ENGLISH BOOST LIVE - SCALABLE, CUSTOMIZABLE LANGUAGE TRAINING WITHIN THE MOODLE ECOSYSTEM

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— FULL PAPER —

***TOPIC**: E-learning in the context of Army*

Abstract

This presentation addresses a key challenge in digital language education: how to design and deliver scalable, pedagogically sound distance learning using the native tools of Moodle, without depending on Artificial Intelligence (*AI*). It introduces a micro-teaching-based course format, English Boost Live (*EBL*), developed within Moodle, showing how a structured *LMS* ecosystem can support high-impact, learner-centred instruction. This approach exemplifies integrated language training, blending synchronous and asynchronous elements with scaffolded, collaborative, cognitive and communicative tasks. The course combines some of the asynchronous tools of Moodle with live sessions via BigBlueButton (*BBB*), following a weekly cycle grounded in Task-Based Language Teaching (*TBLT*). The format fosters engagement, learner autonomy and metacognitive reflection, focusing on learner needs and participation, motivation and relevance. Course design and modular learning objects (*LOs*) align with Bloom-Anderson Taxonomy. The model suits diverse learner profiles and has been replicated at different English levels, with plans for other languages. It supports a glocal vision for lifelong language education through scalable, customizable and impactful training.

Keywords – Language Training, *TBLT*, Learner Autonomy, Digital Micro-teaching, Moodle Ecosystem, Collaborative Learning.

1 INTRODUCTION

The aim of this paper is to present the project of a blended English language course, English Boost Live (*EBL*), designed within the Moodle-based “Portale delle Lingue” (*PdL*) of the Italian Army Language School (“Scuola Lingue Estere Esercito”, *SLEE*). *SLEE* provides language training in various languages to Army personnel and promotes lifelong language learning through the courses running on the *PdL*. The platform is part of the broader digital learning ecosystem of the Italian Army, continually enhanced to support Moodle-based learning in military education [9]. A core course of the *PdL* is the "Corso di Mantenimento di Inglese" (*CDMI*), which supports self-paced learning in line with the NATO Standardisation Agreement (*STANAG*) 6001 language scale. The *EBL* model recently developed illustrates this potential through an evidence-based blended learning experience. It shows how Moodle supports personalisation, cooperation and multilingual flexibility without relying on *AI*. This is achieved through its native tools and instructional design. Since 1999, the School has been offering e-learning language courses through early distance-learning platforms. However, the limited interactivity of earlier platforms prompted the adoption of Moodle to foster collaboration, optimise course design and improve delivery through learning analytics. This transition marked a major step in the digital transformation of language training across multiple languages. The modular structure of Moodle enabled teachers to devise courses that integrate self-paced and interactive components, combining educational and instructional design in a coherent framework. The recently developed *EBL* model is a blended, task-based and adaptive course. This project inspired a parallel micro-course for a workshop addressing

teachers. The aim was to familiarise them with the Moodle and *BBB* environment along with task-based and learner-centred digital teaching.

2 OVERVIEW OF THE ENGLISH BOOST LIVE MODEL

Sections 2.1 – 2.10 provide a detailed illustration of the blended model, designed for and delivered in micro-teaching mode. One of the core English courses running on the *PdL* of the School is *CDMI*, intended for self-study. *CDMI* addresses pre-intermediate, intermediate, upper-intermediate and advanced learners of English. It includes two areas, containing several learning paths populated with stand-alone *LOs*. The learning paths and *LOs* in those areas target learners with Standard Language Proficiency levels (*SLPs*) 2 and 3 against the *STANAG* 6001 scale. There is no official correspondence between *STANAG* 6001 levels and those of the Common European Framework of Reference for Languages (*CEFR*). Approximate equivalence

- STANAG 6001 SLP 2 corresponds to CEFR B1 - B1+
- STANAG 6001 SLP 3 corresponds to CEFR C1 - C1+

2.1 Rationale for a micro-teaching/micro-learning model

The idea for developing a blended course based on micro-teaching/micro-learning for *CDMI* originated from the need to enhance learners' productive skills while optimising time and human resources. Many learners were already practicing autonomously through the learning paths and *LOs* of *CDMI*. The design challenge was to create a user-friendly, replicable format that took into account time and human resource-related constraints. It had to maximise one-hour synchronous practice in *BBB* while maintaining educational coherence and engagement. Those limitations were turned into opportunities by building a potentially adaptable format that integrated collaborative tools and learning analytics.

2.2 Course structure and learner profile

EBL was designed and implemented within the *CDMI* programme as a single course model offered at two different proficiency levels.

- Course format: blended micro-teaching/micro-learning model
- Participants: two groups of six learners
- Levels
    - Functional Level: STANAG 6001 SLP 2 - CEFR B1 - B1+
    - Professional Level: STANAG 6001 SLP 2+ - 3 - CEFR B2 - B2+ - C1
- Duration: eight weeks
- Delivery period: May-June 2025
- Structure: one live session per week (1 hour via BBB), preceded and followed by asynchronous tasks on Moodle
- Learning focus: development of speaking and writing skills
- Official achievement test: not foreseen

2.3 Course objectives

The main aim of the course was to offer live practice via the *BBB* virtual room to users previously engaged in self-study with the *LOs* of *CDMI*. More specifically, the course had three educational objectives

- To increase learner autonomy
- To promote collaboration

- To create an adaptable, replicable and scalable model

2.4 Course philosophy, weekly learning cycle and learner workload

The model blends asynchronous and synchronous learning into a single cycle, using the native tools of Moodle and *LOs* created with *XERTE* online Toolkits (*XERTE*), which is integrated in the ecosystem of the *PdL* (Figure 1 – Integration of English Boost Live into the "Corso di Mantenimento di inglese").

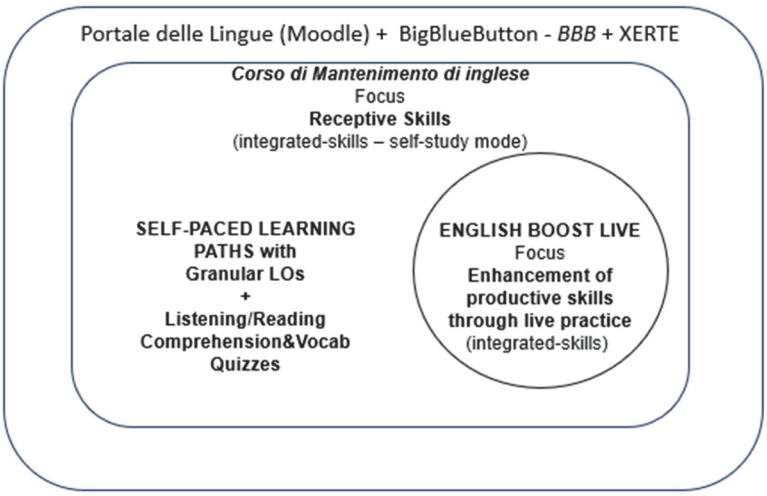

Figure 1 – Integration of English Boost Live into the "Corso di Mantenimento di inglese"

The model provides human-controlled adaptivity through design, e-moderation and learning analytics. The teacher's moderation guides learner progression and engagement. A core principle of language training at the School is that innovation should enhance rather than replace the human dimension of teaching and sustain learner motivation and engagement. In line with that, the *EBL* design promotes active participation and autonomy, while supporting learner collaboration and reflection within both the asynchronous and synchronous stages. The model applies the principles of *TBLT* and micro-teaching/micro-learning. Learners engage in short, goal-oriented tasks that reproduce real communication and professional contexts. The course model consists of two asynchronous phases: one before and one after a live session (Figure 2 – English Boost Live weekly learning cycle).

- Pre-session - asynchronous preparation and exposure to input
- Live session - synchronous practice in the BBB virtual classroom
- Post-session - consolidation and reflection through Moodle activities

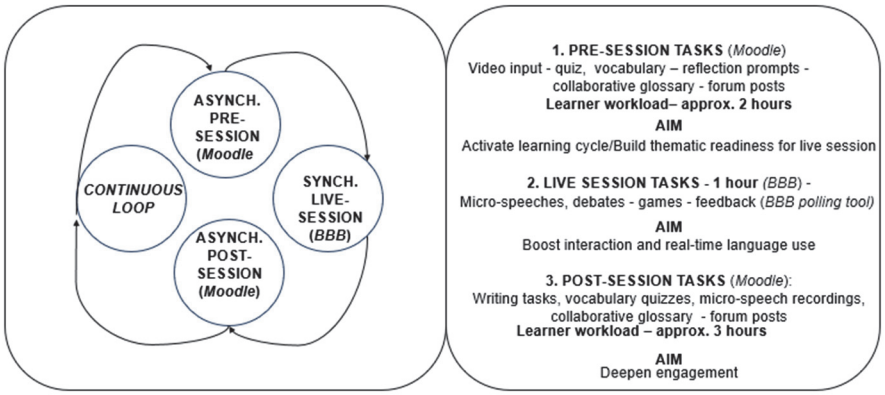

Figure 2 – English Boost Live weekly learning cycle

This pattern promotes learner engagement and autonomy: an approach that ensures progressive skill development while respecting the time constraints of military personnel. For each weekly cycle, a minimum of five hours of autonomous asynchronous work was planned: approximately two hours of preparation before the live session and three hours of consolidation afterwards. Those activities required no direct teacher involvement, but learner progress was monitored through Moodle tools. Across the eight-week course, the average preparation and consolidation workload per learner was about forty hours.

2.5 Course layout and cognitive scaffolding

The course architecture translates educational design into a digital ecosystem built entirely with Moodle native tools and integrated applications (Figure 3 – Moodle tools and activities in English Boost Live). Each component supports a specific function while contributing to both skill progression and metacognitive growth. The main components include

- Moodle tools and activities (Lesson, Quiz, Forum, Page, Assignment/Homework) for content delivery, collaboration and feedback
- *BBB* for synchronous sessions, promoting real-time communication
- *XERTE*-based *LOs* to be used during the pre-session phase

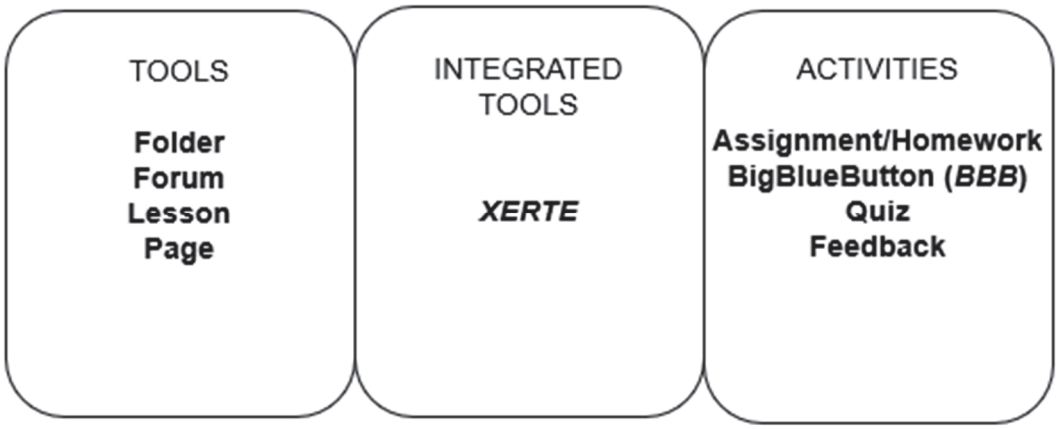

Figure 3 – Moodle tools and activities in English Boost Live

The two pilots had an identical layout

- File: course main info
- Forum: news
- Page: course overview
- Page: *FAQs*
- Page: instructions
- *BBB*: virtual room
- Folder: pre-session/post-session cards in sub-folders, made available on a weekly basis
- Forum: English humour - learner contributions
- Forum: student forum
- Toolkit section
    - Page: grammar links
    - Page: online dictionary links

- 8 weekly sections: one per week, each including
    - Assignment/Homework - text and audio assignments
    - Glossary - collaborative glossary on a weekly topic
- Learner self-assessment section
    - Final Quiz on vocabulary and grammar
- Conclusion section
    - Page – conclusions
- Survey: learner feedback

The design aligns with the Bloom-Anderson taxonomy (Figure 4 – Weekly task evaluation against Bloom-Anderson taxonomy). This mapping ensured that each digital activity, whether receptive or productive, fostered an appropriate cognitive process, from remembering and understanding, to applying and creating.

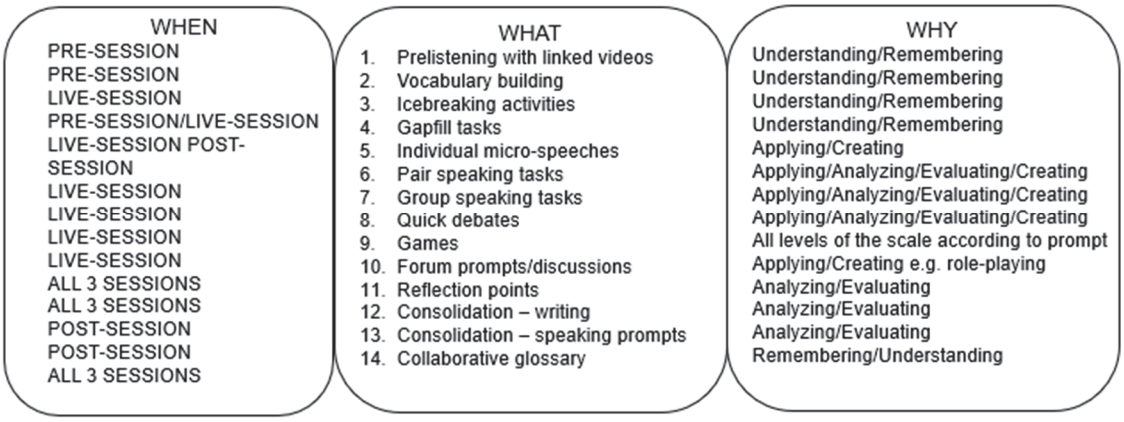

Figure 4 – **Weekly task evaluation against Bloom-Anderson taxonomy**

2.6 Digital implementation and enhancement

During the initial development phase, pre-session, live-session and post-session cards were made available to the learners of the two groups within a folder named “Resources”, included in the layout of both courses. This simple structure enabled efficient distribution of content, clear sequencing and sustained learner engagement. In the current stage, these cards are being progressively redesigned as Moodle Lessons, allowing adaptive navigation, integrated real-time feedback and detailed learner tracking. This evolution highlights the inherent fluidity of Moodle as a pedagogical ecosystem. It also enables teachers to work in successive phases: starting with quick and accessible tools such as Folders and Pages and then advancing to more structured and interactive formats, thereby optimising both time management and instructional design. The ongoing redesign using the Lesson tool is transforming the course into a guided digital environment that integrates texts, audio, videos and quizzes, which enhances learner motivation.

2.7 Learning objects and replicability

Resorting to some selected *LOs* of *CDMI* in the asynchronous pre-session phase, intended as preparation of the live session in *BBB*, made it possible to select reusable and adaptable content. Each *LO* includes objectives, input, practice, production and reflection. Two main versions, receptive and productive, cover listening/reading and speaking/writing, respectively. (Figure 5 – Learning object formats).

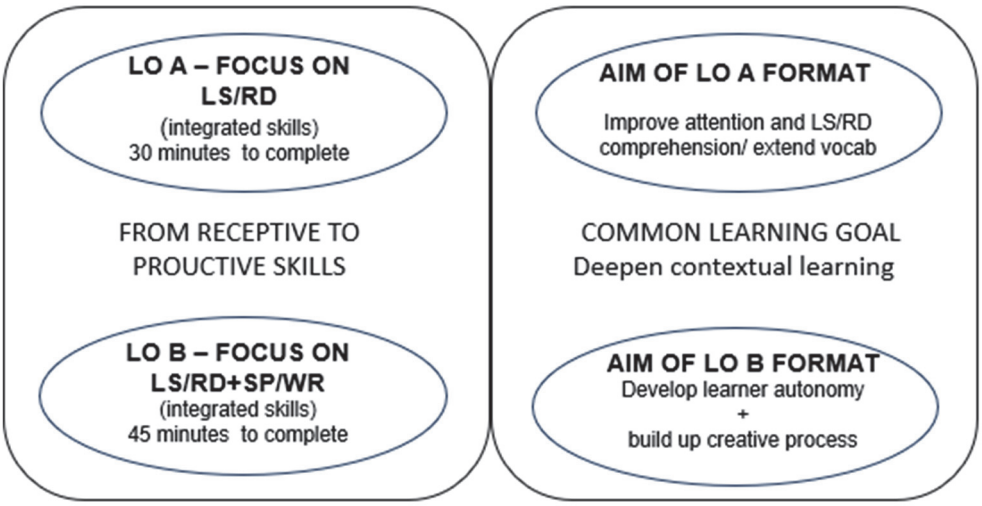

Figure 5 – Learning object formats

Each *LO* takes about 30 - 45 minutes to complete and can function as a stand-alone unit or be used within the *EBL* sessions. Developed using the *XERTE* authoring tool integrated into the *PdL*, the formats of the *LOs*, originally in English, are easy to duplicate and adapt to new topics and have been replicated for other languages as well. However, the B type *LO*s only provide a single model answer for each productive skill prompt. Thus, the live sessions in *BBB* enable teachers to complement them with live practice.

2.8 The blended learning experience

In the course model, asynchronous practice focuses on preparation and reflection, while synchronous sessions promote communication and collaboration. Blended learning ensures continuity, motivation and engagement. Learners get to know the weekly pattern, prepare, perform and reflect, which helps them manage their workload. This balance between structure and flexibility is essential to effective blended learning.

2.9 Teacher roles as instructional designer and facilitator

In *EBL*, the teacher plays a dual role that bridges instructional design and facilitation. As a designer, the teacher defines learning objectives, sequencing and assessment strategies that align with communicative and cognitive outcomes. This involves creating coherent learning paths and ensuring that each task contributes to a broader educational goal. As an instructional designer and e-moderator, they guide learners through live and asynchronous stages, encouraging participation, providing timely feedback and fostering reflection.

Targeted facilitation plays a key role in sustaining engagement and supporting communicative accuracy [6]. Design and facilitation are therefore complementary and cyclical: observing the learners' responses promotes continuous improvement. This pattern transforms teaching into an evolving practice based on active participation and human evaluation.

2.10 Use of Moodle reporting and monitoring

The Moodle environment provides integrated tools for monitoring engagement and completion through both quantitative and qualitative data. Reports, gradebook tracking and completion logs enable teachers to evaluate participation trends and learning outcomes. Each Moodle tool/activity included in the design of the project model supported a dual educational and analytical approach.

- Forum: participation and collaboration
- Assignment/Homework: production and feedback patterns
- Lesson: progression through adaptive learning paths

- Quiz: comprehension and self-check accuracy
- Survey: reflections and satisfaction data

Throughout the two pilots and at the end of them, aggregated Moodle log data was reviewed to observe learner participation and completion trends. This data was used to identify needs, give feedback, redesign activities and fine-tune the course layout. Learning analytics and teacher moderation highlighted recurring language learning issues.

For example, at the start of the lower-level course, written assignments showed major grammatical inaccuracies, while speaking performance revealed pronunciation difficulties. For this reason, after the first two weeks an additional support section, named “Toolkit”, was included in both courses to provide targeted practice. Tasks were tailored to the respective proficiency levels while maintaining the same weekly workload.

3 RESULTS AND REFLECTIONS

Sections 3.1 and 3.4 detail and analyse the outcome of the two pilots (Table 1 – Comparison between the two pilots). Below, a summary of the log data extracted from Moodle reports shows consistent participation and satisfactory completion levels across both courses. For the Functional Level course

- Total learners enrolled: 6
- Average percentage of activity completion rate: 48.7%
- Course completion rate: 83%
- Participation certificates issued: 5
- Total synchronous training hours: 48 hours (8 weeks × 1 hour × 6 participants)

For the Professional Level course

- Total learners enrolled: 6
- Average percentage of activity completion rate: 48.6%
- Course completion rate: (100%)
- Participation certificates issued: 6
- Total synchronous training hours: 48 hours (8 weeks × 1 hour × 6 participants)

In both courses

- 91.7% overall course completion rate, showing sustained motivation and learner autonomy
- Regular weekly access and task completion across May-June 2025
- 48-49% activity completion rate for pre-post-session asynchronous tasks

Submission times and completion reports recorded

- Consistent engagement across the eight-week courses
- 100% submission of weekly assignments (text and audio)
- Asynchronous tasks completion >90%
- Prompt access to materials after release
- Regular participation throughout the course in asynchronous and synchronous tasks

Course completion logs confirmed the outcomes summarised below. (Table 1 – Comparison between the two pilots).

Course Name	Learners	Participation Certificates Issued	% Completion Rate	Synchronous Training Hours (Teacher Delivered)
English Boost Live – Functional	6	5	83%	48
English Boost Live – Professional	6	6	100%	48
Total	*12*	*11*	*91.7%*	*96*

Table 1 – Comparison between the two pilots

3.1 Interpretation of learning analytics results

Learning analytics indicate that the micro-learning structure of the *EBL* model, based on Moodle + *BBB*, fostered sustained participation and engagement. Even without completing every available activity, all participants achieved the intended communicative and metacognitive outcomes.

3.2 Learner feedback survey

At the end of the two pilots learners were asked to complete a survey. Quantitative results from the post-course survey are synthetically reported below. Across both pilots

- 91% of participants rated the course as very useful for improving speaking, writing, and vocabulary
- 100% found the digital tools (Moodle + *BBB*) easy to use
- Over 85% described the live sessions as very helpful in developing fluency and confidence
- 92% of learners said they would recommend the course to others

The most appreciated tasks were

- Group debates (78%)
- Micro-speeches (67%)
- Pair tasks (61%)

3.3 Interpretation of learner feedback

Thus, the quantitative findings are supported by qualitative feedback and highlight motivation, interaction and increased confidence as recurring themes. According to the survey comments, learners valued spontaneous communication and peer collaboration, describing the virtual environment as positive and engaging. Comments emphasised that the structured learning cycle sustained focus, encouraged self-reflection and made learning manageable alongside professional duties. Overall, both data sets recorded high active involvement, suggesting educational coherence and potential scalability of the *EBL* model. The model promoted both language competence and learner autonomy, as reflected in the learner feedback. Learners felt more confident using English for social and professional tasks. They also noted an enhancement in fluency and vocabulary, particularly in less familiar domains, together with consolidation of key grammatical structures. Additionally, they experienced an improvement in pronunciation and teamwork skills. The assignments submitted through the Moodle Homework activity, the results of a final self-assessment quiz on vocabulary and grammar together with teacher observations during the live sessions confirmed the learners' reflections.

3.4 Lessons learned from learner feedback

The overall learner feedback was positive and some useful insights emerged from the post-course survey. Participants suggested extending the duration of

1. The live sessions in *BBB*
2. The overall course

However, the first suggestion will not be adopted, as keeping sessions within one hour aligns with the educational rationale of micro-teaching and helps maintain focus and engagement. As for the second request, future editions of the course will therefore be extended by approximately three additional weeks. This adjustment reflects the commitment of the School to continuous improvement based on learner feedback.

4 MICRO-TEACHING AS A DUAL PEDAGOGICAL STRATEGY

In *EBL*, micro-teaching operates on two levels.

- For learners: it promotes focused, interactive tasks that build communicative competence
- For teachers: it develops evaluative practice and digital fluency

This shared framework strengthens educational coherence and supports continuous professional development within the e-learning ecosystem.

4.1 Overview of a professional development workshop

A key outcome of *EBL* was the creation of a dedicated teacher workshop titled "Micro-teaching through Moodle and *BBB*" modelled on a micro-version of the *EBL* course. It was held in English, which at the School is the official working language for teacher development activities. The workshop replicated the course environment used by learners, allowing teachers to explore the system both technically and educationally. During the workshop, participants first acted as learners in a mock live session, completing micro-speeches, pair tasks and reflection points on a familiar topic (e.g. “Sports”). In the second part, they switched roles and became facilitators, managing the same type of live interaction they had previously experienced. This approach was aimed at highlighting actual learner challenges, technical, language-related and motivational and to develop facilitators’ skills in managing time and providing guided support and feedback.

4.2 Teacher handouts for reflective practice

Handouts for teachers participating in the workshop served as both a note-taking and self-assessment tool. Teachers completed reflection prompts such as: “Which activity could I use with my students next week?” Each section of the handout followed the workshop flow and the learning loop of *EBL*, including

- Course philosophy and weekly structure management
- Micro-learning and Bloom-Anderson taxonomy alignment
- *LO* design (A and B formats)
- Teacher roles and learner autonomy

4.3 Key takeaways from the teacher feedback questionnaire

Through this double-level experience, teachers developed practical digital fluency and classroom management strategies for synchronous e-learning contexts. At the end of the workshop the teachers filled in a questionnaire. Three key takeaways emerged

- Structure supports creativity and clear task design enhances interaction
- Reflection drives progress: guided self-assessment fosters autonomy
- Collaboration sustains motivation, peer teaching and observation enrich professional growth

Most participants felt more confident using Moodle and *BBB* and acknowledged the value of micro-teaching for professional enhancement. The event provided a blueprint for future teacher development programmes within the e-learning ecosystem of the School.

4.4 Challenges and envisaged actions

Although the teacher workshop proved effective at introducing reflective and task-based teaching strategies, its brief duration due to time constraints related to institutional commitments left limited room for deeper practice and extended peer feedback. Future editions will include additional follow-up asynchronous and synchronous activities alongside mentoring sessions to consolidate the skills developed during the workshop.

5 GLOCAL AND INQUIRY-BASED E-LEARNING

Within its educational scope, the project model includes inquiry-based and “glocal” learning, i.e. global vision, local action, [11]. Topics were selected to encourage learners to connect professional English communication with global issues, particularly in the upper-level course. Examples cover *AI* ethics, cybersecurity, the digital divide and environmental awareness. Inquiry-based tasks invited participants to explore complex questions, such as “What are the ethical implications of *AI* in our context?”. Learners were also prompted to research the topics and express their viewpoints through micro-speeches and short essays. The glocal perspective helped learners contextualise their English use in real-world professional scenarios. This approach fostered critical thinking, intercultural communication and global digital citizenship, all key competences in modern international cooperation contexts. Additionally, in several synchronous tasks learners acted as facilitators, always guided by the teacher/moderator to foster collaborative responsibility for learning.

6 LIMITATIONS AND INSTITUTIONAL CONSTRAINTS

The design and evaluation of the *EBL* pilots were shaped by contextual and institutional factors intrinsic to Defence digital education environments. These factors define the current scope of the project and will steer its future development.

- Deployment timeline. The model was originally required to be ready for replication by the end of 2025. Due to planning adjustments at institutional level, the scalability phase has been rescheduled to 2026. This change did not affect the design rationale, but it limited the timeframe available for testing with additional learner groups.
- Assessment strategy. A high-stakes achievement test was intentionally excluded from the pilots. The aim of this phase was to focus on speaking and writing activation, learner autonomy and metacognitive development, rather than formal certification. In light of this, e-moderation further boosted learner morale and enhanced engagement through gamification. For this reason, including an achievement test would have shifted the learning focus and affected the learner experience.
- Assignment authenticity and shadow use of *AI*. In the current educational context, written assignments are increasingly at risk of being refined or generated by *AI* tools. This concern was addressed with learners orally as part of classroom guidance. The course therefore relied strongly on synchronous and teacher-moderated production tasks to ensure authenticity and engagement.

7 CONCLUSIONS AND FUTURE DEVELOPMENT

The outcome of the tested *EBL* project, as suggested by learning analytics, was overall positive. Its modular design promotes educational consistency across languages and contexts, confirming Moodle as a flexible environment for scalable language learning even without AI. Future development of the course model will include further fine-tuning of learning analytics and replicating the model for other English learners by creating several additional small groups. It is also planned to extend the format to other languages. A key guiding principle for the future is that, if AI is integrated into the PdL/Moodle

ecosystem, it should adopt a human-in-the-loop approach to ensure ethical and transparent innovation. In this perspective, EBL provides a sustainable, human-centred model of digital pedagogy.

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