

RESEARCH ARTICLE

Factors Impacting Future English Teachers' Creativity in Teaching English As A Foreign Language in Uzbekistan

Mukhtaramkhon Ergasheva

Lecturer at Turan University, Andijan Branch, Doctoral Researcher at Andijan State University, Uzbekistan

VOLUME: Vol.06 Issue03 2026

PAGE: 177-188

Copyright © 2026 European International Journal of Pedagogics, this is an open-access article distributed under the terms of the Creative Commons Attribution-Noncommercial-Share Alike 4.0 International License. Licensed under Creative Commons License a Creative Commons Attribution 4.0 International License.

Abstract

In the context of rapid globalization and technological advancement, creativity has become a fundamental component of effective teaching, particularly in English as a Foreign Language classrooms. This study investigates the factors influencing the creativity of future English teachers in higher education institutions in Uzbekistan. A qualitative research design was employed, involving final-year EFL students from three universities. Data were collected through interviews, questionnaires, and teaching practice reflections and analyzed using thematic analysis.

The findings reveal three primary factors influencing teacher creativity: knowledge and teaching experience, motivation, and the role of technology. Additionally, Artificial Intelligence is identified as a fourth, integrative factor that enhances and connects these components. The study demonstrates that creativity is not solely an innate ability but a developable competence shaped by pedagogical training and technological innovation.

The results highlight that AI significantly contributes to creative lesson planning, idea generation, personalized feedback, and the development of techno-creative competencies. The study suggests that integrating AI tools into teacher education programs can enhance future teachers' creativity and improve the quality of EFL instruction. These findings have important implications for curriculum design, teacher training, and educational policy in Uzbekistan and similar contexts.

KEY WORDS

EFL, teacher creativity, motivation, technology, artificial intelligence, higher education, Uzbekistan.

INTRODUCTION

Over the past two decades, the world has experienced significant transformations driven by globalization, digitalization, and rapid technological development. These changes have profoundly influenced educational systems, particularly in the field of foreign language teaching. English, as a global lingua franca, has become an essential subject in education systems worldwide, including Uzbekistan.

In response to these changes, modern teaching

methodologies emphasize learner-centered approaches, interactive activities, and creative teaching practices. Creativity in teaching is no longer considered optional; it is a necessary skill that enhances student engagement, motivation, and learning outcomes. In EFL classrooms, creative teaching methods help students overcome language barriers, develop communication skills, and actively participate in the learning process.

In Uzbekistan, higher education institutions have introduced courses such as Innovative Pedagogical Technologies in Foreign Language Teaching, aiming to develop future teachers' creative competencies. However, despite these efforts, many pre-service teachers face challenges in applying creative teaching strategies due to limited experience, lack of motivation, and institutional constraints.

Creativity has traditionally been associated with artistic domains such as music, literature, and visual arts. However, contemporary educational research recognizes creativity as a broader concept that applies to problem-solving, critical thinking, and pedagogical innovation. Classical scholars like Abu Nasr Farabi emphasized the importance of intellectual and moral development in shaping an ideal educator, highlighting the role of knowledge and creative thinking.

Recent studies indicate that creative teaching significantly improves student learning outcomes. However, there is limited research focusing on the factors influencing creativity among future English teachers in Uzbekistan. Therefore, this study aims to fill this gap by identifying key factors affecting their creative teaching practices.

LITERATURE REVIEW

1 Concept of Creativity in Education

Creativity is commonly defined as the ability to produce novel and useful ideas within a specific context (Plucker et al., 2010). In the field of education, this concept extends beyond mere originality to include the capacity to design innovative teaching strategies, adapt instructional materials, and respond flexibly to the diverse needs of learners. In particular, creativity enables teachers to transform traditional, teacher-centered approaches into dynamic, student-centered learning environments where learners actively participate and engage in meaningful communication. Therefore, creativity is not only an individual cognitive ability but also a pedagogical competence that directly influences teaching effectiveness and learning outcomes.

In educational settings, creativity manifests through various practices such as developing interactive tasks, integrating real-life scenarios into lessons, and modifying teaching approaches based on students' proficiency levels, interests, and learning styles. For English as a Foreign Language teachers, creativity plays a crucial role in overcoming linguistic barriers, maintaining student motivation, and fostering communicative competence. As a result, creative teaching is

increasingly recognized as a key component of high-quality education in the 21st century.

Craft (2000) introduced the concept of little-c creativity, which refers to everyday creativity demonstrated in classroom practices. Unlike eminent or groundbreaking creativity, little-c creativity focuses on small-scale innovations that occur in daily teaching activities. This type of creativity is particularly relevant for teachers, as it involves practical problem-solving, improvisation, and the ability to generate engaging learning experiences within existing constraints. For instance, a teacher may creatively adapt a textbook activity into a role-play exercise or design a simple game to reinforce vocabulary learning. Such practices may not be revolutionary, but they significantly enhance student engagement and learning effectiveness.

Furthermore, little-c creativity emphasizes the importance of "Possibility Thinking," which involves asking "what if" and "how might" questions to explore alternative teaching approaches. This mindset encourages teachers to experiment, take risks, and continuously improve their instructional practices. In this sense, creativity becomes an ongoing process rather than a fixed trait.

Beghetto and Kaufman (2009) expanded the understanding of creativity by proposing a developmental continuum consisting of four levels:

- mini-c (personal creativity): individual insights and personal meaning-making processes during learning
- little-c (everyday creativity): routine creative actions in daily life and classroom practices
- Pro-c (professional creativity): advanced creativity demonstrated by professionals with expertise
- Big-C (eminent creativity): groundbreaking contributions recognized at a global level

This continuum highlights that creativity is not a fixed or binary attribute but a dynamic and developmental process that evolves over time. In the context of teacher education, this framework is particularly useful because it allows researchers and educators to understand how creativity develops from basic personal insights (mini-c) to more sophisticated professional practices (Pro-c).

For teachers, little-c and Pro-c creativity are the most relevant levels, as they directly impact classroom practices and instructional quality. Little-c creativity enables teachers to

handle everyday classroom challenges, while Pro-c creativity reflects a higher level of pedagogical expertise, where teachers systematically design innovative curricula, develop original teaching materials, and contribute to professional knowledge in the field. Pre-service teachers typically operate at the mini-c and little-c levels; however, through training, experience, and reflection, they can gradually develop Pro-c creativity.

In the context of EFL teaching in Uzbekistan, fostering little-c and Pro-c creativity is particularly important due to the evolving educational landscape and increasing emphasis on communicative language teaching. Future teachers must not only possess strong linguistic knowledge but also demonstrate the ability to apply creative teaching strategies that enhance student engagement and learning outcomes. Therefore, understanding the different dimensions and levels of creativity provides a theoretical foundation for developing effective teacher training programs aimed at improving creative pedagogical practices.

2 Creativity and Motivation

Motivation plays a crucial role in creative performance, particularly in educational contexts where teachers are expected to continuously adapt and innovate their instructional practices. According to Sternberg and Lubart (1995), creativity is a multifaceted construct influenced by several interrelated factors, including knowledge, intellectual abilities, thinking styles, personality traits, motivation, and environmental conditions. Among these components, motivation is often considered one of the most decisive elements, as it directly drives individuals to engage in creative processes and persist in the face of challenges.

In the context of teaching, motivation determines the extent to which educators are willing to explore new pedagogical approaches, experiment with innovative strategies, and invest effort in improving their instructional practices. Without sufficient motivation, even teachers with strong knowledge and skills may fail to demonstrate creativity in their classrooms. Therefore, motivation acts as a catalyst that activates and sustains creative behavior.

A distinction is commonly made between intrinsic and extrinsic motivation, both of which influence creativity in different ways. Intrinsic motivation refers to engaging in an activity for its inherent satisfaction, interest, or enjoyment. Teachers who are intrinsically motivated derive personal fulfillment from

teaching, feel passionate about their profession, and are driven by a genuine desire to support student learning. Research has consistently shown that intrinsic motivation is strongly associated with higher levels of creativity, as it encourages risk-taking, experimentation, and independent thinking.

In contrast, extrinsic motivation is driven by external factors such as rewards, recognition, institutional evaluation, or career advancement. While extrinsic motivation can also support creative efforts, its impact is often less stable and may depend on the nature of the reward system. For example, excessive emphasis on evaluation or standardized outcomes may limit teachers' willingness to take creative risks, as they may prioritize performance over innovation.

Intrinsic motivation—such as personal interest, curiosity, and passion—has been identified as the most significant driver of creativity in educational settings. Teachers who are internally motivated are more likely to experiment with new teaching methods, design interactive activities, and create engaging learning environments. They tend to view challenges as opportunities for growth rather than obstacles, which enhances their problem-solving abilities and creative thinking.

Furthermore, intrinsically motivated teachers are more likely to engage in reflective practice, continuously evaluating and improving their teaching strategies. This reflective process contributes to the development of professional creativity (Pro-c), as teachers refine their approaches based on experience and feedback. In EFL classrooms, where student engagement and communication are essential, such creative efforts are particularly valuable.

In addition to individual motivation, the social and institutional environment also plays an important role in shaping teachers' creative behavior. Supportive environments that encourage experimentation, collaboration, and professional development can enhance both intrinsic and extrinsic motivation. For instance, positive feedback from peers, recognition of innovative teaching practices, and opportunities for professional growth can reinforce teachers' commitment to creativity.

In the context of Uzbekistan's higher education system, fostering intrinsic motivation among future English teachers is especially important. Pre-service teachers often face challenges such as limited teaching experience, rigid curricula, and resource constraints. Under such conditions, intrinsic

motivation becomes a key factor that enables them to overcome difficulties and maintain their commitment to creative teaching.

Overall, motivation serves as a fundamental driving force behind creative teaching. While both intrinsic and extrinsic factors contribute to creative performance, intrinsic motivation appears to be the most powerful and sustainable source. Therefore, teacher education programs should focus not only on developing pedagogical knowledge but also on fostering motivation, passion, and a sense of professional identity among future teachers. This approach can significantly enhance their ability to implement creative and effective teaching practices in EFL classrooms.

3 Role of Technology in Creative Teaching

Technology has significantly transformed the educational landscape by providing access to a wide range of resources, tools, and platforms that support innovative teaching and learning processes. In modern classrooms, multimedia resources, digital platforms, and online environments enable teachers to design dynamic, interactive, and student-centered lessons. These technological advancements have expanded the possibilities for creative teaching, allowing educators to move beyond traditional methods and incorporate diverse forms of content such as videos, animations, simulations, and interactive tasks.

In the context of English as a Foreign Language teaching, technology plays a particularly important role in enhancing creativity. Digital tools allow teachers to create authentic language learning environments, where students can engage with real-world materials and practice communication skills in meaningful contexts. For example, the use of video-based activities, online discussions, virtual simulations, and language learning applications enables learners to experience language use beyond the classroom. Such approaches not only increase student engagement but also support the development of communicative competence and critical thinking skills.

Moreover, technology facilitates access to a vast amount of educational content, including online textbooks, open educational resources, and language corpora. Teachers can adapt and customize these materials to suit the needs of their students, thereby demonstrating creative flexibility in instructional design. The integration of multimedia elements, such as images, audio, and video, further enhances the effectiveness of teaching by addressing different learning

styles and preferences.

Another important aspect of technology in creative teaching is its role in promoting collaboration and interaction. Digital platforms such as learning management systems, discussion forums, and collaborative tools enable both teachers and students to share ideas, work together on projects, and engage in interactive learning activities. These environments encourage creativity by fostering communication, cooperation, and the exchange of diverse perspectives.

Despite its many advantages, research suggests that technology alone does not guarantee creativity in teaching. The mere presence of digital tools in the classroom does not automatically lead to innovative practices or improved learning outcomes. Instead, the effectiveness of technology depends largely on how it is used by teachers. Without appropriate pedagogical knowledge and intentional design, technology may simply replicate traditional teaching methods in a digital format, limiting its creative potential.

Effective integration of technology requires not only technical skills but also pedagogical competence and innovative thinking. Teachers need to understand how to align technological tools with learning objectives, select appropriate resources, and design activities that actively engage students. This concept is often described through the framework of Technological Pedagogical Content Knowledge, which emphasizes the integration of technology, pedagogy, and subject knowledge in teaching.

Furthermore, teachers' attitudes and beliefs about technology also influence their ability to use it creatively. Educators who are open to experimentation, willing to take risks, and motivated to explore new tools are more likely to integrate technology in innovative ways. In contrast, those who lack confidence or experience may rely on technology in limited or conventional ways.

In the context of Uzbekistan's higher education system, the role of technology in fostering creative teaching is becoming increasingly important. The rapid development of digital infrastructure and access to online resources provides new opportunities for future English teachers to enhance their instructional practices. However, challenges such as limited training, insufficient digital literacy, and unequal access to resources may hinder effective technology integration.

Therefore, it is essential to provide pre-service teachers with adequate training and support to develop their technological

and pedagogical competencies. Teacher education programs should emphasize not only the use of digital tools but also the development of creative thinking and instructional design skills. By doing so, future teachers can effectively utilize technology as a means of enhancing creativity rather than merely as a supplementary tool.

In conclusion, technology serves as a powerful enabler of creative teaching by providing diverse resources, facilitating interaction, and supporting innovative instructional practices. However, its impact depends on teachers' ability to integrate it effectively within pedagogical frameworks. When combined with strong pedagogical knowledge and creative thinking, technology can significantly enhance the quality and effectiveness of EFL teaching.

4 Artificial Intelligence in Education

Artificial Intelligence has recently emerged as one of the most transformative innovations in the field of education, significantly influencing teaching and learning processes across different contexts. As digital technologies continue to evolve, AI is increasingly being integrated into educational environments to enhance efficiency, personalization, and innovation. In particular, AI offers powerful tools that support various aspects of teaching, including content generation, personalized learning, feedback provision, and lesson planning.

One of the most prominent applications of AI in education is content generation. AI-powered systems enable teachers to quickly produce a wide range of instructional materials such as texts, exercises, quizzes, and discussion prompts. This capability reduces the time and effort required for lesson preparation and allows teachers to focus more on pedagogical design and student interaction. In the context of English as a Foreign Language teaching, AI can generate vocabulary exercises, grammar tasks, writing prompts, and speaking scenarios tailored to different proficiency levels, thereby enhancing the diversity and creativity of instructional content.

Another important function of AI is its ability to support personalized learning. Traditional teaching approaches often struggle to address the diverse needs, abilities, and learning styles of students. AI systems, however, can analyze learners' performance data and provide customized learning pathways, adaptive tasks, and individualized recommendations. This allows teachers to implement differentiated instruction more effectively and ensures that each student receives appropriate

support. As a result, AI contributes to more inclusive and student-centered learning environments, which are essential for fostering creativity.

AI also plays a crucial role in feedback provision, offering immediate, consistent, and detailed responses to student work. Unlike traditional assessment methods, which may be time-consuming and limited, AI-based feedback systems can evaluate writing, grammar, pronunciation, and other language skills in real time. This rapid feedback enables students to identify their strengths and weaknesses, make improvements, and engage in self-directed learning. For teachers, AI-generated feedback provides valuable insights into student performance, helping them refine their teaching strategies and address learning gaps more effectively.

In addition, AI supports lesson planning by assisting teachers in organizing instructional content, designing activities, and aligning learning objectives with assessment methods. AI tools can suggest lesson structures, recommend teaching strategies, and provide examples of interactive tasks. This not only enhances efficiency but also encourages teachers to explore new and innovative approaches to teaching. For pre-service teachers, in particular, AI serves as a valuable support system that helps them develop confidence and competence in instructional design.

Beyond these practical applications, AI significantly enhances teacher creativity. By providing access to a wide range of ideas, resources, and solutions, AI enables teachers to experiment with different teaching methods and develop innovative learning experiences. For example, teachers can use AI to create role-play scenarios, project-based tasks, and problem-solving activities that engage students in meaningful learning. This process supports divergent thinking, which is a key component of creativity.

Furthermore, AI promotes reflective teaching practices by allowing teachers to analyze their instructional decisions and student outcomes. Through data analytics and performance tracking, teachers can evaluate the effectiveness of their teaching methods and make informed adjustments. This reflective process contributes to continuous professional development and helps teachers improve their creative competencies over time.

Despite its many advantages, the use of AI in education also presents certain challenges. Issues such as over-reliance on technology, lack of digital literacy, ethical concerns, and

limited access to AI tools may affect its implementation. Therefore, it is important to ensure that AI is used as a supportive tool rather than a replacement for teachers. Human creativity, critical thinking, and pedagogical expertise remain essential components of effective teaching.

In the context of Uzbekistan's higher education system, the integration of AI into teacher education programs offers significant potential for enhancing the creativity of future English teachers. By developing AI literacy and techno-creative skills, pre-service teachers can better adapt to modern educational demands and create more engaging and effective learning environments.

In conclusion, Artificial Intelligence represents a powerful and innovative tool that supports multiple aspects of teaching and learning. Its ability to generate content, personalize instruction, provide feedback, and assist in lesson planning makes it an essential component of modern education. When used effectively, AI not only improves teaching efficiency but also enhances teacher creativity, fosters reflective practice, and contributes to continuous professional growth.

METHODOLOGY

1 Research Design

This study adopted a qualitative research design aimed at exploring the development of creativity among future English teachers in Uzbekistan. A qualitative approach was chosen because it allows for an in-depth investigation of participants' perceptions, experiences, and pedagogical practices related to creative teaching.

At the same time, the study incorporated elements of a quasi-experimental design to measure the impact of specific pedagogical interventions on students' creativity. This combination of qualitative and quasi-experimental approaches provided a more comprehensive understanding of the research problem by enabling both descriptive and comparative analysis.

The research focused on identifying how targeted instructional strategies—particularly the integration of Artificial Intelligence (AI), innovative pedagogical technologies, and creative teaching tasks—affect the development of creativity in pre-service teachers. The study also aimed to compare the outcomes between students exposed to these innovations and those following traditional teaching approaches.

2 Research Context and Participants

The research was conducted in three leading higher education institutions in Uzbekistan:

- Andijan State Institute of Foreign Languages
- Fergana State University
- Tashkent State Pedagogical University named after Nizami

These institutions were selected due to their active implementation of modern teaching methodologies and their focus on training qualified English language teachers.

A total of 56 fourth-year students participated in the study. The participants were selected using purposive sampling to ensure relevance to the research objectives. The selection criteria included:

- being enrolled in the final year of an English language teaching program
- possessing an IELTS or equivalent international language certificate
- having completed or currently undergoing teaching practice

The participants were divided into two groups:

- Experimental group (28 students): exposed to creativity-enhancing interventions
- Control group (28 students): followed traditional instructional methods

This grouping allowed for a systematic comparison of creativity development under different teaching conditions.

3 Data Collection Methods

To ensure validity and reliability, multiple data collection methods were employed. This triangulation approach allowed for a more comprehensive analysis of the research problem.

Interviews

Semi-structured interviews were conducted to explore participants' perceptions of creativity, teaching methods, and the role of technology and AI. These interviews provided detailed qualitative insights into students' experiences and attitudes.

Questionnaires

Structured questionnaires were used to collect data on:

- motivation levels
- attitudes toward creative teaching
- use of technology and AI tools

The questionnaires included both closed-ended and open-ended questions to capture both quantitative and qualitative data.

Tests and Creative Tasks

Participants were given specially designed tests and tasks aimed at evaluating their creative abilities. These tasks included:

- developing innovative lesson plans
- designing interactive classroom activities
- proposing alternative teaching strategies

The tasks were assessed based on originality, flexibility, and practicality.

Classroom Observations

During teaching practice, classroom observations were conducted to analyze how participants applied creative teaching strategies in real educational settings. Observations focused on:

- lesson structure
- student engagement
- use of technology
- interaction patterns

Reflective Journals

Participants were required to maintain reflective journals documenting their teaching experiences, challenges, and improvements. These reflections provided valuable insights into their professional development and creative growth.

4 Intervention Procedures

A structured intervention program was implemented for the experimental group over a specific period. The aim was to enhance students' creativity through targeted pedagogical and technological activities.

The intervention included:

- Lectures on AI in language teaching, focusing on practical applications

- Scientific conferences and seminars on innovative teaching methods
- Master classes conducted by experienced educators
- Integration of AI tools into lesson planning and classroom activities
- Inclusion of new topics in the course Innovative Pedagogical Technologies in Foreign Language Teaching

Students were also given practical assignments such as:

- creating AI-assisted lesson plans
- designing interactive and student-centered activities
- experimenting with digital and multimedia tools

These interventions were designed to develop both creative thinking and practical teaching skills.

5 Data Analysis

Data analysis was conducted using thematic analysis based on Braun and Clarke (2006). The process involved several stages:

1. Data familiarization
2. Initial coding
3. Theme identification
4. Theme review and refinement
5. Interpretation and reporting

In addition, comparative analysis was conducted to evaluate differences between the experimental and control groups. Creativity levels were assessed based on performance in tasks, observations, and overall teaching effectiveness.

RESULTS

1 Knowledge and Teaching Experience

The findings of the study revealed that knowledge and teaching experience serve as fundamental and interdependent factors influencing the development of creativity among future English teachers. Participants consistently emphasized that theoretical knowledge acquired through university coursework provided a solid conceptual foundation for understanding teaching methodologies, language acquisition processes, and classroom management strategies.

However, the results clearly indicate that theoretical knowledge alone is insufficient for fostering creativity. It is through teaching practice and real classroom experience that

pre-service teachers are able to transform abstract knowledge into practical and innovative teaching applications. Participants reported that during their pedagogical practice, they encountered diverse classroom situations that required flexible thinking, spontaneous decision-making, and creative problem-solving.

Students in the experimental group demonstrated a significantly higher ability to:

- adapt teaching methods according to students' needs and proficiency levels
- design innovative and interactive classroom activities
- respond flexibly to unexpected classroom challenges

Their lessons were characterized by a shift from traditional teacher-centered approaches to more student-centered, communicative, and activity-based instruction. For example, instead of relying solely on textbook exercises, they incorporated role-plays, group discussions, and task-based activities that encouraged active student participation.

Furthermore, classroom observations indicated that students with more teaching experience exhibited greater confidence, autonomy, and willingness to experiment with new instructional strategies. This suggests that teaching experience not only enhances practical skills but also plays a crucial role in developing creative competence.

In contrast, participants in the control group tended to rely on conventional teaching methods, demonstrating limited variation in instructional techniques. Their lessons were more structured and predictable, with less emphasis on interaction and creativity.

Overall, the findings highlight that the integration of theoretical knowledge and practical experience is essential for the development of creative teaching practices.

2 Motivation

Motivation emerged as a central factor influencing creative performance among future teachers. The analysis identified two primary types of motivation:

- Intrinsic motivation: driven by personal interest, passion for teaching, and a desire for self-improvement
- Extrinsic motivation: influenced by external factors such as grades, institutional evaluation, and competition

The results indicate that intrinsic motivation plays a more

significant and sustainable role in fostering creativity. Participants who were intrinsically motivated demonstrated a strong commitment to their professional development and showed a greater willingness to engage in creative teaching practices.

These students were more likely to:

- experiment with new teaching methods
- design original and engaging classroom activities
- take risks and try unconventional approaches

In contrast, students who were primarily extrinsically motivated tended to focus on meeting formal requirements rather than exploring creative possibilities. Their teaching practices were often limited to fulfilling assigned tasks without significant innovation.

Importantly, participants in the experimental group displayed a noticeable increase in intrinsic motivation. This can be attributed to several factors:

- active participation in interactive and creative learning activities
- exposure to innovative teaching methodologies
- involvement in professional development events such as conferences, seminars, and master classes

These experiences created a supportive and stimulating learning environment that encouraged students to explore their creative potential. As a result, motivation and creativity were found to be closely interconnected, with motivation acting as a driving force behind creative engagement.

3 Role of Technology

The findings demonstrate that technology plays a significant role in supporting and enhancing creative teaching practices. Participants reported using a variety of digital tools and resources, including:

- multimedia presentations (e.g., slides, videos, animations)
- online educational platforms and websites
- interactive applications and digital learning tools

These technologies enabled students to present content in more engaging and visually appealing ways, thereby increasing student interest and participation.

However, the study also revealed that the mere use of technology does not automatically lead to creativity. The effectiveness of technology depends largely on how it is integrated into the teaching process. Students who used technology in a purposeful and pedagogically meaningful way were able to create more dynamic and interactive learning environments.

Participants in the experimental group demonstrated a higher level of competence in integrating technology creatively. They combined digital tools with communicative and task-based approaches, resulting in lessons that were both innovative and effective.

For example, they used videos as discussion starters, online quizzes for formative assessment, and interactive platforms for collaborative tasks. This indicates that technology becomes a tool for creativity only when it is supported by strong pedagogical understanding.

In contrast, control group participants often used technology in a more limited and traditional manner, such as simply presenting information through slides without interactive elements.

4 Role of Artificial Intelligence

Artificial Intelligence emerged as one of the most influential factors in enhancing creativity among future English teachers. The results show that participants who were exposed to AI tools developed significantly higher levels of creative competence compared to those who were not.

Students utilized AI for various purposes, including:

- generating innovative lesson ideas
- creating customized teaching materials
- analyzing student performance and learning needs
- designing personalized and adaptive learning tasks

AI tools allowed students to explore a wider range of teaching possibilities and experiment with different instructional approaches. This not only improved their efficiency but also expanded their creative thinking.

Participants reported that AI helped them:

- save time in lesson preparation
- access diverse teaching resources
- receive instant feedback on their ideas

Moreover, AI encouraged reflective teaching practices by enabling students to evaluate and refine their instructional strategies. As a result, AI functioned not only as a technical tool but also as a cognitive and creative support system.

The experimental group, which actively used AI in their training, demonstrated:

- higher originality in lesson design
- greater flexibility in teaching approaches
- improved ability to address diverse student needs

These findings confirm that AI has a transformative impact on creative teaching and should be considered an essential component of modern teacher education.

5 Comparative Analysis

The comparative analysis between the experimental and control groups revealed clear and statistically significant differences in creativity development.

The experimental group demonstrated:

- higher levels of originality in teaching tasks
- greater diversity in instructional methods
- stronger engagement in creative activities
- improved problem-solving abilities

Their teaching practices reflected a more innovative and student-centered approach, with a focus on interaction, collaboration, and critical thinking.

In contrast, the control group showed:

- limited variation in teaching methods
- reliance on traditional instructional techniques
- lower levels of student engagement
- reduced willingness to experiment with new ideas

Quantitative indicators, based on task performance and assessment criteria, showed a significant increase in creativity scores in the experimental group compared to the control group. This difference confirms the effectiveness of the implemented intervention strategies, including the integration of AI, innovative pedagogical methods, and professional development activities.

Overall, the results provide strong empirical evidence that targeted educational interventions can significantly enhance

creativity among future English teachers. The combination of knowledge, motivation, technology, and AI creates an optimal environment for developing creative teaching competencies.

DISCUSSION

The findings of this study provide robust evidence that creativity in teaching is a multidimensional construct influenced by both internal and external factors. Internal factors, such as knowledge, teaching experience, and motivation, form the foundational elements that enable teachers to conceptualize and implement creative instructional strategies. External factors, including technology and Artificial Intelligence, serve as catalysts that amplify these internal capacities, creating an ecosystem conducive to innovation in education.

1 Internal Factors and Their Interplay

Knowledge and teaching experience emerged as critical drivers of creative teaching. The study confirms previous literature (Plucker et al., 2010; Craft, 2000) suggesting that theoretical understanding alone is insufficient; practical application in classroom settings is necessary to cultivate creative competence. Participants in the experimental group, who were exposed to guided pedagogical interventions, demonstrated superior ability to adapt lesson plans, design interactive activities, and respond flexibly to student needs. These results indicate that experience transforms theoretical knowledge into actionable creativity, allowing teachers to move from “little-c” creativity—everyday innovative practices—to “Pro-c” professional creativity (Beghetto & Kaufman, 2009).

Motivation, particularly intrinsic motivation, was found to be a significant predictor of creative engagement. Participants who exhibited high intrinsic motivation were more willing to experiment with non-traditional instructional methods and actively participate in professional events such as master classes, workshops, and conferences. This aligns with Sternberg and Lubart’s (1995) assertion that intrinsic interest fuels creative problem-solving. Notably, the intervention activities enhanced motivation by providing opportunities for hands-on practice and exposure to pedagogical innovations, which in turn strengthened creative performance.

2 External Factors: Technology and AI

Technology was identified as a critical external factor that facilitates creativity when integrated effectively into

pedagogical practice. Students who used digital tools such as multimedia presentations, online platforms, and interactive applications in a meaningful way were able to create more student-centered, dynamic, and collaborative learning environments. However, the study emphasizes that technology alone does not guarantee creativity; pedagogical knowledge and intentional design are essential for meaningful application.

AI, in particular, was found to play a unique integrative role in enhancing creative teaching. It not only improved efficiency in lesson planning and material generation but also acted as a cognitive partner that expanded students’ creative potential. AI-supported activities encouraged reflective practice, facilitated personalized learning, and allowed pre-service teachers to explore multiple instructional approaches quickly. These findings are consistent with recent studies highlighting AI as an enabler of professional creativity in education (Holmes et al., 2021).

3 Interaction Between Internal and External Factors

The study reveals that AI serves as a bridge connecting internal and external factors. For instance:

- It enhances knowledge by providing access to diverse content and teaching resources.
- It boosts motivation by offering immediate feedback and recognition of innovative lesson designs.
- It supports technology use by streamlining digital integration and providing interactive teaching tools.

Thus, AI functions not merely as a technological tool but as a multifaceted support system that amplifies the effect of internal capacities on creative performance.

4 Pedagogical Implications

The results demonstrate that structured pedagogical interventions are highly effective in fostering creativity. Key elements of successful interventions include:

- Practical teaching experiences that allow for experimentation and reflection
- Integration of AI and educational technology into lesson planning
- Participation in professional development events, such as workshops, master classes, and conferences focused on pedagogical innovation

Moreover, the comparative analysis of experimental and control groups shows that targeted interventions significantly increase creativity scores. The experimental group, which received AI-supported and innovative pedagogical training, consistently outperformed the control group, confirming the importance of systematic and scaffolded approaches in teacher education.

5 Contribution to the Field

This study contributes to the growing body of literature on teacher creativity by demonstrating how internal and external factors interact synergistically to enhance creative competence. It underscores the importance of AI and digital technologies as transformative tools in language teaching, offering a model for future pre-service teacher training programs in Uzbekistan and similar educational contexts. The findings suggest that embedding AI and pedagogical innovations into teacher education can produce measurable improvements in creativity, classroom engagement, and instructional effectiveness.

CONCLUSION

This study investigated the factors influencing teacher creativity in EFL education, focusing on the roles of knowledge, motivation, technology, and Artificial Intelligence (AI). Based on the findings from experimental interventions conducted at Andijan State Institute of Foreign Languages, Fergana State University, and Nizomiy Tashkent Pedagogical University, four key factors were identified as critical determinants of creative teaching:

1. Knowledge and Experience – Theoretical knowledge alone is insufficient; practical teaching experience enables pre-service teachers to apply concepts creatively, adapt lesson plans, and respond flexibly to classroom challenges.
2. Motivation – Intrinsic motivation was particularly influential, driving engagement with creative tasks, experimentation with innovative teaching strategies, and participation in professional development activities.
3. Technology – Digital tools, when effectively integrated into pedagogy, supported interactive and student-centered learning, fostering creativity in lesson delivery.
4. Artificial Intelligence – AI acted as an integrative tool that enhanced knowledge acquisition, facilitated personalized learning, provided feedback, and expanded creative potential.

The experimental findings demonstrated that targeted interventions, which combined AI tools, pedagogical innovations, and professional training, significantly improved creativity scores among pre-service teachers compared to control groups. Specifically, the experimental group achieved:

- Greater adaptability in lesson planning and instructional design
- Higher engagement in creative problem-solving
- Enhanced ability to integrate technology and AI into teaching practice

These results provide empirical evidence that creativity is a developable skill rather than an innate trait. Structured educational programs that integrate AI, technology, and hands-on pedagogical practice can cultivate creativity effectively in pre-service teachers.

Practical Implications

Based on the findings, the study recommends the following strategies for teacher education programs:

- Integration of AI tools into curriculum design, lesson planning, and classroom management to support innovative teaching practices.
- Promotion of creative pedagogy, including project-based learning, collaborative activities, and reflective teaching practices that encourage experimentation and adaptive thinking.
- Continuous professional development, such as workshops, master classes, conferences, and peer learning communities, to sustain motivation and creative growth.
- Evaluation frameworks that measure creativity in teaching, enabling institutions to monitor the impact of educational innovations systematically.

Final Remarks

In conclusion, creativity is an essential competence for effective EFL teaching, and AI plays a transformative role in shaping contemporary educational practices. The study highlights that combining theoretical knowledge, practical experience, intrinsic motivation, and technological support creates an environment where pre-service teachers can achieve high levels of creative performance. As educational contexts continue to evolve, integrating AI and innovative pedagogical strategies will be critical in preparing future

teachers to meet diverse student needs and enhance learning outcomes globally.

REFERENCES

1. Beghetto, R. A., & Kaufman, J. C. (2009). Do we all have multicreative potential?
2. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology.
3. Craft, A. (2000). Creativity across the curriculum.
4. Plucker, J. A., Beghetto, R. A., & Dow, G. T. (2010). Why isn't creativity more important?
5. Sternberg, R. J., & Lubart, T. I. (1995). Defying the crowd.