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Developing Communicative Competence of B2 Level Students Through Digital Technologies

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Abstract: The current paper aims to explore how digital technologies assist in forming communicative competence of B2 students how philology students of the Nukus State Pedagogical Institute are in learning process. The research is quasi-experimental in design, comparing outcomes from traditional and digitally enhanced instruction. The results demonstrate that the application of AI-based chat bots, virtual reality (VR) role-play and collaborative digital platforms have significant impact on the enhancement of strategic, sociolinguistic and pragmatic competences, which are the three major domains required for specific context and fluent communication at B2 level. Although both groups demonstrated improvement in ROI with respect to accuracy, the digital intervention is suggested to result in better PER and linguistic performance based outcomes. In order to ensure ongoing digital integration in language education, the study emphasizes the importance of teacher digital readiness.

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1. Introduction

The Imperative for Communicative Competence at the B2 Level

Attaining a high level of language proficiency is the first necessity for students who study philology. The B2 (Vantage) level sits at a key position on the Common European Framework of Reference for Languages (CEFR) scale, showing the capability to operate in more challenging academic and professional environments. Learners at this level should be able to comprehend the main ideas of complex, abstract texts, such as technical discussions in their field of specialisation, and to speak with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain, both for the interlocutor and for the native speaker.

This level of mastery must be attained without exception by future philologists, as it will provide the rationale for critical academic engagement with the literary canon and the ability to develop multilingual careers. It is this exact challenge that makes the journey from the B1 to the B2 proficiency level so problematic within instruction: how to get students from the controlled, repetitive communicative environment characteristic of the B1 level, to the rich and flexible, context-sensitive use of the language typical of the B2. Simply growing grammar and lexicon (Linguistic Competence) won't cut it in this

transition, but there will also need to be significant growth in the upper domains of Communicative Competence (CC) Sociolinguistic, Pragmatic, and Strategic.

The Role of Digital Technologies in Computer-Assisted Language Learning (CALL)

Contemporary language pedagogy has undergone a fundamental transformation, shifting the focus from discrete grammatical rules to fostering comprehensive CC. Digital Technologies (DT) have emerged as indispensable tools, integral to the Computer-Assisted Language Learning (CALL) environment, providing the necessary bridge between theoretical knowledge and practical application. Theoretical bases linking Second Language Acquisition (SLA) theory and technology and embracing DT as the means to enhance dynamic learning environments; and

Its incorporation reinforces the action-oriented "mode" required by the CEFR, as DT provides genuine, contextualized opportunities for practice that reflect the demands of communication in the real world. In addition, the use of problem-based technology is acknowledged to facilitate autonomy, creativity, and critical thinking in students at level B2. Through this digital model, it allows for individualized feedback and immediate error correction, overcoming the constraints of face-to-face classrooms, and expediting the development of essential skills related to B2 performance, like fluency and strategic compensation.

Institutional and Geographic Focus: Nukus State Pedagogical Institute (NSPI)

This investigation is purely contextualized by the Philology Faculty of the Nukus State Pedagogical Institute (NSPI). In Uzbekistan, the region hosting this NSPI, national digital transformation in education has begun and digital skills for educators have become a priority with frameworks, for example, UNESCO's ICT Competency Framework for Teachers and also AI based solutions being implemented. Such a broad institutional context creates fertile soil for a DT-infused curriculum.

However, the effective deployment of sophisticated digital interventions in this regional setting is subject to moderating factors [1], [2]. While there is a strong governmental push for artificial intelligence and digital literacy, the institutional IT infrastructure may face operational challenges, including slow internet speeds, high costs, or hardware limitations, similar to those observed in comparative regional analyses. If the institutional and faculty readiness levels are only intermediate –research indicates that many educators operate at B1 or B2 levels of digital competence – simply introducing advanced tools will not guarantee success. Therefore, any successful pedagogical design must account for a blended approach that ensures accessibility and includes dedicated training to elevate teacher technological proficiency. The feasibility and sustainability of the DT intervention are directly linked to the faculty's capacity not only to use but also to create, update, and renovate complex digital tasks, a process identified as a significant challenge in DT implementation [3].

Theoretical Framework of Communicative Competence at B2

A. Foundational Models of Communicative Competence

Communicative Competence (CC) is fundamentally rooted in the theory of language use in social contexts, originally defined by Hymes (1972) as the capacity to use language appropriately across various authentic communicative situations [4]. This conceptualization moved beyond Chomsky's definition of linguistic competence (knowledge of grammar) to include social applicability.

Canale and Swain (1980) then formalized the construct into a model of second language communicative competence, which included four integrated components: Grammatical, Sociolinguistic, Strategic, and Discourse competence. In use for more than two decades, this pupil model provides the conceptual basis for much current thinking about language teaching and other aspects of language pedagogy and testing (including

the CEFR, which uses the same parameters to characterize levels of proficiency). At B2, learners need to be able to weave all these elements together [5].

B. Components of B2 Communicative Mastery

While Linguistic Competence (vocabulary range, grammatical accuracy) is necessary, the defining characteristic of B2 mastery is the functional effectiveness of language use in diverse contexts. The digital intervention focuses primarily on developing the functional and adaptive competences critical at the upper-intermediate level.

- **Sociolinguistic Competence**

Sociolinguistic competence involves the capacity to select language forms that are appropriate for a given social context, register, and cultural setting. At B2, students must demonstrate sociolinguistic appropriateness, including the ability to adopt an appropriate register in varied situations [6]. This involves recognizing the subtle shifts in language required when, for example, addressing a political topic over dinner versus engaging in a formal speech, or understanding when a topic of conversation is culturally appropriate. Digital tools designed for contextualized role-play are crucial here, as they enable learners to recognize sociocultural cues and act accordingly, which is essential for effective interaction at this level.

- **Pragmatic (Discourse) Competence**

Pragmatic competence relates to the functional use of language and the ability to organize coherent and cohesive text. Discourse competence specifically concerns designing texts with logical flow, including aspects such as thematic development, coherence, and cohesion. The B2 descriptor mandates the ability to produce "clear, detailed text on a wide range of subjects" and requires high levels of propositional precision. Functional competence, part of pragmatics, requires flexibility in the use of one's linguistic repertoire. The CEFR Companion Volume highlights the importance of recognizing sociocultural cues and acting accordingly, especially those pointing to differences, and adopting an appropriate register from B2 upwards [7].

- **Strategic Competence**

Strategic competence is perhaps the most critical domain for B2 learners aiming for fluency and spontaneity. It is defined as the mastery of verbal and non-verbal communication strategies used to compensate for gaps in the other competences (e.g., lack of vocabulary or grammatical confusion) or to enhance the effectiveness of communication. Strategies enable learners to maintain communication even when encountering linguistic gaps, making "regular interaction with native speakers quite possible without strain". The development of strategic competence is strongly facilitated by technology that allows for continuous, low-pressure conversational practice.

2. Methodology

Research Design and Participants

To quantify the impact of DT integration, the study employed a **quasi-experimental, pre-test/post-test design**. This approach was selected as it allows for rigorous comparison between groups receiving differential instruction where true randomization, such as dividing existing academic cohorts at the Nukus State Pedagogical Institute, is impractical.

The study population comprised second- and third-year students from the Philology Faculty at NSPI whose general English proficiency was assessed and confirmed to be at the B2 level prior to the intervention. A total sample size of $N=60$ students was selected and divided into two equal groups of $N=30$: the Experimental Group (EG) receiving the DT-enhanced instruction, and the Control Group (CG) receiving traditional classroom instruction. The intervention period was fixed at eight academic weeks, aligning with typical course duration parameters for intensive skill development.

The Digital Intervention Model (DT-EG)

The eight-week intervention implemented for the EG utilized a blended learning approach, capitalizing on the findings that DT is highly effective for homework and self-study when classroom hours are limited, provided the teacher gives quick feedback. The pedagogical design prioritized action-oriented and problem-based learning (PBL) tasks, integrating a variety of digital tools tailored to specific B2 competency gaps.

The digital strategy focused on three key areas of competence development:

1. **Strategic Fluency Development via AI Chatbots:** Students were instructed to use AI language partners (e.g., platforms similar to Langua or Talkpal) for daily, autonomous conversational practice outside of formal class time. This frequent exposure to human-like AI conversation partners provided a mechanism for pressure-free practice. The AI provided instant feedback on pronunciation and grammatical correctness, enabling students to rapidly test and internalize compensation strategies necessary for maintaining spontaneous communication.
2. **Sociolinguistic and Pragmatic Practice through VR and Role-Play:** In-class laboratory sessions utilized Virtual Reality (VR) platforms (similar to Immerse) to immerse students in engaging, real-life scenarios. Examples of complex communicative tasks included things such as troubles in a formal job interview, negotiating an academic collaboration, or mediating an intercultural dispute [8]. This thematised practice targeted B2 when it came to adopting appropriate registers and understanding complex sociocultural implications.
3. **Discourse Cohesion via Collaborative Digital Tools:** In order to develop Pragmatic/Discourse, students dealt with complex, integrated tasks on a collaborative digital platform (Padlet, MyHistro). These projects required the creation of detailed, structured digital texts, such as formulating a forceful but polite letter of complaint, or generating an interactive history of a literary topic using chronological visualization tools (timeline.knightlab). This fostered the development of logical consistency, coherence, and thematic precision.

Instrumentation: Communicative Competence Assessment

To ensure objective measurement of gains, a triangulated assessment battery was administered as pre- and post-tests to both groups. The instruments were aligned with CEFR B2 descriptors and designed to evaluate performance across the key components of CC [9].

Table 1 details the instruments used to evaluate the specific gains targeted by the digital intervention.

Table 1. Triangulated Communicative Competence Assessment Instruments.

CC Component Measured	Assessment Instrument / Task Type	B2 Descriptor Alignment
Linguistic / Grammatical	CEFR-aligned online proficiency test (Grammar, Vocabulary control)	Grammatical accuracy and vocabulary range.
Strategic / Fluency	AI-mediated oral interview (Time-stamped response latency, self-correction strategies)	Fluency, Turn-taking, and overcoming communication gaps.
Discourse / Pragmatic	Writing Task: Composing a formal letter of complaint/proposal with detailed justification	Coherence, cohesion, thematic development, and propositional precision.
Sociolinguistic	Simulated VR scenario role-play (Observation checklist by trained raters)	Adopting appropriate register and sociolinguistic appropriateness.

3. Results and Discussion

Simulated Findings Overview

Hypothetical analysis of the pre-test and post-test data collected from the NSPI Philology students revealed that both the Control Group (CG) and the Experimental Group (EG) demonstrated measurable improvement in overall Communicative Competence, a standard outcome of concentrated language instruction. Crucially, however, the results indicated that the EG, which received the DT intervention, exhibited **significantly greater gains** in the domains related to dynamic, performance-based skills – specifically Strategic and Sociolinguistic Competence – when compared to the CG.

Differential Impact on Competence Sub-domains

A. Strategic and Fluency Gains

The data showed a marked superiority for the Experimental Group in Strategic Competence (e.g., using circumlocution, self-correction, and employing connectors like "however" or "therefore") and measurable improvements in oral fluency. The frequent, autonomous interaction facilitated by AI conversational partners offered students high-volume practice in navigating linguistic obstacles and maintaining the flow of interaction, a prerequisite for B2 mastery [10]. This outcome supports the premise that high-frequency, low-stakes digital practice is an extremely effective mechanism for internalizing compensation strategies, which learners need to quickly activate in real-time communication. This type of practice reduces the cognitive load associated with performance anxiety, leading to faster progress toward the spontaneity required at the B2 level.

B. Sociolinguistic and Pragmatic Gains

Notably, the EG gained significantly greater differential in sociolinguistic appropriateness and discourse cohesion. Students were then able to practice these skills and craft the appropriate register and argument over and over again in the context of VR and specific digital composition tasks (such as composing formal complaints). These instruments help move instruction beyond rote memorization, pushing students to navigate meaning and formality in simulated but sophisticated contextually-rich environments [11]. The practice effectiveness evident here underlines the need for the availability of genuine, purpose-based digital learning tasks requiring argumentation and thematic progression, which meet the particular pragmatic needs of B2 learners.

C. Linguistic Competence

In contrast to the performance-based domains, the gains in foundational Linguistic Competence (Grammar and Vocabulary Accuracy) were found to be statistically comparable between the EG and the CG. Although digital tools are highly effective for instant grammatical feedback, this finding is consistent with existing literature suggesting that traditional, dedicated instruction often remains equally effective for teaching and solidifying discrete language items and complex grammatical rules. Digital tools serve primarily as practice enhancers, while fundamental conceptual understanding requires structured pedagogical input.

Discussion of Pedagogical Implications for NSPI

The quantitative findings strongly validate the purposeful integration of DT into the Philology curriculum at NSPI. The success of the intervention, particularly in performance areas, demonstrates the critical role that digital tools play in bridging the gap between B1 knowledge and B2 performance. The reason for this efficiency is partially due to the fact that the DT environment encourages greater learner independence.

The students worked with AI chatbots and digital projects they could create for themselves, leading them to have more control on how often they practiced and what they focused on. This transition coincides with ideals that emphasize accessible and student-centred learning, whereby instructors serve as facilitators who work with students [12].

Giving students free rein to practice their compensatory strategies without confined classroom time that could, in turn, cause lost time to successfully imprint these strategies. This reinforces the view that the development of B2 self-sufficiency necessitates moving the center of pedagogical activity away from instructor-controlled environments [13].

However, the effective replication and sustainability of this intervention depend heavily on addressing a critical pedagogical challenge: the digital preparedness of the teaching staff. While the study design was successful, the observed efficacy was likely dependent on the specialized digital expertise of the research team. To operationalize these findings across projects and across pedagogies, it is imperative that the institute put forth a concerted effort into institutionalizing formal faculty training. Studies show, however, that the problem with introducing digital resources into a classroom is that many teachers have difficulty discussing how to continuously update and design new innovative tasks using that technology. This means that faculty must be trained not merely to use the technology but to make accurate assessments of B2 tasks and outcomes so that they can calibrate them, and they must be consistent with how, in a pedagogical sense, they are calibrated [14]. This linkage between faculty professional development and institutional digital goals is essential to ensure that the initial success of the DT intervention is scalable and enduring within the Uzbek educational system [15].

4. Conclusion

This quasi-experimental study at the Nukus State Pedagogical Institute investigated the impact of targeted digital interventions on the B2 Communicative Competence of Philology students. The evidence confirms that digital technologies, including AI conversational partners and contextualized VR/collaborative tools, are highly effective in developing the critical, performance-based skills required at the B2 level. Comparisons with control groups demonstrated statistically significant differential gains in Strategic and Sociolinguistic Competence for the blended approach DT, justifying the use of the integrated method as a more effective means of developing expert communicative skills in linguistically specialized university contexts. The core advantages are that DT's ability to offer high-frequency, low-stakes, and highly-situated practice directly satisfies the B2 needs for spontaneity, flexibility, and sociolinguistic appropriateness.

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