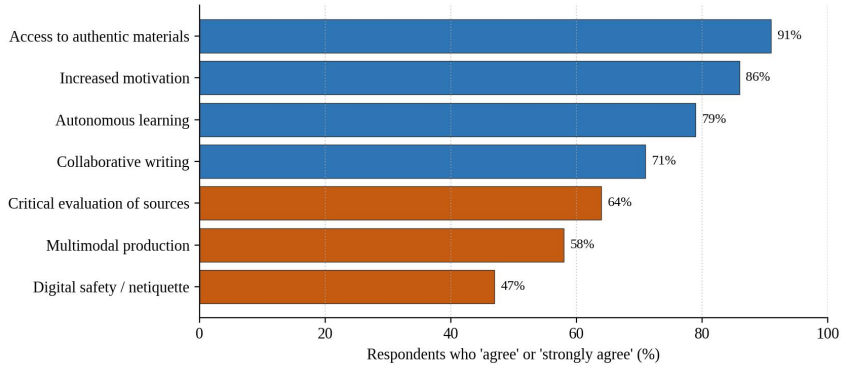

Figure 3. *EFL teachers' perceptions of didactic opportunities for developing digital literacy (N = 84)*

The open answers revealed three main barriers: insufficient teacher training in digital pedagogy (mentioned by 62% of respondents), unstable internet access and equipment in classrooms (48%), and the absence of digital literacy objectives in curricula and assessment (41%). Several teachers noted that they "use technology every lesson, but never teach how to use it critically", confirming the gap between tool use and literacy development.

3.2. Effectiveness of the experimental model

The dynamics of the digital literacy index are presented in Figure 4. The groups did not differ at week 0 ($t(53) = 0.42$, $p = .68$). Repeated-measures ANOVA revealed a significant time × group interaction, $F(3, 159) = 58.7$, $p < .001$, partial $\eta^2 = .53$. The growth in the EG was steady across all measurement points, whereas the CG showed only minor improvement.

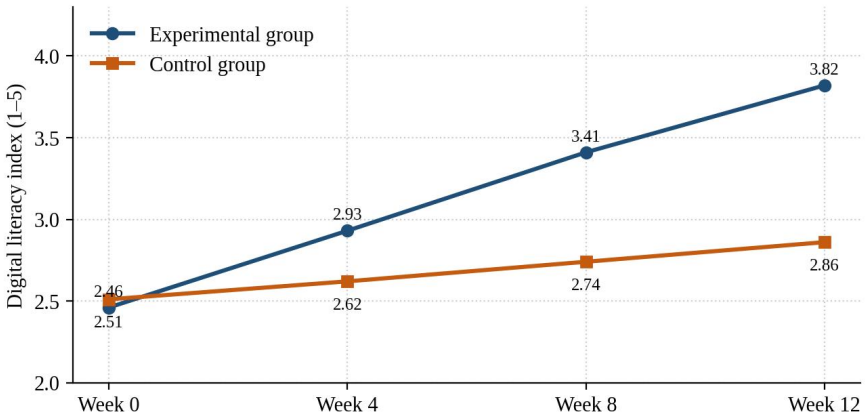

Figure 4. *Dynamics of the digital literacy index in the experimental and control groups*

Table 2 presents the results by DigComp area. The largest differences at the post-test were found in digital content creation and in information and data literacy, i.e., in the areas most directly supported by the writing and reading tasks of the model. The smallest, though still significant, difference was in safety.

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Table 2. *Post-test results by digital competence area (1–5 scale)*

DigComp area	EG pre	EG post	CG pre	CG post	t(53), post	p
Information and data literacy	2.38	3.91	2.44	2.83	7.62	< .001
Communication and collaboration	2.71	3.87	2.69	3.02	6.15	< .001
Digital content creation	2.19	3.84	2.26	2.61	8.04	< .001
Safety	2.52	3.56	2.58	2.97	3.48	.001
Problem solving	2.49	3.90	2.57	2.88	6.37	< .001
Digital literacy index (mean)	2.46	3.82	2.51	2.86	7.29	< .001

3.3. Qualitative findings

Reflective portfolios of EG students (n = 28, 196 entries) were analysed to understand how students experienced the model. Three themes emerged. First, students reported **growing confidence in using English for real digital purposes**: "For the first time I wrote a comment to a foreign blogger and he answered me". Second, they became **more aware of authorship and copyright**: many admitted that they had previously copied pictures and texts without attribution and now used Creative Commons search and citation. Third, students highlighted **collaboration**: shared documents and peer comments made writing "less lonely" and helped them notice their own mistakes. At the same time, some students complained about information overload and the time needed to evaluate sources, which indicates that digital tasks should be carefully scaffolded and time-limited.

The observation of lessons also allowed us to identify the digital tools that were most productive for particular didactic purposes. They are summarised in Table 3; the list is illustrative, since specific tools change quickly, while the underlying literacy goals remain stable.

Table 3. *Examples of digital tools used in the model and their didactic functions*

Didactic function	Examples of tools	Digital literacy developed
Access to authentic input	BBC Learning English, TED-Ed, news websites, podcasts	Multimedia and information literacy
Searching and evaluating	Advanced search operators, Google Scholar, fact-checking sites	Search, filtering and information literacy
Collaborative writing	Google Docs, Padlet, class blog on an LMS	Participatory and network literacy
Vocabulary and language data	Online learner dictionaries, corpus tools (e.g., SkELL), Quizlet	Hypertext and code-aware literacy
Multimodal production	Canva, podcasting and video-editing apps	Multimedia and remix literacy

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Didactic function	Examples of tools	Digital literacy developed
Reflection and assessment	E-portfolios, online quizzes, self-assessment checklists	Personal literacy and digital identity

4. DISCUSSION

The findings confirm that the English lesson contains a wide range of didactic opportunities for developing digital literacy, and that these opportunities are realised most effectively when language tasks are designed at the transformation levels of SAMR. This is consistent with the TPACK view that the value of technology depends on its integration with content and pedagogy (Mishra & Koehler, 2006), and with Hockly's (2012) argument that digital literacies should be taught explicitly rather than assumed.

The survey revealed an imbalance in teachers' perceptions: resource and motivation opportunities are well recognised, whereas critical, ethical and safety opportunities are underused. This mirrors international findings that young people's everyday familiarity with technology does not translate into critical digital skills (van Deursen & van Dijk, 2014). The experimental results show that the underused areas can be developed through ordinary language tasks, for instance by asking students to justify source choices in a WebQuest or to license images correctly in a class blog.

Based on the results, the didactic opportunities of ELT for developing digital literacy can be grouped into five categories: (1) *content* opportunities (authentic multimodal materials in English); (2) *procedural* opportunities (search, evaluation and organisation of information as part of reading and research tasks); (3) *communicative* opportunities (online interaction, telecollaboration and intercultural exchange); (4) *creative* opportunities (production of blogs, podcasts, digital stories and remixes); and (5) *reflective-ethical* opportunities (netiquette, copyright, digital footprint and safety). Table 4 outlines the pedagogical conditions required to realise these opportunities.

Table 4. *Pedagogical conditions for realising the didactic opportunities*

Condition	Content	Responsible level
Curricular	Explicit digital literacy objectives in EFL syllabi and assessment criteria	Department, curriculum designers
Methodological	Task design at SAMR transformation levels; project-based and blended learning	Teacher
Professional	Teacher training based on DigCompEdu and TPACK	University, in-service institutes
Technical	Reliable internet access, LMS (e.g., Moodle), BYOD policy	Administration
Reflective	Learner portfolios, self-assessment against DigComp descriptors	Teacher and students

A further implication concerns the assessment of digital literacy in ELT. At present, English courses are usually assessed only through language outcomes, which makes digital literacy invisible in the final grade. The experience of this study shows that DigComp proficiency descriptors (Vuorikari et al., 2022) can be adapted into simple can-do statements and combined with language criteria in the same

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rubric: for instance, a collaborative blog post can be evaluated for accuracy and coherence of English as well as for the quality of sources, correct licensing of images and appropriateness of online communication. Such integrated assessment encourages both teachers and students to treat digital literacy as an organic part of language competence rather than as an additional technical skill. It is also consistent with the DigCompEdu requirement that educators empower learners to use digital technologies creatively, critically and responsibly (Redecker, 2017).

English language teaching has significant and still underused didactic potential for developing students' digital literacy. The study systematised this potential into content, procedural, communicative, creative and reflective-ethical opportunities, and linked them to specific language skills through a practical matrix. The experimental model produced a significant increase in all five areas of digital competence, especially in information literacy and content creation. To realise this potential on a wider scale, it is recommended to include digital literacy outcomes in EFL curricula, to design tasks at the transformation levels of technology integration, and to provide systematic professional development for English teachers in digital pedagogy.

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