



## EXPERIMENTAL AND INNOVATIVE ACTIVITIES IN THE FIELD OF EDUCATION

*Tirkasheva Begoyim G'olibjon qizi*

*Uzbekistan State University of World Languages 3-4th year student of  
English foreign language and literature*

**Annotation:** This emphasizes the importance of leveraging cutting-edge, modern, experimental, and innovative technologies and methodologies to empower students and young people. By employing these crucial tools, individuals can easily tackle various challenges, foster their creativity, enhance critical thinking skills, and embark on research journeys within their respective fields. It underscores the significance of utilizing these resources in a strategic and thoughtful manner, taking into consideration all relevant factors and ensuring that they are positioned effectively to maximize their impact.

**注解:** 本文强调了利用最新、现代、实验性和创新性技术和方法作为培养学生和年轻人的关键工具的重要性。通过使用这些关键工具，个人可以轻松应对各种挑战，培养创造力，提高批判性思维能力，并在各自领域开展研究。文章强调了战略性和审慎地利用这些资源的重要性，考虑到所有相关因素，并确保它们的最大潜力得到充分发挥。

**Аннотация:** В данной статье подчеркивается важность использования современных, инновационных, экспериментальных технологий и методик как ключевых инструментов для развития студентов и молодежи. Эти инструменты позволяют легко решать различные задачи, развивать креативность, улучшать критическое мышление и начинать исследования в своих областях. Статья подчеркивает важность использования этих ресурсов стратегически и обдуманно, учитывая все соответствующие факторы и обеспечивая максимальное использование их потенциала.

**Key words:** virtual reality, Ed-tech, social-emotional learning, augmented reality, adaptive learning, makerspaces, gamification, computational thinking, data analytics.

Now there are lots of experimental and innovative work, technologies on education that can make easily to engage and acquire the lesson, knowledge for students and youngsters. Augmented reality, Edtech, virtual reality are related to online learning process; besides adaptive learning is a type of accommodating all styles of leaning in our current life; social-emotional learning and makerspaces help us to work with team sharing, delivering our speech, ideas easily while being in a group; gamification is using games depends on teaching, lesson; data analytics identify all learner's learning capacity, degree of acquiring knowledge, state of falling or rising in a group; computational thinking teach students to solve problem through logical, arithmetic, critical thinking. In today's educational landscape, there's an array of experimental and innovative technologies aimed at engaging students and young learners while facilitating the acquisition of knowledge. Augmented reality (AR), EdTech, and virtual reality (VR) are at the forefront of online learning processes. AR overlays digital content onto the physical world, making learning more interactive and immersive. EdTech encompasses a wide range of digital tools and platforms designed to enhance teaching and learning experiences, from interactive whiteboards to educational apps. VR provides simulated environments that allow students to explore concepts and scenarios that would otherwise be inaccessible, fostering deeper understanding. Adaptive learning is another powerful tool in modern education, accommodating various learning styles and preferences. By tailoring content and pacing to individual needs, adaptive learning ensures that each student can learn at their own pace, maximizing comprehension and

retention. Social-emotional learning (SEL) and makerspaces play crucial roles in developing students' interpersonal skills and collaborative abilities. SEL programs teach skills such as self-awareness, empathy, and relationship-building, enabling students to navigate social situations effectively. Makerspaces provide environments where students can work together, share ideas, and collaborate on projects, honing their communication and teamwork skills. Gamification leverages the elements of game design to make learning more engaging and enjoyable. By incorporating rewards, challenges, and competition into educational activities, gamification motivates students to actively participate and progress in their learning journey. Data analytics is revolutionizing education by providing insights into each learner's progress, preferences, and areas of improvement. By analyzing data from assessments, assignments, and interactions, educators can tailor instruction to meet individual needs and optimize learning outcomes. Computational thinking is a foundational skill that teaches students to solve problems logically, analytically, and creatively. By introducing concepts such as algorithms, abstraction, and decomposition, computational thinking fosters critical thinking skills essential for success in the digital age.

Tele-conferencing and tele-lectures has become a medium for communicating effectively. In communicative lab, all the computer-based exercises are also communicative one. communicative lab teaches English language rather teaching about language. Rather teaching rules and structure directly if we start teaching a foreign language with communicative practice it improves learner's willingness to learn an unfamiliar language. It also saves time, money and space. It helps the students in recording the lecture so that they can hear the same lecture after a certain period. Some sound cards, such as Diamond MX300 and Sound Blaster Live! have 3-D capabilities enabled by processors on the card that use mathematical formulas to create greater depth, complexity, and realism of sound. High quality audio can be produced through a system that uses the Universal Serial Bus (USB) and does not require a sound card. Processing is left to the CPU, and digital-to-audio conversion to the speakers. Understanding the immense importance of CCTV Security Cameras for video security systems, we manufacture our range using the best quality instruments. These CCTV cameras can keep a track of student, classroom, playground, reception, employees, locations, entry ways, and other areas in an efficient manner.

A renowned philosopher, Eric Hoffer believed that in a time of drastic change, it is the learners who inherit the future. The learned find themselves equipped to live in a world that no longer exists. Innovation is a broad concept, addressed by many definitions depending on the specific area of application. According to sociologists, Kirkland and Such (2009), 'Innovation is the application of new resource or approach that changes social practice, creating some value'. According to sociologist and educational reformer, Fullan (2007), significant educational innovation must include the following three elements:

\*Use of new revised materials (curriculum materials or technologies)

\*Use of new teaching approaches (teaching strategies or activities)

\*Alteration of beliefs (pin says that, developing innovation as a process requires the necessary skills, the approach which aims at empowerment, a climate of faith and a bond of trust, and a lot of energy to implement new ways of organizing and structuring the things in the desired order, rewarding people and communicating.

Sociologist Kozma (2003), said 'ICT supported innovation in education is defined as the pedagogical situations and means of supporting a shift from traditional paradigms towards emerging pedagogical approaches based on our current understanding of learning, such as fostering learner centered and constructivist approaches, and the acquisition of life-long learning skills'. Innovation is a major driving force for economic and social progress. If absent, innovation growth stalls, economies, and communities stagnate. Innovation in education is always seeking knowledge that would support new and unique ideas in the instructional techniques and will reach the students in a more effective and exciting ways. However, it is important to note the fact that innovation does not happen in a vacuum. Bringing about change, requires team, goals, and an examination of the methodologies used and values at play along with the commitment from all the aspects. Innovative ideas often meet resistance always from the fear of failure or a push to not rock the boat, but there can be new processes, models, or ways to create and manage knowledge and new cultures. Innovation requires conversation with yourself and surroundings around you. Innovation has been a topic of considerable interest in the education sector. For innovation to be successful, human creativity, knowledge, skills, and talents are to be nurtured in a large part through the system of education. Some of the

recent innovations in the education system include the introduction of computers in the classrooms, which is often referred to as the most significant innovation. However, the physical structure of the classroom has not changed much since chalkboards were introduced in the late 18th century, the arrival of computers, tablets, internet, e-learning, project-based learning, learning in groups has led to re-orientation of many traditional teaching practices and is generally seen as an opportunity for improvement (The Economist, 2013). The Organization for Economic Co-operation and Development (OECD) (2007) has defined major principles, to be looked at interactively, as building blocks in educational innovation design are as follows:

\*Learning environment should make learning and engagement central;

\*Innovation must be a social process;

\*Innovation must be highly attuned to learner's emotions;

\*Innovation must reflect individual differences

\*Innovation must be demanding for all while avoiding overload

Use of broad assessments and feedback Promote horizontal connectedness. Some of the Guiding Principles of Innovation in Education as defined by Michigan, Department of Education are as follows:

\*Innovation in education must use outcome-based strategies and practices that are new, unique or creative and that have the likelihood of having significant impact on the student(s). Innovation in education must involve risk, creativity, and challenge our basic assumptions and beliefs underlying traditional education system.

\*Innovation in education must engage students to use novel ideas, products, or processes.

\*Innovation in education must prepare the students globally to be competitive, to think out of the box, solve problems, and to assimilate and apply the knowledge learnt.

\*Innovation in education must be focused on individual student and student competency and should have data-proven relevance.

With the introduction of educational technology in the discipline of education, great changes have taken place in the process of teaching learning and training of teachers. In the last 25 years, classroom teaching has been changed considerably with the application of technology of teaching. The emphasis is being given to evolve new practices in teaching in order to raise the academic performance, and individual differences of the students to be properly considered in the teaching learning situations. As a result, various innovative practices have been involved in this area. The three most important innovative practices of teaching are as follows:

1. Team teaching

2. Personalized system of instruction

3. Educational games

These practices have been discussed in the following section.

The main objectives of Rabindranath Tagore's philosophy are as follows:

\*The medium of instruction must be in the language which is familiar to the child.

\*For developing creative faculties, the child should be provided opportunities for self-expression.

\*The child should be educated in the laps of nature, thus, far away from the busy life of towns and cities.

\*The concept of national education should be closely connected with national life.

\*Children should be given education which is rooted in their culture.

\*Children should be provided freedom to live in a natural environment and learn from their own experiences.

\*Children should not be forced to receive knowledge through books. Instead, they should be encouraged to learn from original sources.

\*Schools should be reformed.

\*Education should not train children to be effective farmers, clerks or craftsmen but develop them to become good human beings. Therefore, we should take their age, interests, ability to do task, learn and live with lesson into consideration. Furthermore, our lesson that are teaching children or students will be more interesting, interactive and memorable with fun in their mind once more. These will definitely bring huge success in learning process and blossom in everywhere through valuable lesson.

**References:**

1. Linton, Ralph. 1998. *The Cultural Background of Personality, Volume 1*. United Kingdom: Routledge.
2. Larkley, E Jasmine and Viola B. Maynhard (ed). 2008. *Innovation in Education*. New York: Nova Publishers.
3. S.S., Chauhan. 2009. *Innovations in Teaching Learning Process*. Noida: VikasPublishing House Pvt. Ltd.
4. Beck, Clive and Clare Kosnik. 2012. *Innovations in Teacher Education: A Social Constructivist Approach*. New York: SUNY Press.  
Mota, Ronaldo and David Scott. 2014. *Education for Innovation and Independent Learning*. United Kingdom: Elsevier.