Philology Matters / ISSN: 1994 – 4233
Uzbekistan State World Languages University
2026 Vol. 56 No. 3
METHODOLOGY
https://philmatt.uzswlu.uz

Received: August 5, 2026
Accepted: September 23, 2026
Available online: September 25, 2026

https://doi.org/10.36078/987655606

Original research article / Original tadqiqot maqolasi

IMPROVING ENGLISH WRITING COMPETENCE THROUGH BLENDED LEARNING USING PICRAT IN THE TIM (Paragraph and Three-Paragraph Essay Writing)

Solijon AZIZOV

Doctor of Philosophy (PhD) in Pedagogical Sciences
Uzbekistan State World Languages University
Tashkent, Uzbekistan
ORCID iD: 0000-0003-0467-7003
Email: solijonazizov1@gmail.com

ABSTRACT

This study aims to develop and empirically evaluate a blended learning methodology that applies the PICRAT model within the Technology Integration Model (TIM) to improve the writing competence of prospective English language specialists, focusing on paragraph and three-paragraph essay writing. The study addresses limited classroom time, insufficient opportunities for sustained writing practice, and students' difficulties in producing coherent texts that meet genre-specific requirements. Its objectives are to identify key writing difficulties, develop a structured system of writing exercises, integrate digital technologies into classroom, online, and independent learning, and evaluate the methodology through a pedagogical experiment.

The study employed theoretical analysis of scholarly literature, curriculum and syllabus analysis, classroom observation, and pedagogical experimentation. The students' theoretical knowledge of writing was assessed using 10-item multiple-choice tests administered before and after the experiment. Mathematical-statistical methods were used to analyse the results. Communicative and genre-based approaches were implemented through information-gap activities, collaborative writing, process writing, genre analysis, text deconstruction, and peer review. Digital tools, including Telegram, Google Forms, Google Docs, Write & Improve, and Grammarly, supported learning activities, independent practice, assessment, and feedback. The experiment involved 257 first- and second-year students from three higher education institutions in Uzbekistan: Uzbekistan State World Languages University, Samarkand State Institute of Foreign Languages, and Andijan State Institute of Foreign Languages.

The reported results indicate higher performance indicators for the experimental group than for the control group in both theoretical knowledge and practical writing. The total efficiency coefficients were 1.15 for the multiple-choice test and 1.16 for the written test. These findings suggest that a structured combination of classroom instruction, online learning, and independent practice can support the development of paragraph- and essay-writing competence. The study highlights the value of aligning technology integration with explicit writing objectives, genre-specific exercises, systematic assessment, and constructive feedback.

Key words: blended learning, PICRAT model, Technology Integration Model (TIM), writing competence, prospective English language specialists, paragraph writing, essay writing, digital technologies, genre-based approach, pedagogical experiment, higher education.

For citation:
Azizov, S. (2026). Improving English writing competence through blended learning using

© Solijon Azizov, 2026. Licensed under the Creative Commons Attribution 4.0 International License (CC BY 4.0).

PICRAT in TIM (paragraph and three-paragraph essay writing). *Philology Matters*, *56*(3), 222–258. https://doi.org/10.36078/987655606.

BLENDED TA'LIM ORQALI INGLIZ TILIDA YOZUV KOMPETENSIYASINI TAKOMILLASHTIRISHDA PICRAT MODELIDAN TIM DOIRASIDA FOYDALANISH (paragraf va uch paragrafli insho yozish misolida)

Solijon AZIZOV

Pedagogika fanlari bo'yicha falsafa doktori (PhD)
O'zbekiston davlat jahon tillari universiteti
Toshkent, O'zbekiston

ANNOTATSIYA

Ushbu tadqiqotning maqsadi bo'lajak ingliz tili mutaxassislarining yozuv kompetensiyasini takomillashtirishga qaratilgan, Texnologiyalar integratsiyasi modeli (TIM) doirasida PICRAT modelini qo'llashga asoslangan blended ta'lim metodikasini ishlab chiqish va uning samaradorligini empirik jihatdan baholashdan iborat. Tadqiqotda auditoriya mashg'ulotlari uchun ajratilgan vaqtning cheklanganligi, muntazam yozma mashqlarni bajarish imkoniyatlarining yetarli emasligi hamda talabalarning muayyan janr talablariga javob beradigan izchil matnlar yaratishdagi qiyinchiliklari ko'rib chiqiladi. Tadqiqotning vazifalari yozuv jarayonida yuzaga keladigan asosiy qiyinchiliklarni aniqlash, yozma mashqlarning tizimlashtirilgan majmuasini ishlab chiqish, raqamli texnologiyalarni auditoriya, onlayn va mustaqil ta'lim jarayonlariga integratsiya qilish hamda taklif etilgan metodikani pedagogik tajriba-sinov orqali baholashdan iborat.

Tadqiqotda ilmiy adabiyotlarni nazariy tahlil qilish, o'quv rejalari va fan dasturlarini tahlil qilish, auditoriya mashg'ulotlarini kuzatish hamda pedagogik tajriba-sinov metodlaridan foydalanildi. Talabalarning yozuvga oid nazariy bilimlari tajriba-sinovdan oldin va keyin o'tkazilgan 10 ta topshiriqdan iborat ko'p variantli testlar yordamida baholandi. Olingan natijalarni tahlil qilishda matematik-statistik metodlar qo'llanildi. Kommunikativ va janrga asoslangan yondashuvlar axborot bo'shlig'ini to'ldirishga qaratilgan topshiriqlar, hamkorlikda yozish, jarayonga asoslangan yozuv, janr tahlili, matnni tarkibiy qismlarga ajratib tahlil qilish va o'zaro taqriz berish faoliyatlari orqali amalga oshirildi. Telegram, Google Forms, Google Docs, Write & Improve va Grammarly kabi raqamli vositalar ta'lim faoliyatini tashkil etish, mustaqil mashq qilish, bilimlarni baholash va fikr-mulohazalar taqdim etishda qo'llanildi. Tajriba-sinovda O'zbekistondagi uchta OTM – O'zbekiston davlat jahon tillari universiteti, Samarqand davlat chet tillar instituti va Andijon davlat chet tillari institutining birinchi va ikkinchi bosqichlarida tahsil olayotgan jami 257 nafar talaba ishtirok etdi.

Olingan natijalar tajriba guruhida nazariy bilimlar va amaliy yozuv ko'nikmalari bo'yicha ko'rsatkichlar nazorat guruhiga nisbatan yuqoriroq bo'lganini ko'rsatadi. Umumiy samaradorlik koeffitsiyentlari ko'p variantli test uchun 1,15ni, yozma ish testi uchun esa 1,16ni tashkil etdi. Ushbu natijalar auditoriya mashg'ulotlari, onlayn ta'lim va mustaqil mashqlarni tizimli ravishda uyg'unlashtirish paragraf hamda uch paragrafli insho yozish kompetensiyasini rivojlantirishga yordam berishi mumkinligini ko'rsatadi.

Kalit so'zlar: blended ta'lim, PICRAT modeli, Texnologiyalar integratsiyasi modeli (TIM), yozuv kompetensiyasi, bo'lajak ingliz tili mutaxassislari, paragraf yozish, insho yozish, raqamli texnologiyalar, janrga asoslangan yondashuv, pedagogik tajriba-sinov, oliy ta'lim.

СОВЕРШЕНСТВОВАНИЕ ПИСЬМЕННОЙ КОМПЕТЕНЦИИ НА АНГЛИЙСКОМ ЯЗЫКЕ ПОСРЕДСТВОМ СМЕШАННОГО ОБУЧЕНИЯ С ИСПОЛЬЗОВАНИЕМ МОДЕЛИ PICRAT В РАМКАХ TIM (на материале написания параграфов и трёхабзацных эссе)

Солижон АЗИЗОВ

Доктор философии (PhD) по педагогическим наукам
Узбекский государственный университет мировых языков
Ташкент, Узбекистан

АННОТАЦИЯ

Цель данного исследования заключается в разработке и эмпирической оценке методики смешанного обучения, основанной на применении модели PICRAT в рамках модели интеграции технологий (TIM), для совершенствования письменной компетенции будущих специалистов по английскому языку с акцентом на написание абзацев и трёхабзацных эссе. В исследовании рассматриваются такие проблемы, как ограниченное время аудиторных занятий, недостаточные возможности для систематической письменной практики, а также трудности студентов при создании связных текстов, соответствующих требованиям определённых жанров. Задачи исследования включают выявление основных трудностей в обучении письменной речи, разработку системы письменных упражнений, интеграцию цифровых технологий в аудиторное, онлайн- и самостоятельное обучение, а также экспериментальную оценку эффективности предложенной методики.

В исследовании использовались методы теоретического анализа научной литературы, анализа учебных планов и программ дисциплин, наблюдения за аудиторными занятиями и педагогического эксперимента. Теоретические знания студентов в области письменной речи оценивались с помощью тестов, состоящих из 10 заданий с выбором одного из нескольких вариантов ответа, которые проводились до и после эксперимента. Для анализа полученных результатов применялись математико-статистические методы. Коммуникативный и жанровый подходы реализовывались посредством заданий на восполнение информационного пробела, совместного написания текстов, поэтапного обучения письму, жанрового анализа, деконструкции текста и взаимного рецензирования письменных работ. Цифровые инструменты, включая Telegram, Google Forms, Google Docs, Write & Improve и Grammarly, использовались для организации учебной деятельности, самостоятельной практики, оценивания и предоставления обратной связи. В эксперименте приняли участие 257 студентов первого и второго курсов трёх высших образовательных учреждений Узбекистана: Узбекского государственного университета мировых языков, Самаркандского государственного института иностранных языков и Андижанского государственного института иностранных языков.

Полученные результаты свидетельствуют о более высоких показателях экспериментальной группы по сравнению с контрольной группой как в области теоретических знаний, так и в области практических навыков письменной речи. Общие коэффициенты эффективности составили 1,15 по тесту с выбором ответа и 1,16 по тесту письменных работ. Эти результаты позволяют предположить, что систематическое сочетание аудиторных занятий, онлайн-обучения и самостоятельной практики способствует развитию компетенции написания абзацев и эссе.

Ключевые слова: смешанное обучение, модель PICRAT, модель технологической интеграции (TIM), письменная компетенция, будущие специалисты по английскому языку, написание параграфов, написание эссе, цифровые технологии, жанровый подход, педагогический эксперимент, высшее образование.

INTRODUCTION

Rationale for technology integration in English writing instruction

Writing has always been associated with particular technologies and tools. K.Hyland argues that technological developments have influenced written communication from early forms of inscription to contemporary digital platforms, with the pace of change representing a defining characteristic of current developments [Hyland, 2019]. Similarly, the systematic integration of information and communication

technologies (ICTs) has become an important feature of higher education [Chan et al., 2005].

Despite these developments, writing often receives insufficient attention in foreign language education. Research by P.Sysoev and Y.Syomich indicates that writing instruction may be constrained by the limited time allocated to this area of language learning [Sysoev & Syomich, 2019]. As university teaching hours decrease, writing activities requiring substantial individual effort are increasingly transferred to out-of-class learning [Solovova, 2002]. This creates a pedagogical challenge: students need sustained practice to develop writing competence, yet classroom instruction alone may not provide sufficient opportunities for drafting, revising, and receiving feedback.

K.Beatty describes virtual classrooms as learning environments that can extend teaching and learning across time, space, and content [Beatty, 2013]. However, the availability of digital environments does not necessarily ensure the effectiveness of writing instruction. M.Bloch notes that many technologies used in language education were not originally designed specifically to support foreign language writing [Bloch, 2008]. Their implementation therefore requires a clear pedagogical rationale.

Different digital tools offer different opportunities for developing written communication. Blogs can encourage students to write and foster a sense of learning community [Bloch, 2008], while wikis can support collaborative research and writing [Beach et al., 2014]. Mobile technologies, text messaging, and microblogging services can also facilitate authentic writing activities [Hyland, 2019]. These examples suggest that digital tools can expand the contexts in which students write, but the educational value of such tools depends on the tasks they support and the learning outcomes they are intended to achieve.

Research has consequently shifted from examining technologies in isolation towards investigating their influence on teacher–student and student–student interaction. J.S. Brown emphasises the importance of studying how technologies facilitate interaction in educational settings rather than focusing exclusively on individual computer-based writing [Brown, 2002]. M.Palmquist et al. similarly observe that online and face-to-face writing environments may pursue comparable objectives while involving different teaching strategies, learning relationships, and patterns of interaction [Palmquist et al., 1998].

From this perspective, technology integration should not be reduced to the electronic delivery of conventional classroom materials. Its pedagogical value lies in how it supports communication, collaboration, independent practice, and the development of written texts. In our view, the central issue is the alignment between the affordances of a digital tool and the specific requirements of a writing task. This is particularly important for pre-service English language specialists, who must learn to produce coherent texts while developing the ability to evaluate and revise their own writing.

Blended learning offers opportunities to coordinate these instructional functions. Its potential includes the use of multilevel digital resources, multimedia and hypertext

materials, the organisation and monitoring of learning activities, individualised learning trajectories, and the development of independent learning skills [Limar & Shevtsova, 2019]. The emergence of digital genres, including email, instant messaging, and other forms of text-based communication, has also expanded the contexts addressed in English language teaching [Solontsova, 2018].

T.F. Pantier highlights the importance of applying knowledge acquired through professional and everyday experience to written communication and using ICTs for specific purposes [Pantier, 1999]. T.Y. Ovchinnikova observes that although written communication has evolved from traditional epistolary genres to computer- and mobile-mediated forms, its functions remain connected with expressing emotions, exchanging information, coordinating activities, and communicating ideas [Ovchinnikova, 2009]. Digital tools also allow writers to draft, edit, and revise texts flexibly, sometimes undertaking these processes concurrently rather than in a strictly linear sequence [Hyland, 2019].

These findings indicate that blended learning can expand opportunities for writing practice, but its effectiveness depends on the systematic organisation of learning activities. The present study therefore considers technology integration in relation to the development of specific writing skills, rather than treating digitalisation as an educational objective in itself. The instructional design combines classroom teaching, online activities, and independent study to support the development of paragraph and three-paragraph essay writing.

PICRAT within the Technology Integration Model (TIM)

Writing competence requires the coordinated development of grammatical accuracy, lexical appropriateness, idea development, textual cohesion, organisation, and revision. Explicit strategy instruction, collaborative writing, and model-based practice have been identified as useful approaches to writing development [Graham & Perin, 2007]. Blended learning can complement these approaches by combining face-to-face instruction with online practice, collaboration, feedback, and independent revision [Graham, 2006].

However, transferring a conventional exercise to a digital platform does not necessarily improve its pedagogical value. The instructional purpose of a task must determine how technology is used. The PICRAT model provides a framework for analysing this relationship by considering both students' engagement with technology and the effect of technology on teaching practices [Kimmons et al., 2020].

PICRAT combines three forms of student engagement—Passive, Interactive, and Creative (PIC)—with three levels of technology integration—Replacement, Amplification, and Transformation (RAT). The model encourages teachers to consider two questions: how do students engage with the technology, and how does the teacher's use of technology affect existing instructional practices? [Hughes et al., 2006]. These dimensions offer a basis for analysing technology-supported writing activities according to their pedagogical functions.

Student engagement: Passive, Interactive, and Creative

At the passive level, students primarily receive or access learning content. In the

present study, this dimension is represented by classroom presentations introducing the structural and linguistic features of paragraphs and essays. The relevant materials are also made available digitally through presentation files and instructional videos. Vocabulary resources, written guidelines, photographs, and video materials support students' independent learning.

The interactive level involves students' active engagement with learning content and/or interaction with other learners. Effective learning can be supported by inquiry, experimentation, collaboration, and other forms of active participation [Kennewell et al., 2008]. In the proposed methodology, this dimension includes collaborative writing, classroom discussions of errors, online assessment, and independent practice using digital writing platforms and journals.

At the creative level, students use technology to produce learning artefacts that demonstrate their understanding [Kimmons et al., 2020]. The production of such artefacts can support meaningful learning when students apply their knowledge and skills to problems [Papert & Harel, 1991]. This orientation also corresponds to the higher levels of Bloom's revised taxonomy of educational objectives [Anderson et al., 2001]. In writing instruction, creative engagement is reflected in producing paragraphs and essays, revising written work, and maintaining digital writing journals.

These dimensions describe different forms of student engagement rather than a compulsory sequence through which every activity must progress. In our interpretation, their value lies in helping teachers determine whether a task requires students to receive information, interact with content and peers, or create a written product. The selection of a particular form of engagement must therefore be guided by the intended writing outcome.

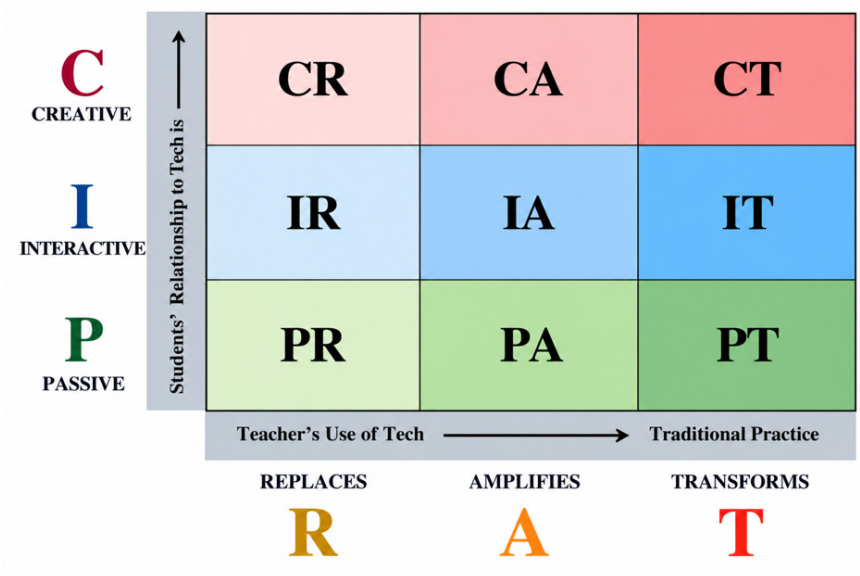
Technology integration: Replacement, Amplification, and Transformation

Replacement refers to using technology as a substitute for an existing instructional practice without fundamentally changing its design. Examples include presenting learning materials electronically, announcing and collecting assignments online, returning electronic feedback, maintaining digital portfolios, and providing access to online resources. These practices can facilitate the organisation and accessibility of learning, although replacement alone does not demonstrate improved learning outcomes [Kimmons et al., 2020].

Amplification involves using technology to improve an existing practice while retaining its underlying pedagogical structure. Electronic feedback, for example, can facilitate the distribution and review of teacher comments. Digital portfolios can also enable teachers and students to monitor the development of writing competence across multiple assignments. Their value lies in supporting systematic review and revision rather than simply replacing paper-based procedures [Kimmons et al., 2020].

Transformation occurs when the affordances of technology enable new forms of teaching and learning that would be difficult to implement without it [Kimmons et al., 2020]. In the present study, online writing platforms, digital journals, and asynchronous resources extend opportunities to explore ideas, develop written texts, and practise beyond scheduled classroom sessions (See Figure 1):

Figure 1. ***PICRAT matrix within the TIM***



The PICRAT matrix combines the three PIC dimensions with the three RAT dimensions to produce nine possible configurations of technology use. The model is designed to support reflection on individual learning activities rather than to classify an entire course or teacher according to one level of technology integration [Kimmons et al., 2020]. This distinction is relevant to writing instruction because different tasks may require different combinations of student engagement and technology use.

The application of PICRAT also presents several challenges. First, creativity should not be restricted to artistic production; it can involve constructing knowledge and producing written artefacts. Second, transformation should not be interpreted as the complete replacement of conventional teaching, but as the purposeful use of technology to enable meaningful changes in learning. Third, technology integration must be adapted to the objectives and context of each activity. Finally, the model does not independently provide a complete system for connecting technology-use decisions with measurable learning outcomes; these require explicit instructional objectives and appropriate assessment procedures [Kimmons et al., 2020].

In our view, PICRAT is most useful when it guides instructional planning without being treated as a direct measure of students' writing competence. A task may be interactive or creative without necessarily producing a coherent, grammatically accurate, or genre-appropriate text. Consequently, the present study combines PICRAT-guided technology integration with explicit writing objectives, genre-specific activities, and assessment criteria. The model guides the organisation of learning activities, while students' written products and assessment results provide the basis for evaluating the methodology.

Research problem: Paragraph and three-paragraph essay writing

The increasing importance of written communication has intensified the need

for effective foreign language writing instruction. O.P. Shaban and I.N. Kozeletskaya note that the expansion of ICT-mediated communication has increased the range of contexts in which writing is used. Nevertheless, limited classroom time and the predominant emphasis on oral communication can restrict opportunities for students to submit written assignments and receive teacher feedback [Shaban & Kozeletskaya, 2021].

An analysis of the State Educational Standards governing higher education in the Republic of Uzbekistan, the qualification requirements for degree programme 60111800—Foreign Language and Literature (English), and the relevant curricula and syllabi indicated that these challenges were also present at the institutions involved in the present study. The investigation consequently focused on the difficulties encountered by first- and second-year students in producing paragraphs and three-paragraph essays.

The writing process generally involves planning, drafting, revising, and editing. Y.R. Ovechkina identifies three principal stages in the development of communicative competence involved in foreign-language writing: idea generation, compositional design, and presentation of the completed text [Ovechkina, 2012]. Idea generation involves identifying the communicative purpose, selecting an appropriate sociocultural context, and formulating relevant ideas. Compositional design requires the logical organisation of ideas according to the rhetorical conventions of the target language. Presentation involves producing a legible and correctly structured text with appropriate spelling, punctuation, and formatting.

These stages demonstrate that writing competence encompasses more than the production of grammatically correct sentences. Students must also understand the communicative purpose of a text, organise ideas coherently, and apply the conventions of the target genre. In our view, these requirements make it necessary to organise instruction around the structural and communicative characteristics of specific writing tasks.

Paragraph structure and first-year students' difficulties

A paragraph is a group of sentences organised around a topic sentence, which introduces its central idea. Supporting sentences develop this idea through examples, explanations, and relevant details, while a concluding sentence summarises the paragraph's main point [Aldera, 2016]. The topic sentence consists of a topic and a controlling idea: the topic identifies what the paragraph addresses, whereas the controlling idea specifies what the writer communicates about that topic and limits the scope of the discussion. Supporting sentences then explain, develop, or substantiate the central idea. A concluding sentence is particularly characteristic of a stand-alone paragraph, while body paragraphs within an essay do not generally perform the same concluding function [Hogue & Bixby, 2016].

The analysis of the Writing Practice syllabus showed that first-year students were expected to produce five types of paragraphs: descriptive, compare-and-contrast, opinion, narrative, and cause-and-effect paragraphs. Each type has conventions governing the formulation of topic and concluding sentences. The initial investigation

identified difficulties with these components as a significant source of error in students' written work.

Students frequently included irrelevant information, produced unnecessarily lengthy sentences, or formulated unclear topic sentences. Other difficulties involved the absence of an appropriate controlling idea, the introduction of new ideas in supporting sentences, and deviations from the paragraph's central topic. Problems also arose in concluding sentences, where students sometimes introduced new information instead of summarising the ideas already developed. Depending on the paragraph type, a conclusion may express a personal response, offer a recommendation, encourage action, explain the significance of an experience, or predict possible causes or effects.

These difficulties suggest that paragraph instruction must address the communicative function of each sentence rather than focus exclusively on sentence-level accuracy. The writer needs to maintain a clear relationship between the topic sentence, supporting details, and conclusion. Accordingly, the present study selected descriptive paragraph writing for the experimental intervention. Descriptive writing has been characterised as a foundation for developing writing because it incorporates elements that are also relevant to other forms of written production [Kartawijaya, 2018].

Three-paragraph essay structure and second-year students' difficulties

According to the Writing Practice syllabus, second-year students develop the ability to produce the more complex genre of a three-paragraph essay. As with paragraphs, essays may be descriptive, compare-and-contrast, opinion, narrative, or cause-and-effect texts. A three-paragraph essay comprises an introduction, a body paragraph, and a conclusion, each serving a distinct communicative purpose.

The introductory paragraph introduces the topic, identifies the aspect to be discussed, and presents the writer's position [Dudeney & Hockly, 2007]. Paraphrasing the wording of the task through synonyms or alternative expressions can also demonstrate the writer's language proficiency. The body paragraph develops the ideas introduced in the opening paragraph, particularly those expressed in the thesis statement. It should present relevant facts or arguments in a coherent sequence and use an appropriate transition towards the conclusion. The concluding paragraph restates the thesis in different words, synthesises the principal ideas, and may include a thought-provoking final statement [Barbeau, 2017].

A typical introductory paragraph contains a hook, supporting sentences, and a thesis statement. The initial investigation revealed that students had difficulty developing appropriate hooks and formulating supporting sentences that fulfilled the communicative purpose of the essay type. Students also struggled to formulate thesis statements that clearly established the organisation and content of the essay.

The demands placed on a thesis statement vary according to the genre. In a descriptive essay, it should establish the significance of the subject; in a compare-and-contrast essay, it should express the writer's perspective on the objects being compared; in an opinion essay, it should state a position on the issue; in a narrative essay, it should prepare the reader for the sequence of events; and in a cause-and-

effect essay, it should identify the relationship being examined. The initial assessment indicated that students did not consistently address these functions, which affected the coherence of their essays.

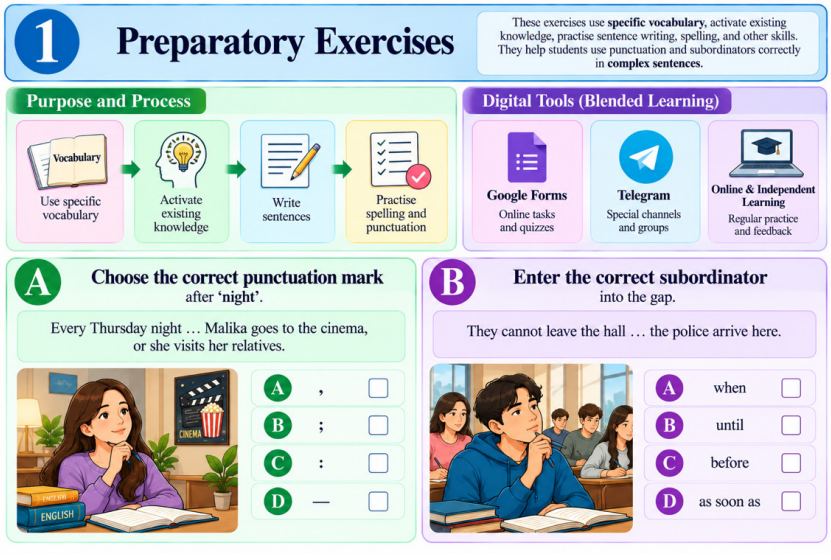
The concluding paragraph presents a further challenge. Although it generally restates and synthesises ideas from the introduction and body, its specific function depends on the essay type. It may provide a prediction or warning, reinforce an opinion, explain the personal significance of an experience, or clarify the importance of understanding a causal relationship. The initial writing test identified difficulties with these genre-specific functions, particularly in the conclusions of three-paragraph essays.

In our assessment, the difficulties observed in paragraph and essay writing are related but not identical. Paragraph writing requires students to maintain unity around a controlling idea and develop it through supporting sentences. Essay writing requires these abilities to be coordinated with a broader rhetorical structure, particularly the relationship between the thesis statement, body paragraph, and conclusion. A differentiated instructional sequence is therefore needed to address the specific demands of each genre.

Rationale for the exercise system and the present study

To address the identified difficulties, the study adapted the exercise system proposed by M.Y. Kaskova and L.N. Frolova [Kaskova & Frolova, 2018]. Their system was originally developed to improve German writing competence among lower-level students and was not specifically designed for English paragraph and essay writing. The present study therefore adapted the exercises to the requirements of five paragraph and essay types and incorporated the affordances of blended learning technologies (See Figures 1, 2, 3, 4):

Figure 1.



Preparatory exercises establish the linguistic foundation for subsequent writing tasks by targeting specific language difficulties. Students activate lexical knowledge, formulate sentences, and practise punctuation and grammatical structures through short, focused activities. Gap-filling and multiple-choice tasks encourage learners to identify appropriate language forms before applying them independently. Digital platforms such as Google Forms and Telegram facilitate interactive practice, rapid response checking, and immediate feedback. This stage helps students reduce basic language errors and prepare for more complex paragraph and essay composition.

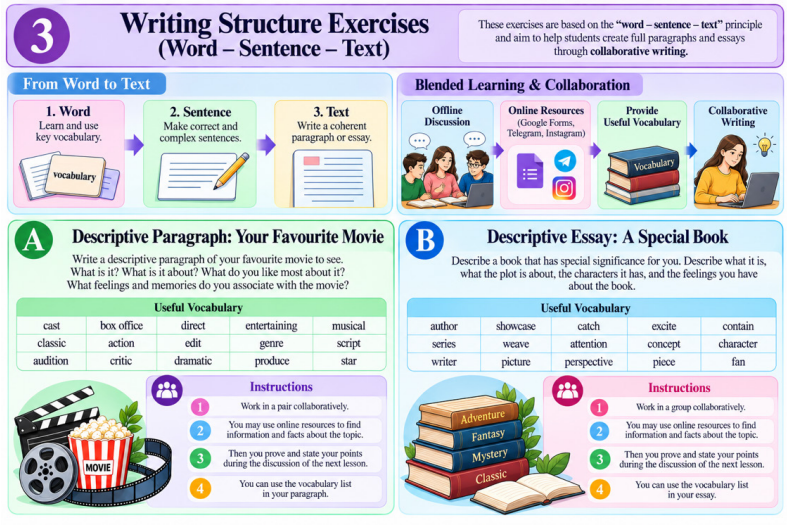
Figure 2.



Constructive exercises develop students' ability to construct meaningful sentences by combining visual prompts with appropriate linguistic forms. Picture cards provide contextual cues that help learners generate ideas and express actions in grammatically accurate sentences. Multiple-choice and sentence-completion tasks encourage students to identify suitable language structures and establish logical connections between ideas. These activities promote the transition from recognising language patterns to producing original sentences. Consequently, constructive exercises prepare learners to organise sentences into coherent paragraphs and develop more complex written texts.

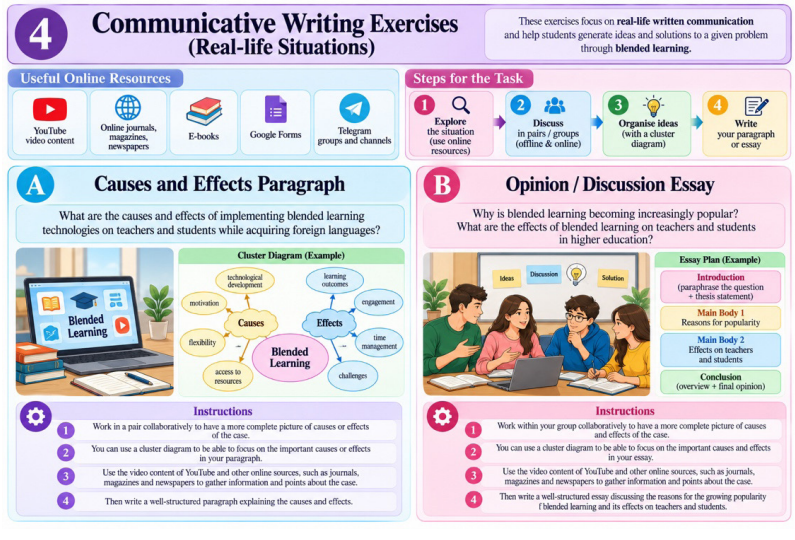
Writing structure exercises develop students' ability to organise language into coherent written texts, progressing from individual words and sentences to complete paragraphs and essays. Students use visual prompts, topic-specific vocabulary, and sentence-building activities to practise expressing ideas in a logical sequence. Descriptive paragraph and essay tasks encourage learners to select relevant details, maintain thematic unity, and apply appropriate text structures. Blended learning tools facilitate access to online resources, collaborative writing, and vocabulary development. These exercises strengthen students' ability to construct well-organised texts and prepare them for more independent academic writing.

Figure 3.



Communicative writing exercises develop students' ability to produce purposeful written texts in realistic communication contexts. Students apply their writing skills to practical tasks, such as analysing the benefits and challenges of blended learning or presenting arguments in opinion essays. Real-life scenarios encourage learners to identify an audience, clarify their communicative purpose, and support their ideas with relevant reasons and examples. Digital resources facilitate information gathering, collaborative discussion, and the organisation of arguments before writing. These exercises promote the transfer of writing skills to authentic academic and professional communication.

Figure 4.



The analysis of current instructional practice identified several shortcomings.

First, communicative-competence principles were implemented largely through offline classroom activities. Second, paragraph and essay instruction was not consistently organised within a clearly defined genre-based or process-based framework. Third, insufficient attention was paid to the structural features of individual paragraph and essay types, and the teaching methods were not always integrated into a systematic sequence.

These shortcomings indicate that the problem cannot be addressed solely by increasing the number of writing tasks or transferring existing exercises to online platforms. In our view, an effective methodology must connect genre-specific instruction, a structured sequence of writing activities, feedback, and revision with a coherent organisation of classroom, online, and independent learning. The purpose of the present study was therefore to develop and empirically evaluate a blended learning methodology guided by PICRAT within TIM for improving the writing competence of prospective English language specialists, with particular emphasis on paragraph and three-paragraph essay writing.

METHODS

Research design and instructional approaches

The study employed a pedagogical experiment to investigate the effectiveness of blended learning technologies in developing students' writing competence. The instructional design combined offline classroom activities, online resources, and independent learning. The communicative and genre-based approaches were selected in response to the difficulties identified through the initial diagnostic assessment.

The communicative approach supported the purposeful use of written discourse in different contexts, while the genre-based approach focused on the distinctive structural and communicative features of five paragraph and essay types: descriptive, compare-and-contrast, opinion, narrative, and cause-and-effect writing. These approaches were implemented through a system of exercises designed to develop students' ability to organise ideas, construct coherent texts, and apply genre-specific conventions.

The study also incorporated PICRAT-guided technology integration within TIM. The framework was used to organise the functions of digital tools across classroom teaching, online learning, and independent study. The experimental methodology was designed to ensure that technology-supported activities remained aligned with the learning objectives of paragraph and essay writing.

Writing activities and instructional methods

The instructional programme incorporated the following methods, adapted to the study's objectives and implemented across the three learning modes.

Information-gap activities. Students completed model paragraphs and essays by supplying missing topic sentences, supporting ideas, thesis statements, and concluding sentences. Activities were introduced during classroom lessons, continued online or independently, and subsequently discussed in class [Millin, 2015]. This method focused on students' understanding of the functions and relationships among

the structural components of written texts.

Collaborative writing. Students with different levels of writing competence worked in pairs or groups to plan and produce paragraphs and essays. Tasks were initiated during classroom instruction, developed online, and reviewed during subsequent lessons [Lowry et al., 2004]. Collaborative work provided opportunities to discuss ideas, examine textual organisation, and identify problems in written production.

Process writing. Writing activities were organised around pre-writing and writing stages. Students first generated and organised ideas and outlined the components of the text; they then developed these components into coherent paragraphs or essays [Parady, 2024]. This procedure supported the organisation of writing as a process involving planning and text development rather than a single act of composition.

Genre analysis. Students examined model texts to identify the communicative functions and structural characteristics of sentences, paragraphs, and essays. This analysis was conducted through classroom activities, online resources, and independent study [Halim & Negara, 2019]. The tasks directed attention to genre-specific conventions and the relationship between a text's purpose and its organisation.

Text deconstruction. Students reconstructed disordered text extracts by identifying cohesive devices and explaining their choices. The activities were intended to develop their understanding of how individual sentences and ideas are connected within written discourse.

Peer review. Students evaluated classmates' written work, identified strengths and weaknesses, and provided constructive feedback. The procedure supported critical reading and revision skills by requiring students to assess texts against the intended writing objectives [Washington University in St. Louis, n.d.].

These methods were not treated as separate, unrelated techniques. They were incorporated into a broader instructional sequence in which students analysed model texts, planned and produced their own writing, reviewed written work, and revised it in response to feedback.

Writing-assessment criteria and prompt-based tasks

The Writing Practice syllabus incorporated writing-assessment criteria from IELTS, TOEFL iBT, and CAE/FCE as additional learning content rather than as the foundation of the curriculum. The selected criteria included task response, coherence and cohesion, lexical resource, and grammatical range and accuracy for IELTS; development, organisation, and language use for TOEFL iBT; and content, communicative achievement, organisation, and language for CAE/FCE [Educational Testing Service, 2021; Cambridge English, n.d.-a, n.d.-b].

The inclusion of these criteria was intended to familiarise students with the assessment of written texts in relation to both their content and organisation. Prompt-based writing was also incorporated to encourage students to investigate questions, analyse information, formulate explanations, and apply their findings. Inquiry-based learning provided an additional means of supporting knowledge development through teacher guidance [Wale & Bogale, 2021].

In the present study, assessment criteria were linked to the structural requirements of the target genres. This ensured that students' work was examined not only for linguistic correctness but also for the relevance of content, the organisation of ideas, and the fulfilment of the writing task.

Digital platforms and learning resources

Because the HEMIS system was being introduced gradually at the selected higher education institutions, Telegram was chosen as the principal virtual platform for the experimental work. The selection also took account of the preferences of students in the experimental groups and the need to provide a familiar environment for collaboration between teachers and learners.

The platform's features were examined in relation to the three learning modes. These included:

1) creating virtual student groups;

2) establishing channels for sharing learning materials and resources;

3) integrating resources and links from Google Forms, Instagram, and YouTube;

4) conducting live video and audio sessions;

5) facilitating individual teacher–student communication;

6) using bots to collect assignments;

7) assessing students through anonymous voting, multiple-answer polls, and quizzes;

8) collecting student feedback through polls;

9) evaluating students' responses to learning materials and platform features; and

10) coordinating offline, online, and independent learning activities.

Other digital tools were selected for specific instructional functions. Google Forms and Telegram supported assessment; Instagram and YouTube provided access to vocabulary resources, videos, and additional content; Google Docs and Microsoft Word supported text production and revision; Write & Improve and Grammarly provided opportunities for independent writing practice; Google Drive was used to maintain electronic portfolios; and Microsoft Excel supported the recording and organisation of assessment results.

The tools were selected according to their intended functions within the methodology. In this respect, Telegram served as the main communication and coordination platform, while the other applications supported particular stages of writing practice, assessment, feedback, and progress monitoring.

Blended learning model and implementation procedure

The proposed blended learning methodology consisted of three complementary components:

- **Offline learning:** providing students with essential information and guided classroom instruction.
- **Online learning:** supporting the monitoring and assessment of students' knowledge and writing skills.

▪ **Independent learning:** consolidating and reinforcing the knowledge and skills acquired through classroom and online activities (See Figures 5 and 6):

Figure 5. ***Representation of blended learning technologies within the PICRAT in the TIM for improving students' writing competence***



Figure 6. ***Model for using blended learning technologies to improve students' writing competence***



The model organised collaboration among the researcher, teachers, and students across offline, online, and independent learning. Its implementation was based on the assumption that effective learning requires timely access to instructional information, appropriate learning materials, and clear guidance on the use of blended learning technologies.

The methodology was implemented through the following activities:

1. **Presentation of new topics.** Warm-up activities introduced topic-related

vocabulary and paragraph- or essay-writing tasks. Teachers presented new material through PowerPoint presentations based on communicative and genre-based principles, including outlining techniques.

2. **Collaborative writing.** First-year students worked in pairs to develop paragraph-writing skills, while second-year students worked in groups to practise essay writing. These activities addressed the difficulties identified during the initial diagnostic assessment, particularly those related to text structure and its constituent elements.

3. **Review of previously taught topics.** PowerPoint presentations were made available in both file and recorded-video formats, allowing students to revisit explanations beyond classroom instruction and review material according to their learning needs.

4. **Vocabulary and instructional resources.** Telegram and Instagram were used to distribute infographics, videos, vocabulary resources, and writing instructions for independent study. The resources supported students in producing paragraphs and essays in accordance with the conventions of the target language.

5. **Assessment of writing-related knowledge and skills.** Google Forms and Telegram Poll features, including Multiple Answers, Anonymous Voting, and Quiz Mode, were used for regular assessment. Exercises and tests addressed paragraph and essay structure, topic sentences, thesis statements, sentence types, punctuation, conjunctions, and textual cohesion.

6. **Exploration of ideas and opinions.** Online journals and YouTube videos were shared through dedicated Telegram channels to help students identify relevant information, generate ideas, and develop arguments. Reading materials provided models of paragraph structure, while video content offered additional input for organising written discourse.

7. **Electronic submission of homework.** Students submitted paragraph and essay assignments as electronic files or text messages. Two dedicated bots, BlendedTask1 and BlendedTask2, were developed to collect assignments and enable teachers to return feedback digitally.

8. **Independent writing practice.** Students used Write & Improve with Cambridge and Grammarly to practise and improve their writing. Grammarly provided feedback on correctness, clarity, engagement, and delivery, while assignments on Write & Improve supported progress towards the syllabus objectives.

9. **Paragraph and essay production.** Google Docs and Microsoft Word were used to complete writing assignments electronically and support four stages of the writing process: generating ideas, drafting, revising, and editing. These tools also facilitated electronic assessment and feedback.

10. **Electronic feedback.** Teacher feedback included identified errors and weaknesses, positive developments, and recommendations for improvement supported by hyperlinks to online resources. Feedback was attached to students' electronic submissions and returned through the dedicated Telegram bots.

11. **Discussion of errors and difficulties.** Classroom discussions addressed

assessment results, homework, independent assignments, and errors identified through electronic feedback. Additional online sessions and workshops reinforced students' understanding and addressed recurring difficulties.

12. **Electronic portfolios.** Paragraphs and essays representing the five target genres were systematically collected in Google Drive alongside electronic feedback. The portfolios allowed teachers and students to access assignments from different locations and monitor writing development throughout the experimental period.

13. **Online writing diaries.** First-year students were encouraged to write daily entries, whereas second-year students produced weekly entries aligned with the prescribed paragraph and essay genres. Teachers reviewed these entries regularly and provided feedback.

14. **Online workshops.** Weekly live sessions were organised through Telegram Video Chat. Topics were selected according to students' writing difficulties, with particular attention to topic sentences, thesis statements, supporting and concluding sentences, complex sentence structures, punctuation, and conjunctions.

15. **Recording and reporting learning outcomes.** Classroom participation and achievement results were recorded electronically. Microsoft Excel was used to organise assessment data and prepare charts illustrating students' progress, which was shared through dedicated Telegram groups.

Taken together, these activities connected classroom explanations with independent practice, online assessment, feedback, and revision. Their purpose was to provide a coordinated learning sequence rather than a collection of disconnected digital exercises.

Research participants and experimental setting

The pedagogical experiment was conducted at three higher education institutions in Uzbekistan: Uzbekistan State World Languages University (UzSWLU), Samarkand State Institute of Foreign Languages (SamSIFL), and Andijan State Institute of Foreign Languages (ASIFL). At all three institutions, the research was carried out within degree programme 60111800, Foreign Language and Literature (English).

A total of 257 first- and second-year students participated in the study. The participants included 127 first-year students and 130 second-year students. Across the full sample, 130 students were assigned to the experimental group and 127 to the control group. The intervention was conducted during the 2021/2022 and 2022/2023 academic years.

The first-year students were involved in paragraph-writing instruction, while the second-year students participated in activities focused on three-paragraph essays. This arrangement corresponded to the Writing Practice syllabus and enabled the intervention to address the genre-specific requirements of the two study years.

Experimental Procedure

The experimental work was organised into three stages:

Diagnostic and prognostic stage. The selected institutions and existing educational practices were examined. The State Educational Standards, qualification

requirements for degree programme 60111800, curricula, and syllabi were analysed. Writing Practice classes were observed, and students completed initial tests to identify the principal difficulties and relevant instructional needs. The findings informed the formulation of the research objectives, hypothesis, tasks, and experimental programme.

Organisational and preparatory stage. The experimental sites, duration, schedule, instructional materials, and participants were determined. Methodological and didactic resources were prepared, including the blended learning model, implementation guidelines, exercise system, test bank, and assignments aimed at improving paragraph- and essay-writing skills.

Implementation stage. Students were assigned to control and experimental groups, and the intervention was carried out during the 2021/2022 and 2022/2023 academic years. Curriculum analysis and the initial writing-test results informed the selection of activities addressing the five main paragraph and essay types, the use of digital learning technologies, and digital literacy. The selection of topics also took account of students' future professional needs, particularly their ability to assess and analyse written genres. Additional online lessons were organised to address the needs identified during the initial assessment.

Assessment instruments and writing tasks

The initial and subsequent assessments included two sections. The first section consisted of 10 multiple-choice questions designed to assess students' theoretical knowledge of paragraph and essay structure, sentence types, and linguistic devices used to organise coherent written texts. Control and experimental groups completed the same tasks under identical conditions. The materials were of comparable length and difficulty and were aligned with the learning objectives for first- and second-year students. The questions assessed students' knowledge of paragraph and essay components, sentence types, and linguistic devices used to organise coherent written texts.

The second section assessed practical writing skills. First-year students were asked to write a descriptive paragraph on "*My First Day at My Dream University (Institute)*", consisting of 180–200 words. Second-year students were asked to write a descriptive essay on "*Describe Your Favourite Lesson on Writing Competence at University (Institute)*", consisting of 220–250 words.

The writing tasks were selected to correspond to the genres taught at the respective study levels. They provided a basis for examining both students' knowledge of written-text organisation and their ability to apply that knowledge in practical writing.

Students' written work was assessed according to four criteria:

1) content and task response;
2) organisation;
3) variety of vocabulary and structure; and
4) mechanics.

These criteria addressed the relevance of the written content, the organisation

and development of ideas, the use of vocabulary and grammatical structures, and the technical conventions of writing. Their application allowed the study to examine students' written products in relation to the intended learning outcomes.

Data analysis

The experimental results were analysed by comparing the performance of the control and experimental groups and examining the changes between the initial and final assessment stages. The assessment data were organised to support the evaluation of students' theoretical knowledge and practical writing performance.

Mathematical and statistical analysis was used to examine the results and determine the effectiveness of the proposed blended learning methodology. The analysis considered the relationship between the instructional intervention and students' writing outcomes, with particular attention to the development of paragraph and three-paragraph essay writing.

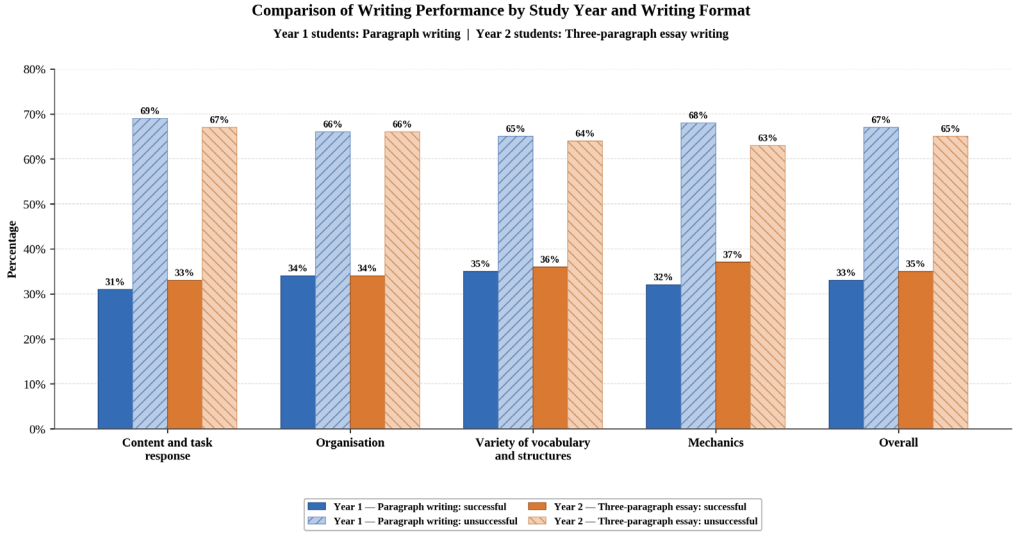
The statistical findings and the detailed comparisons between control and experimental groups are presented in the Results and Discussion section. This separation distinguishes the methods used to collect and analyse the data from the empirical findings obtained through the pedagogical experiment.

RESULTS AND DISCUSSION

Initial writing performance across four assessment criteria

Figure 7 presents the initial writing assessment results for first-year students completing a paragraph-writing task and second-year students completing a three-paragraph essay. Students' performance was evaluated according to four criteria: content and task response, organisation, variety of vocabulary and structures, and mechanics. The figure distinguishes successful and unsuccessful performance, providing an overview of students' writing competence before the implementation of the blended learning methodology (See Figure 7):

Figure 7. ***Initial writing performance across four assessment criteria***



The results reveal that the proportion of successful performance remained relatively low across all four assessment criteria. For first-year students, the overall success rate was approximately 33%, while the unsuccessful rate reached 67%. Second-year students demonstrated an overall success rate of 35%, compared with 65% unsuccessful performance. The difference between the two cohorts was therefore modest, indicating that the initial writing difficulties were evident at both paragraph and essay levels.

Regarding **content and task response**, approximately 31% of first-year students and 33% of second-year students achieved successful performance, whereas 69% and 67%, respectively, fell into the unsuccessful category. These results suggest that many students experienced difficulties in developing relevant ideas and responding adequately to the assigned writing task. In descriptive writing, this may involve insufficient supporting details, limited elaboration, or a weak connection between the main idea and the information provided.

For **organisation**, successful performance accounted for approximately 34% in both cohorts, while unsuccessful performance reached 66%. This pattern indicates that organising information coherently was a substantial challenge. At paragraph level, students need to establish a clear topic sentence and arrange supporting details logically. At essay level, they must also maintain an appropriate relationship between the introduction, body paragraph, and conclusion. The similar results across the two cohorts suggest that text organisation required further instructional attention regardless of the writing format.

The **variety of vocabulary and structures** criterion showed successful performance of approximately 35% among first-year students and 36% among second-year students. The corresponding unsuccessful rates were 65% and 64%. Although this criterion produced slightly higher success rates than some of the other categories, the results still indicate limited achievement in using varied linguistic resources. Students may have needed further support in selecting precise vocabulary, constructing varied sentences, and using language appropriate to the communicative purpose of descriptive writing.

In **mechanics**, approximately 32% of first-year students and 37% of second-year students achieved successful performance. The unsuccessful rates were 68% and 63%, respectively. Mechanics was therefore a particularly challenging area for first-year students, whereas second-year students showed a comparatively higher success rate. This criterion concerns the formal features of written language, including spelling, punctuation, and capitalisation, which contribute to the clarity and readability of a text.

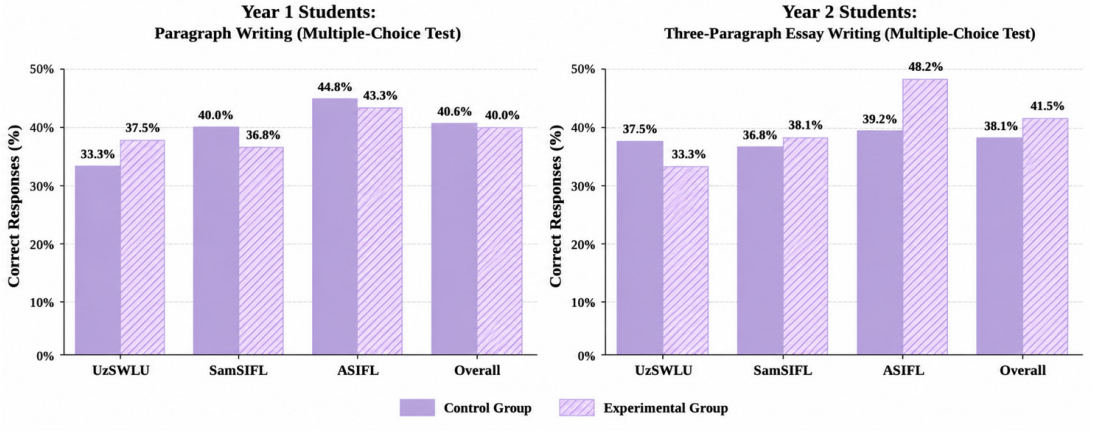
Overall, Figure 7 establishes a baseline against which the final writing assessment can be compared. The unsuccessful performance rates ranged from approximately 63% to 69% across the four criteria, demonstrating that the initial difficulties were not confined to a single aspect of writing. Instead, the results point to the need for an integrated instructional approach addressing idea development, text organisation, lexical and grammatical resources, and writing mechanics. These diagnostic findings

provide a rationale for implementing structured paragraph- and essay-writing practice supported by feedback, revision, and blended learning activities.

Initial multiple-choice test results

Figure 8 presents the initial multiple-choice test results for first-year students studying paragraph writing and second-year students studying three-paragraph essay writing. The test assessed students' knowledge of writing-related concepts before the implementation of the blended learning methodology. The results are reported separately for the control and experimental groups at UzSWLU, SamSIFL, and ASIFL (See Figure 8):

Figure 8. ***Initial multiple-choice test results by study year and institution***



Among first-year students, the overall correct-response rate was 40.6% in the control group and 40.0% in the experimental group. At UzSWLU, the control group achieved 33.3%, compared with 37.5% in the experimental group. At SamSIFL, the respective results were 40.0% and 36.8%, while at ASIFL they were 44.8% and 43.3%. These results show that the initial difference between the two groups was small overall, although the direction of the difference varied across institutions.

Among second-year students, the overall correct-response rate was 38.1% in the control group and 41.5% in the experimental group. At UzSWLU, the control group achieved 37.5%, while the experimental group achieved 33.3%. At SamSIFL, the results were 36.8% and 38.1%, respectively. The largest difference was observed at ASIFL, where the control group achieved 39.2% and the experimental group 48.2%. Thus, the experimental group had a higher overall initial score among second-year students, but this pattern was not consistent across all institutions.

Taken together, the initial multiple-choice results indicate that students' knowledge of writing-related concepts was limited in both groups. The overall scores ranged from 38.1% to 41.5%, depending on the study year and group. The relatively small differences between the first-year groups suggest broadly comparable starting scores, whereas the second-year results show a more noticeable initial difference in favour of the experimental group. This variation is important when interpreting the final results: improvement should be assessed by comparing the initial and final scores

for each group, rather than by relying exclusively on the final scores.

The findings also support the need to combine knowledge-based assessment with practical writing tasks. A multiple-choice test can measure students' recognition and understanding of writing conventions, but it cannot fully demonstrate their ability to develop ideas, organise a paragraph or construct a coherent essay. Therefore, the initial test served as one component of the diagnostic assessment, alongside the practical writing assessment presented in Figure 7.

Statistical analysis of the initial multiple-choice test

The statistical indicators presented in Table 1 provide a quantitative overview of the initial multiple-choice test results for the experimental and control groups across the three participating institutions. The analysis includes mean scores, sample variance, standard error, confidence intervals, mean value indicators, and Student's t-statistic. These measures were intended to establish the groups' initial performance profiles before the implementation of the blended learning methodology (See Table 1):

Table 1. ***Statistical indicators of the initial multiple-choice test***

Statistical Indicators	Groups	UzSWLU	SamSIFL	ASIFL	Total
Mean	Experimental Group	2.61	2.63	2.73	2.67
	Control Group	2.61	2.64	2.67	2.65
Sample Variance	Experimental Group	0.88	0.83	0.81	0.88
	Control Group	0.88	0.85	0.78	0.83
Standard Error	Experimental Group	0.94	0.91	0.90	0.91
	Control Group	0.94	0.92	0.89	0.91
Coefficient of Variation		**1.00**	**0.99**	**1.02**	**1.01**
Confidence Interval	Experimental Group	2.28	2.34	2.50	2.51
		2.94	2.91	2.96	2.83
	Control Group	2.28	2.35	2.44	2.49
		2.94	2.93	2.90	2.80
Mean Value Indicator	Experimental Group	6.46	5.50	4.29	3.01
	Control Group	6.46	5.58	6.06	3.05
Student's t-statistic		**0**	**-0.07**	**0.37**	**0.20**
Critical Value		1.96	1.96	1.96	1.96
Criterion Conclusion		H_0	H_0	H_0	H_0

The reported overall mean was 2.67 for the experimental group and 2.65 for the control group. At the institutional level, the mean scores were identical at UzSWLU (2.61 for both groups), while the differences at SamSIFL and ASIFL were relatively small. At SamSIFL, the experimental group's mean was 2.63, compared with 2.64 in the control group. At ASIFL, the experimental group recorded 2.73, compared with 2.67 in the control group. These results indicate that the initial mean scores were broadly similar, although some variation existed across institutions.

The reported sample variance and standard error values also show relatively close figures between the groups. The overall sample variance was 0.88 for the

experimental group and 0.83 for the control group, while the overall standard error was 0.91 for both groups. However, these indicators should be interpreted alongside the sample sizes and the method used to calculate the statistics, as the table alone does not provide sufficient information to verify the calculations independently.

The Student's t-statistics reported in the table were 0.00 for UzSWLU, −0.07 for SamSIFL, 0.37 for ASIFL, and 0.20 for the total sample. All reported absolute t-values were below the stated critical value of 1.96. According to the decision rule used in the table, the null hypothesis (H_0) was therefore retained for each institution and for the total sample. On this basis, the table does not indicate a statistically significant difference between the experimental and control groups at the initial assessment stage.

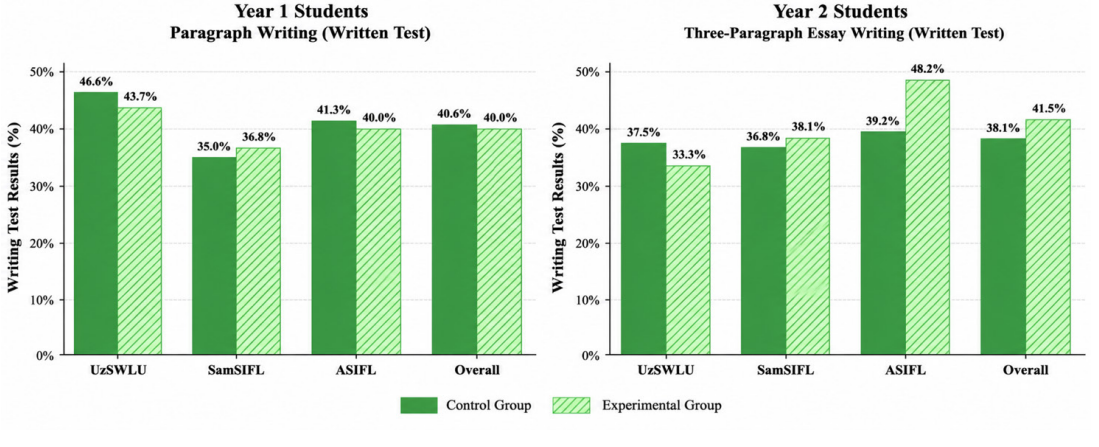
This finding is important for interpreting the subsequent pedagogical experiment. The initial multiple-choice test was designed to establish a baseline rather than demonstrate the effectiveness of the intervention. The reported statistical results suggest that the groups' initial knowledge-based test performance was comparable overall. The final assessment can consequently be examined against this baseline to determine whether the experimental group demonstrated a greater improvement than the control group.

Nevertheless, the statistical interpretation should be treated cautiously until the calculations are verified against the original dataset. In particular, the table's confidence intervals, mean value indicators, and standard errors require clear definitions and a consistent calculation procedure. The overall mean values and t-statistics should also be checked against the underlying sample sizes and raw scores before publication.

Initial written-test results

Figure 9 presents the initial written-test results for first-year students completing a paragraph-writing task and second-year students completing a three-paragraph essay. The results are reported for the control and experimental groups at UzSWLU, SamSIFL, and ASIFL. The purpose of this assessment was to establish students' practical writing performance before the implementation of the blended learning methodology (See Figure 9):

Figure 9. ***Initial written-test results by study year and institution***



Among first-year students, the overall written-test result was 40.6% for the control group and 40.0% for the experimental group. At UzSWLU, the control group achieved 46.6%, compared with 43.7% in the experimental group. At SamSIFL, the corresponding results were 35.0% and 36.8%, while at ASIFL they were 41.3% and 40.0%. These figures indicate that the groups had similar overall initial results, although the relative performance differed across institutions.

Among second-year students, the overall results were 38.1% for the control group and 41.5% for the experimental group. At UzSWLU, the control group achieved 37.5%, while the experimental group achieved 33.3%. At SamSIFL, the respective results were 36.8% and 38.1%. At ASIFL, the control group achieved 39.2%, compared with 48.2% in the experimental group. The experimental group therefore had a higher overall initial score among second-year students, with the largest institution-level difference observed at ASIFL.

Comparison of the two cohorts shows that initial practical writing performance was broadly similar at the aggregate level, although the second-year experimental group had a higher reported overall score than its control counterpart. These baseline differences should be considered when interpreting the final assessment. In particular, the final performance of the experimental group should be evaluated in relation to its own initial results and to the corresponding changes in the control group.

Unlike the multiple-choice test, the written test required students to demonstrate their ability to produce a text rather than select a correct answer. It therefore provided complementary evidence of practical writing performance. However, the overall percentages alone do not identify which aspects of writing—content, organisation, vocabulary and structures, or mechanics—accounted for the observed differences. Criterion-level results must be examined separately to determine the specific areas in which students experienced difficulties or demonstrated improvement.

Statistical analysis of the initial written test

Table 2 presents the statistical indicators obtained from the initial written test administered to the experimental and control groups at UzSWLU, SamSIFL, and ASIFL. The calculations were conducted using the mathematical and statistical procedures specified in the research methodology, including the arithmetic mean, sample variance, standard error, efficiency coefficient, confidence intervals, and Student's t-statistic (See Table 2).

The overall mean score was 2.65 for the experimental group and 2.63 for the control group. At UzSWLU, the experimental group recorded a mean of 2.61, compared with 2.71 in the control group. At SamSIFL, the corresponding values were 2.63 and 2.59, while at ASIFL they were 2.68 and 2.61. Thus, the initial mean scores were relatively close overall, although the direction of the difference varied across institutions.

The reported sample variances were 0.78 for the experimental group and 0.80 for the control group in the total sample. The corresponding standard errors were 0.88 and 0.89. These values indicate similar levels of reported variability in the two groups. The efficiency coefficients were 0.97 at UzSWLU, 1.01 at SamSIFL, 1.02 at ASIFL,

and 1.00 overall. As these coefficients were close to 1.00, they did not indicate a substantial overall advantage for either group at the initial stage under the calculation procedure used in the study.

Table 2. ***Statistical indicators of the initial written test***

Statistical Indicators	Groups	UzSWLU	SamSIFL	ASIFL	Total
Mean	Experimental Group	2.61	2.63	2.68	2.65
	Control Group	2.71	2.59	2.61	2.63
Sample Variance	Experimental Group	0.75	0.83	0.76	0.78
	Control Group	0.92	0.81	0.73	0.80
Standard Error	Experimental Group	0.87	0.91	0.87	0.88
	Control Group	0.96	0.90	0.83	0.89
Efficiency Coefficient		**0.97**	**1.01**	**1.02**	**1.00**
Confidence Interval	Experimental Group	2.31	2.34	2.46	2.49
		2.92	2.91	2.90	2.80
	Control Group	2.37	2.31	2.39	2.47
		3.05	2.87	2.84	2.79
Mean Value Indicator	Experimental Group	5.97	5.50	4.24	2.93
	Control Group	6.34	5.55	5.96	3.02
Student's t-statistic		**-0.41**	**0.17**	**0.39**	**0.14**
Critical Value		**1.96**	**1.96**	**1.96**	**1.96**
Criterion Conclusion		**H_0**	**H_0**	**H_0**	**H_0**

The Student's t-statistics were −0.41 at UzSWLU, 0.17 at SamSIFL, 0.39 at ASIFL, and 0.14 for the total sample. All absolute values were below the critical value of 1.96 reported in the table. Accordingly, the table records the retention of the null hypothesis (H_0) for each institution and for the total sample. Under the stated decision rule, the initial written-test results therefore did not show a statistically significant difference between the experimental and control groups.

These findings provide a baseline for interpreting the final written-test results. Although the experimental group's overall mean was slightly higher, the difference was small, and the institutional results varied in direction. Consequently, the initial data do not establish a clear advantage for the experimental group in practical writing performance. The final assessment must be compared with these baseline results to examine whether the experimental group demonstrated greater improvement than the control group after the blended learning methodology was implemented.

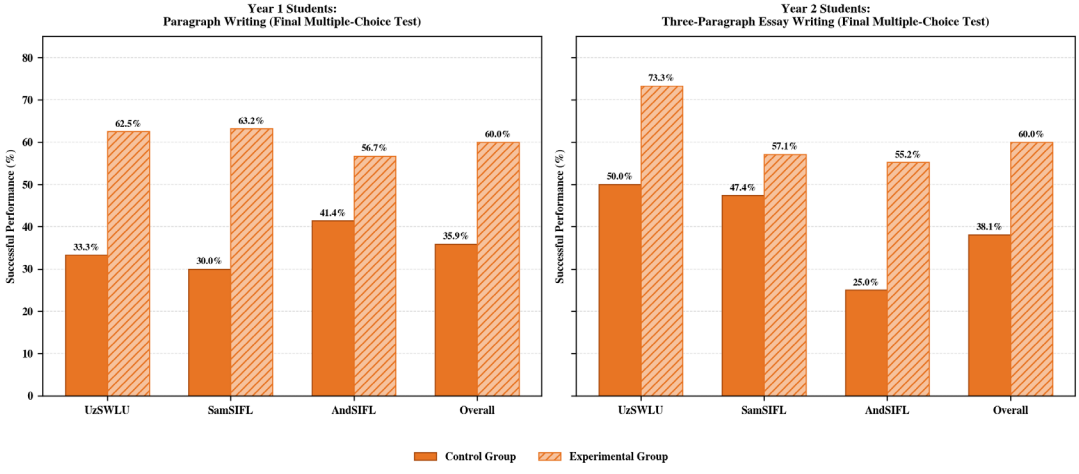
Final multiple-choice test results

Figure 10 illustrates the final multiple-choice test results for first-year students studying paragraph writing and second-year students studying three-paragraph essay writing. The results compare the control and experimental groups at UzSWLU, SamSIFL, and ASIFL (See Figure 10).

Among first-year students, the experimental group achieved higher scores than the control group at all three institutions. At UzSWLU, the experimental group scored 62.5%, compared with 30.9% in the control group. At SamSIFL, the respective results were 63.3% and 28.8%, while at ASIFL they were 56.7% and 41.4%. Overall, the experimental group achieved 60.0%, whereas the control group achieved 35.5%,

representing a difference of 24.5 percentage points.

Figure 10. ***Final multiple-choice test results by study year and institution***



A similar pattern was observed among second-year students. At UzSWLU, the experimental group achieved 73.5%, compared with 50.0% in the control group. At SamSIFL, the scores were 57.9% and 47.4%, respectively. At ASIFL, the experimental group achieved 56.2%, while the control group scored 25.0%. The overall results were 60.0% for the experimental group and 38.7% for the control group, a difference of 21.3 percentage points.

The largest institution-level difference among first-year students was observed at SamSIFL, where the experimental group outperformed the control group by 34.5 percentage points. Among second-year students, the largest difference occurred at ASIFL, where the gap reached 31.2 percentage points. These variations indicate that the size of the difference between groups differed across institutions, even though the experimental group achieved higher final scores in every comparison shown in the figure.

Taken together, the final multiple-choice results demonstrate a consistent advantage for the experimental groups in both study years. Compared with the initial test, where the overall scores were 40.0% for the first-year experimental group and 41.5% for the second-year experimental group, the final scores reached 60.0% in both cohorts. This corresponds to increases of 20.0 and 18.5 percentage points, respectively, within the experimental groups. These descriptive changes are consistent with improvement in students' knowledge of writing-related concepts during the intervention. However, the multiple-choice results alone cannot establish equivalent improvement in practical writing performance; this requires separate analysis of the written-test results.

Statistical analysis of the final multiple-choice test

Table 3 presents the mathematical and statistical results of the final multiple-choice test administered to the experimental and control groups at UzSWLU, SamSIFL, and ASIFL. The indicators were calculated using the statistical procedures specified in

the research methodology, including the arithmetic mean, sample variance, standard error, efficiency coefficient, confidence intervals, and Student's t-statistic (See Table 3):

Table 3. ***Statistical indicators of the final multiple-choice test***

Statistical Indicators	Groups	UzSWLU	SamSIFL	ASIFL	Total
Mean	**Experimental Group**	3,81	3,80	3,53	3,68
	Control Group	3,32	3,36	3,02	3,20
Sample Variance	**Experimental Group**	0,74	0,81	0,96	0,88
	Control Group	0,93	0,85	0,79	0,87
Standard Error	**Experimental Group**	0,86	0,90	0,98	0,95
	Control Group	0,96	0,92	0,89	0,93
Efficiency Coefficient		**1,14**	**1,13**	**1,16**	**1,15**
Confidence Interval	**Experimental Group**	3,50	3,52	3,28	3,52
		4,11	4,08	3,78	3,84
	Control Group	2,98	3,07	2,79	3,03
		3,66	3,65	3,25	3,36
Mean Value Indicator	**Experimental Group**	4,05	3,74	3,62	2,24
	Control Group	5,21	4,38	5,37	2,58
Student's t-statistic		**2,09**	**2,15**	**2,93**	**4,11**
Critical Value		1,96	1,96	1,96	1,96
Criterion Conclusion		**H_1**	**H_1**	**H_1**	**H_1**

The mean results show higher performance in the experimental group across all three institutions. At UzSWLU, the experimental group achieved a mean score of 3.81, compared with 3.32 in the control group. At SamSIFL, the respective means were 3.80 and 3.36, while at ASIFL they were 3.53 and 3.02. For the total sample, the experimental group's mean was 3.68, compared with 3.20 in the control group. These results indicate a consistent difference in favour of the experimental group in the final assessment.

The reported efficiency coefficients were 1.14 at UzSWLU, 1.13 at SamSIFL, 1.16 at ASIFL, and 1.15 for the total sample. As these values exceed 1.00, they indicate a positive efficiency ratio under the calculation procedure used in the study. The highest reported coefficient was observed at ASIFL (1.16), followed by the overall coefficient of 1.15. These ratios should be interpreted according to the formula specified in the research methodology and should not be confused with percentage-point differences in test scores.

The statistical significance of the differences was examined using Student's t-statistic. The reported values were 2.09 at UzSWLU, 2.15 at SamSIFL, 2.93 at ASIFL, and 4.11 for the total sample. Each value exceeded the critical value of 1.96 shown in the table. Accordingly, the table reports (H_1) for all three institutions and for the total sample, indicating a statistically significant difference between the experimental and control groups under the stated decision rule.

The total-sample t-statistic of 4.11 represents the largest reported value, while the institutional results also exceed the stated threshold. This pattern supports the conclusion that the final multiple-choice test results differed significantly between the two groups in favour of the experimental group. Nevertheless, statistical significance

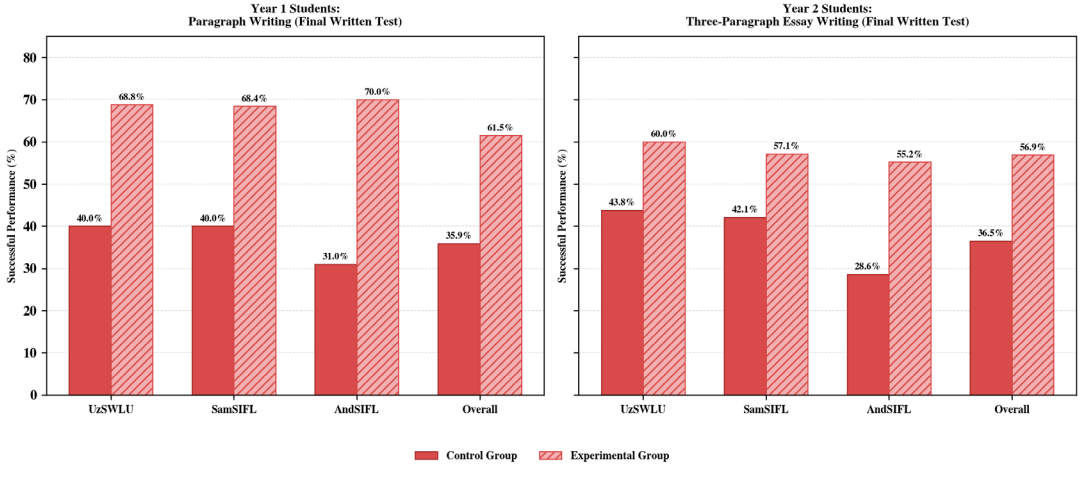
alone does not establish that the intervention was the sole cause of the difference; interpretation must also consider the initial scores, the implementation of the teaching methodology, and the consistency of the assessment procedures.

When considered alongside the initial assessment, these final results provide evidence for evaluating the outcomes of the pedagogical experiment. The initial multiple-choice test showed broadly similar overall mean scores, whereas the final statistical table reports higher mean scores for the experimental group at every institution. This contrast is consistent with a positive association between the blended learning methodology and students' writing-related knowledge. The practical writing-test results must be considered separately to determine whether the observed gains in test knowledge were accompanied by improvements in paragraph and essay production.

Final written-test results

Figure 11 presents the final written-test results for first-year students assessed on paragraph writing and second-year students assessed on three-paragraph essay writing. The results compare the control and experimental groups at UzSWLU, SamSIFL, and ASIFL (See Figure 11):

Figure 11. ***Final written-test results by study year and institution***



Among first-year students, the experimental group achieved higher results than the control group at all three institutions. At UzSWLU, the control group scored 40.0%, compared with 68.8% in the experimental group. At SamSIFL, the respective results were 40.0% and 68.4%. At ASIFL, the control group achieved 31.0%, while the experimental group reached 70.0%. Overall, the control group recorded 35.9%, compared with 61.5% for the experimental group, a difference of 25.6 percentage points.

The results for second-year students showed the same general pattern. At UzSWLU, the control group scored 43.8%, while the experimental group achieved 60.0%. At SamSIFL, the results were 42.1% and 57.1%, respectively. At ASIFL, the control group achieved 28.6%, compared with 55.2% in the experimental group.

Overall, the control group recorded 36.5%, whereas the experimental group achieved 56.9%, representing a difference of 20.4 percentage points.

The largest difference among first-year students was observed at ASIFL, where the experimental group outperformed the control group by 39.0 percentage points. Among second-year students, the largest difference was also recorded at ASIFL, at 26.6 percentage points. These findings show that the experimental group achieved higher final written-test results at all three institutions in both paragraph writing and three-paragraph essay writing.

Overall, the final written-test results indicate a clear performance advantage for the experimental groups. The difference was 25.6 percentage points for first-year students and 20.4 percentage points for second-year students. Since the assessment involved producing written texts, these results provide evidence of students' practical writing performance. To evaluate the extent of improvement during the pedagogical experiment, the final scores should be considered alongside the initial written-test results and the corresponding statistical analysis.

Statistical analysis of the final written test

Table 4 presents the statistical indicators used to analyse the final written-test results of the experimental and control groups at UzSWLU, SamSIFL, and ASIFL. The calculations follow the mathematical and statistical procedures described in the research methodology, including the arithmetic mean, sample variance, standard error, confidence intervals, and Student's t-statistic (See Table 4):

Table 4. ***Statistical indicators of the final written test***

Statistical Indicators	Groups	UzSWLU	SamSIFL	ASIFL	Total
Mean	Experimental Group	3,90	3,70	3,63	3,72
	Control Group	3,26	3,18	3,14	3,18
Sample Variance	Experimental Group	0,80	0,91	0,91	0,90
	Control Group	0,90	0,87	0,86	0,87
Standard Error	Experimental Group	0,89	0,95	0,95	0,95
	Control Group	0,95	0,93	0,93	0,93
Efficiency Coefficient		**1,19**	**1,16**	**1,15**	**1,16**
Confidence Interval	Experimental Group	3,59	3,40	3,38	3,55
		4,22	4,00	3,87	3,88
	Control Group	2,92	2,89	2,90	3,02
		3,59	3,47	3,38	3,34
Mean Value Indicator	Experimental Group	4,11	4,08	3,43	2,23
	Control Group	5,23	4,68	5,38	2,61
Student's t-statistic		**2,75**	**2,45**	**2,78**	**4,55**
Critical Value		1,96	1,96	1,96	1,96
Criterion Conclusion		**H_1**	**H_1**	**H_1**	**H_1**

According to the table, the overall mean score was 3.72 for the experimental group and 3.18 for the control group. At UzSWLU, the experimental group achieved a mean score of 3.90, compared with 3.26 in the control group. At SamSIFL, the corresponding mean scores were 3.70 and 3.18, while at ASIFL, they were 3.63 and

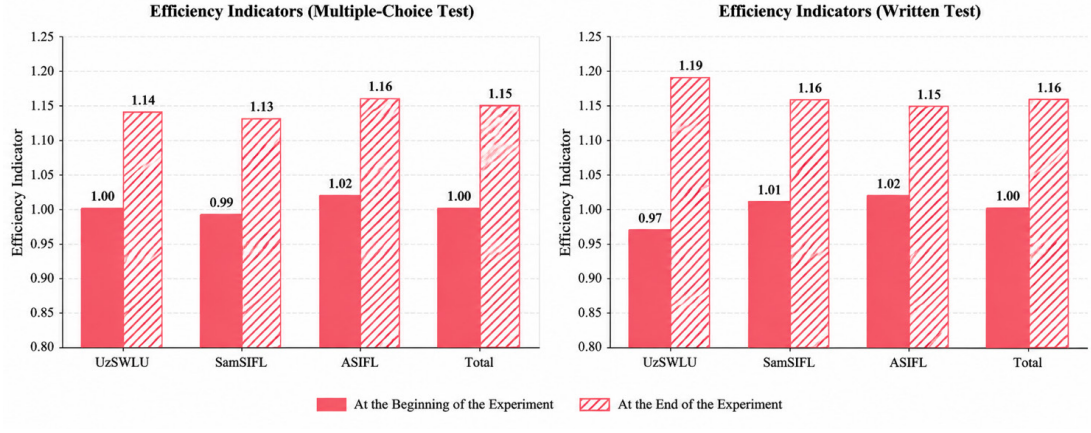
3.14, respectively. These figures indicate that the experimental group achieved higher mean scores than the control group across all three institutions.

The reported Student's t-statistics were 2.75 at UzSWLU, 2.45 at SamSIFL, 2.78 at ASIFL, and 4.55 for the total sample. All t-values exceeded the stated critical value of 1.96. According to the decision rule presented in the table, the alternative hypothesis (H_1) was accepted for all institutions and for the total sample. Thus, the reported statistics indicate statistically significant differences between the experimental and control groups, favouring the experimental group.

Comparison of experimental efficiency indicators

Figure 12 presents the efficiency coefficients for the multiple-choice test and the written test at the beginning and at the end of the pedagogical experiment. The results are reported for UzSWLU, SamSIFL, ASIFL, and the total sample (See Figure 12):

Figure 12. ***Comparison of experimental efficiency indicators***



For the multiple-choice test, the overall efficiency coefficient increased from 1.00 at the beginning of the experiment to 1.15 at the end. At UzSWLU, it increased from 1.00 to 1.14; at SamSIFL, from 0.99 to 1.13; and at ASIFL, from 1.02 to 1.16. The highest final coefficient for this test was recorded at ASIFL.

For the written test, the overall coefficient increased from 1.00 to 1.16. At UzSWLU, it rose from 0.97 to 1.19; at SamSIFL, from 1.01 to 1.16; and at ASIFL, from 1.02 to 1.15. The largest increase was observed at UzSWLU, where the coefficient rose by 0.22.

Overall, the efficiency coefficients increased across all three institutions in both assessment components. The final coefficient for the written test (1.16) was slightly higher than that for the multiple-choice test (1.15).

Mathematical and statistical verification of experimental effectiveness

The mathematical and statistical analysis of the pedagogical experiment was conducted using the formulas specified in the research methodology. The calculations included the arithmetic mean, sample variance, standard error, confidence intervals, the teaching effectiveness coefficient, Student's t-statistic, and the corresponding

critical value. These statistical procedures were applied to assess the results obtained by the experimental and control groups at UzSWLU, SamSIFL, and ASIFL.

The teaching effectiveness coefficient was calculated using the ratio of the experimental group's mean score to the control group's mean score. The statistical analysis also included the calculation of confidence intervals and Student's t-statistic to examine the differences between the groups' results. The calculated t-statistics were compared with the relevant critical values to evaluate the research hypotheses.

Based on the reported calculations, the final overall teaching effectiveness coefficient reached **1.15 for the multiple-choice test** and **1.16 for the written test**. These values were obtained by applying the effectiveness-coefficient formula to the corresponding assessment results. The coefficients indicate that the experimental group's mean performance was higher than that of the control group under the calculation procedure used in the study.

The results for both assessment types provide complementary evidence for evaluating the implemented blended learning methodology. The multiple-choice test assessed students' knowledge of writing-related concepts, whereas the written test examined their ability to apply this knowledge in paragraph and three-paragraph essay production. The slightly higher coefficient for the written test (1.16) than for the multiple-choice test (1.15) indicates a marginally higher relative effectiveness ratio for practical writing performance.

CONCLUSION

This study examined the potential of integrating blended learning technologies with the PICRAT model within the Technology Integration Model (TIM) to improve the writing competence of prospective English language specialists. The methodology was implemented with first- and second-year students, focusing on paragraph writing and three-paragraph essay production, respectively. It combined face-to-face instruction, online activities, and independent practice within a structured sequence of genre-based writing tasks.

The findings highlight the importance of integrating writing micro-skills, including grammatical accuracy and lexical selection, with macro-skills such as idea development, textual organisation, coherence, and cohesion. The proposed methodology organised these components through preparatory activities, genre analysis, collaborative writing, drafting, peer review, and revision. Within this framework, PICRAT provided a basis for aligning technology use with instructional objectives and for encouraging more interactive and creative forms of student engagement.

The pedagogical experiment involved 257 students from UzSWLU, SamSIFL, and ASIFL. The reported results showed higher performance in the experimental groups than in the control groups in both theoretical knowledge and practical writing. The overall teaching effectiveness coefficients were 1.15 for the multiple-choice test and 1.16 for the written test. These results indicate a positive association between the implementation of the proposed methodology and students' writing performance,

although the interpretation of its effectiveness depends on the accuracy and consistency of the statistical calculations and assessment procedures.

The practical significance of the study lies in its structured integration of genre-based writing instruction, technology-supported practice, and systematic feedback. The findings suggest that digital tools are most useful when selected according to specific learning outcomes and incorporated into a coherent instructional sequence rather than used as independent technological solutions. The proposed approach may therefore inform the design of writing courses for prospective English language specialists in higher education.

Further research should examine changes in individual writing assessment criteria, investigate the long-term retention and transfer of writing skills, and evaluate the applicability of the methodology across different proficiency levels and educational contexts. More detailed reporting of the statistical procedures and effect measures would also strengthen the reliability and replicability of the findings.

REFERENCES

1. Aldera, A. (2016). Cohesion in written discourse: A case study of Arab EFL students. *Arab World English Journal, 7*(2), 328–341.
2. Anderson, L.W., Krathwohl, D.R., & Bloom, B.S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York, NY: Longman.
3. Barbeau, E. (2017, October 13). Writing a three-paragraph essay. In *Cite This for Me*. https://www.citethisforme.com/blog/2017/10/13/writing-three-paragraph-essay.
4. Beach, R., Anson, C., Kastman Breuch, L.-A., & Reynolds, T. (2014). *Understanding and creating digital texts*. Washington, DC: Rowman & Littlefield.
5. Beatty, K. (2013). *Teaching and researching: Computer-assisted language learning* (2nd ed.). London: Routledge.
6. Bloch, J. (2008). *Technology in the second language composition classroom*. Ann Arbor, MI: University of Michigan Press.
7. Brown, J.S. (2002). Growing up digital: How the web changes work, education, and the ways people learn. *USDLA Journal, 16*, 10–20.
8. Cambridge English. (n.d.-a). *B2 First exam format*. Cambridge University Press & Assessment. https://www.cambridgeenglish.org/exams-and-tests/first/exam-format/.
9. Cambridge English. (n.d.-b). *IELTS test format*. Cambridge University Press & Assessment. https://www.cambridgeenglish.org/exams-and-tests/ielts/test-format/.
10. Chan, A.Y., Chow, K.-O., & Jia, W.-J. (2005). A framework for evaluation of learning effectiveness in online courses. In R.W. Lau, Q. Li, R. Cheung, & W. Liu (Eds.), *Advances in Web-Based Learning—ICWL 2005* (pp. 383–395). Berlin, Germany: Springer.
11. Dudeney, G., & Hockly, N. (2007). *How to teach English with technology*. Harlow, England: Pearson Education.
12. Educational Testing Service. (2021). *The official guide to the TOEFL iBT test* (6th ed.). New York, NY: McGraw-Hill Education.
13. Graham, S. (2006). Writing. In P.A. Alexander & P.H. Winne (Eds.), *Handbook of Educational Psychology* (pp. 457–478). Mahwah, NJ: Lawrence Erlbaum Associates.
14. Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, *99*(3), 445–476.
15. Halim, N., & Negara, K. (2019). Incorporating genre analysis in teaching writing. *Getsempena English Education Journal, 6*, 148–158.
16. Hogue, A., & Bixby, J. (2016). *Longman academic writing series 2: Paragraphs* (3rd ed.).

Harlow: Pearson Education Limited.
17. Hughes, J., Thomas, R., & Scharber, C. (2006, March). Assessing technology integration: The RAT—replacement, amplification, and transformation framework. In *Proceedings of the Society for Information Technology & Teacher Education International Conference* (pp. 1616–1620). Chesapeake, VA: Association for the Advancement of Computing in Education.
18. Hyland, K. (2019). *Second language writing* (2nd ed.). Cambridge: Cambridge University Press.
19. Kartawijaya, S. (2018). Improving students' writing skill in writing paragraphs through an outline technique. *Journal of Teaching and Learning, 3*(3), 152–158.
20. Kaskova, M.E., & Frolova, L.N. (2018). Written communication in the foreign language classroom: Types of instructions for developing writing skills. *Philological Aspect*, (11) (43), 82–94.
21. Kennewell, S., Tanner, H., Jones, S., & Beauchamp, G. (2008). Analysing the use of interactive technology to implement interactive teaching. *Journal of Computer Assisted Learning, 24*(1), 61–73.
22. Kimmons, R., Graham, C.R., & West, R.E. (2020). The PICRAT model for technology integration in teacher preparation. *Contemporary Issues in Technology and Teacher Education, 20*(1), 176–198.
23. Limar, L.S., & Shevtsova, M.A. (2019). Information technologies as a means of developing written language skills. In *Innovative technologies for foreign language teaching in higher education institutions and schools: Implementation of modern Federal State Educational Standards* (pp. 395–402). Voronezh: VSU Publishing House.
24. Lowry, P.B., Curtis, A., & Lowry, M.R. (2004). Building a taxonomy and nomenclature of collaborative writing to improve interdisciplinary research and practice. *Journal of Business Communication, 41*(1), 66–99.
25. Millin, S. (2015, February 15). *How to set up an information gap*. Sandy Millin. https://sandymillin.wordpress.com/2015/02/15/how-to-set-up-an-information-gap/.
26. Ovchinnikova, T.Y. (2009). *The practice of teaching English written communication to university students*. Orenburg: Bibkom.
27. Ovechkina, Y.R. (2012). The structure of communicative competence in foreign-language writing among students at a language university. *Pedagogical Education in Russia*, (6)(1), 231–233.
28. Palmquist, M., Kiefer, K., Hartvigsen, J., & Goodlew, B. (1998). *Transitions: Teaching writing in computer-supported and traditional classrooms*. Greenwich, CT: Ablex.
29. Pantier, T.F. (1999). *A comparison of writing performance of fifth-grade students using the process writing approach and the Shurley Method* [Unpublished doctoral dissertation]. Oklahoma: Oklahoma State University.
30. Papert, S., & Harel, I. (1991). Situating constructionism. In S.Papert & I.Harel (Eds.), *Constructionism* (pp. 1–11). Norwood, NJ: Ablex Publishing Corporation.
31. Parady, J. (2024, February 18). Process writing: An overview for teachers. In *Landmark School Outreach*. https://www.landmarkoutreach.org/strategies/process-writing/.
32. Shaban, O.P., & Kozeletskaya, I.N. (2021). Specific features of teaching foreign-language writing. In *Issues of contemporary philology in the context of language and cultural interaction: Proceedings of the 4th International Scientific and Practical Conference* (pp. 170–174). Orenburg: Orenburg State Pedagogical University.
33. Solontsova, L.P. (2018). *Methods of teaching foreign languages. Part 1: General issues. Basic course*. Moscow: VLADOS Publishing House.
34. Solovova, Y.N. (2002). *Methods of teaching foreign languages*. Moscow: Enlightenment.
35. Sysoev, P.V., & Syomich, Y.I. (2019). Teaching students majoring in journalism to produce written texts in a foreign language using corpus technologies. *Language and Culture*, (47), 260–277.
36. Wale, B.D., & Bogale, Y.N. (2021). Using inquiry-based writing instruction to develop

students' academic writing skills. *Asian Journal of Second and Foreign Language Education, 6*(4).

37. Washington University in St. Louis. (n.d.). Using peer review to help students improve their writing. In *Center for Teaching and Learning*. https://ctl.wustl.edu/resources/using-peer-review-to-help-students-improve-their-writing/.