

O'ZBEKISTON RESPUBLIKASI  
OLIY TA'LIM, FAN VA INNOVATSIYALAR VAZIRLIGI  
FARG'ONA DAVLAT UNIVERSITETI

**FarDU.  
ILMIY  
XABARLAR**

1995-yildan nashr etiladi  
Yilda 6 marta chiqadi

**2024/6--SON  
ILOVA TO'PLAM**

**НАУЧНЫЙ  
ВЕСТНИК.  
ФерГУ**

Издаётся с 1995 года  
Выходит 6 раз в год

<b>Sh.T.Mavlonova</b>	
Inklyuziv ta'lim o'quvchilariga ingliz tilini o'rgatishning pedagogik-psixologik, ijtimoiy xususiyatlari .....	214
<b>Z.M.Xursanova</b>	
Bo'lajak tarbiya fani o'qituvchilarining mantiqiy fikrlashini rivojlantirish mazmuni .....	219
<b>A.B.Mirzayev</b>	
Effective ways to use the task-based approach in foreign language courses .....	223
<b>Sh.A.Pakirdinova</b>	
Blended learning texnologiyasining nazariy asoslari va uning ta'lim jarayonida ahamiyati .....	226
<b>Sh.A.Pakirdinova</b>	
Comparative analysis of online and traditional classroom learning .....	231
<b>M.M.Umaralieva</b>	
Fostering autonomy and engagement in higher education: self-regulated learning with multimedia tools .....	235
<b>Z.N.Usmonov</b>	
Maktabgacha tarbiya muassasalaridagi bolalar jismoniy tarbiyasi .....	239
<b>A.T.Akbarov</b>	
Turli maktab yoshidagi o'quvchilar organizmining funksional holatini o'ziga xos xususiyatlari .....	246
<b>U.K.Rahmonov</b>	
Musiq madaniyat darslarini olib borishda ta'lim beruvchining o'rni .....	252
<b>U.K.Rahmonov</b>	
Musiq darslarida zamonaviy texnologiyalarni qo'llashda loyiha texnologiyasini ahamiyati .....	256
<b>V.Abdurakhmanov</b>	
"The challenges of teaching english to international students" .....	261
<b>D.Y.Irmatov</b>	
Tarbiyachining kasbiy nazari va kasbiy amaliy tayorgarligi mazmuni monitoringi va maktabgacha ta'lim yoshidagilar "Ontogonez"ga mansub bilimlar .....	265
<b>Н.Соби́ров, О.А.Акбаров, Э.Ф.Гиздулин</b>	
Инновационная педагогическая деятельность .....	269

## IQTISODIYOT

<b>M.O.Baltabayeva, K.N.Raximova, M.K.Axmadaliyeva</b>	
Ayollarning iqtisodiy mustaqilligi oilaning yaxshi yashashiga qo'shgan hissasi .....	273
<b>K.N.Raximova, M.O.Baltabayeva, M.K.Axmadaliyeva</b>	
Yashil iqtisodiyot fanida yashil iqtisodiyotga o'tish dolzarbligi va konseptual asoslari .....	276

## FALSAFA

<b>N.M.Axmadiyev</b>	
Ijtimoiy rivojlanish va yoshlarni dunyoqarashida manfaatlar to'qnashuvi .....	281
<b>I.Toirov</b>	
Milliy davlatchilik asoslarini mustaxkamlash va fuqarolik jamiyati barpo etishning falsafiy jihatlarini .....	284
<b>I.A.Nurmatova</b>	
Jamiyat ma'naviy muhitida oila institutining roli .....	289

## SIYOSAT

<b>B.P.Zokirov</b>	
Jinoiy aktivlarni qaytarish bo'yicha universal va mintaqaviy xalqaro-huquqiy asoslari .....	293
<b>S.M.Xoliqov</b>	
Davlatning mudofaa qobiliyatining huquqiy asoslari .....	301
<b>B.P.Zokirov</b>	
Xorijiy ilg'or tajribalar jinoiy aktivlarni qaytarish mexanizmlarini rivojlantirishning muhim omil sifatida .....	304
<b>S.M.Xoliqov</b>	
Milliy xavfsizlikni ta'minlashda parlament quyi palatasi faoliyatidagi muammolar .....	314



UO'K:37.022

**FOSTERING AUTONOMY AND ENGAGEMENT IN HIGHER EDUCATION: SELF-REGULATED LEARNING WITH MULTIMEDIA TOOLS****OLIV TA'LIMDA MUSTAQIL TA'LIMNI INTERAKTIV MULTIMEDIA VOSITALARI ORQALI RIVOJLANTIRISH****РАЗВИТИЕ САМОСТОЯТЕЛЬНОГО ОБУЧЕНИЯ В ВЫСШЕМ ОБРАЗОВАНИИ С ПОМОЩЬЮ ИНТЕРАКТИВНЫХ МУЛЬТИМЕДИЙНЫХ ИНСТРУМЕНТОВ****Umaralieva Munojatkxon Mashrabovna** 

A senior teacher of Applied English Chair

**Abstract**

This study explores the role of interactive multimedia tools (IMTs) in fostering self-regulated learning (SRL) among university students. Drawing on theories of motivation and cognitive engagement, the research highlights how IMTs, such as video lectures, quizzes, and gamified activities, enhance students' autonomy, engagement, and metacognitive strategies. While IMTs effectively promote motivation and active learning, findings suggest they have limitations in fostering deeper self-regulation skills like planning and reflection. The study recommends integrating IMTs with additional instructional scaffolding to maximize their potential and enhance higher education SRL outcomes.

**Annotatsiya**

Ushbu tadqiqotda universitet talabalari orasida mustaqil ta'limni rivojlantirishda interaktiv multimedia vositalarining (IMV) roli ko'rib chiqiladi. Motivatsiya va kognitiv jalb qilish nazariyalariga asoslanib, tadqiqot IMV, jumladan video-ma'ruzalar, testlar va o'yinli faoliyatlar talabalarning mustaqilligi, jalb qilinishi va metakognitiv strategiyalarini qanday rivojlantirishi ta'kidlanadi. IMV motivatsiyani oshirish va faol o'qitishda samarali bo'lsada, natijalar ularning rejalashtirish va refleksiya kabi chuqurroq o'z-o'zini boshqarish ko'nikmalarini rivojlantirishda cheklovlarini ko'rsatadi. Tadqiqot IMVni qo'shimcha pedagogik usullar bilan integratsiyalashni, ularning imkoniyatlarini maksimal darajada ochib berish va O'BTni rivojlantirishni tavsiya qiladi.

**Аннотация**

В этом исследовании рассматривается роль интерактивных мультимедийных инструментов (ИМИ) в развитии саморегулируемого обучения (СРЛ) среди студентов университетов. Основываясь на теориях мотивации и когнитивного вовлечения, исследование подчеркивает, как ИМИ, такие как видеолекции, викторины и игровые активности, способствуют развитию автономии, вовлеченности и метакогнитивных стратегий студентов. Несмотря на то, что ИМИ эффективно повышают мотивацию и активное обучение, результаты показывают их ограничения в развитии более глубоких навыков саморегуляции, таких как планирование и рефлексия. Исследование рекомендует интеграцию ИМИ с дополнительными педагогическими методиками для максимального раскрытия их потенциала и улучшения СРЛ в высшем образовании.

**Key words:** self-regulated learning, interactive multimedia tools, motivation, autonomy, higher education.**Kalit so'zlar:** Mustaqil ta'lim, interaktiv multimedia vositalari, motivatsiya, mustaqillik, oliy ta'lim.**Ключевые слова:** Самостоятельное образование, интерактивные мультимедийные инструменты, мотивация, автономия, высшее образование.**INTRODUCTION**

Human knowledge is cumulative and participatory by nature. The exponential growth of information has led to a growing emphasis on building integrated learning processes for pupils. The educational process now aims to develop students' thinking and analytical skills, preparing them to deal effectively with new information and knowledge.

To prepare students for today's difficulties, it's important to consider education systems and apply various learning theories to construct effective models. The "Self-Regulated Learning" (SRL) approach significantly advances this discipline. The new learning curve emphasizes empowering students to execute learning practices independently, making it a key topic in education. SRL is a highly discussed topic in academic learning due to its emphasis on students' active participation in their learning outcomes [2].



Zimmerman defines SRL as a self-directed process that helps students transform their mental abilities into academic skills. It is a regular and mental knowledge process in which learners actively engage to achieve their learning objectives [11]. SRL is defined by Pintrich: as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment" [9; 453].

One of the effective ways to promote EFL learners' autonomy is by integrating multimedia tools in teaching practices to support self-directed learning (SDL). Multimedia content can help to diversify and enhance the learning experience and improve knowledge retention. Educational videos provide students with more opportunities to interact with the material, allowing them to better understand the subject matter. Students from different parts of the world can access course materials through video, making it easier for them to engage in learning. Multimedia learning systems have the potential to improve students' understanding of the language, as they provide a variety of resources that can be used to support learning goals.

### LITERATURE REVIEW

#### Self-Regulated Learning (SRL) in Higher Education

A significant framework in the field of educational science is the theory of self-determination, which differentiates between autonomous and controlled reasons for engagement in academic activities. This theory is supported by various studies (Deci & Ryan, 2000, 2008a, 2008b, Guay et al., 2008, Pintrich, 2003b, Ryan & Deci, 2000a, 2000b) [7].

Autonomous behavior is driven by personal choice and agency, reflecting a complete acceptance and enthusiasm for participation in an activity. This is manifested in intrinsic interest and personal commitment to learning. As a result, behavior becomes more self-directed and intrinsically motivated. However, more integrated and internalized forms of extrinsic motivation are also considered autonomous, as these students have extrinsic reasons that align with their own goals, interests, and needs.

In recent years, educational institutions have been increasingly integrating interactive multimedia tools into their teaching methods to support students' self-regulated learning. Self-regulated learning refers to the student's ability to plan, monitor, and evaluate their learning process, including setting goals, choosing strategies, and managing resources efficiently [11]. Interactive multimedia tools, such as video lectures, simulations, quizzes, and gamified activities, are thought to enhance these abilities by promoting active participation and providing instant feedback.

The shift to online and hybrid learning environments, exacerbated by the COVID-19 pandemic, has increased the need for students to develop greater self-directed learning skills. With reduced direct supervision, students must assume responsibility for their learning.

Research has demonstrated that interactive multimedia resources significantly enhance self-directed learning by promoting engagement, motivation, and the utilization of cognitive strategies. These resources, including gamified educational platforms, mobile apps, and flipped classroom approaches, encourage active participation and independent learning.

Specifically, flipped videos incorporating self-regulated learning mechanisms have been shown to improve learning outcomes by enabling students to independently plan, monitor, and evaluate their progress.

In addition, research indicates that integrating IMTs with SRL approaches leads to improved academic achievement and student satisfaction. Tools such as online discussion forums, blogs, and game-based applications assist students in developing critical thinking and problem-solving skills, while also providing real-time feedback that further enhances their self-regulation abilities.

#### Role of Interactive Multimedia Tools

According to J. Johnstone and L. Milne, the use of video has been found to effectively develop listening skills and grammar [3]. Mayer et. al state the use of a teacher-controlled multimedia tool has enhanced communication in the classroom for both teachers and students. Within this environment, students have become more engaged and independent, participating in language learning through appealing visuals, animations, and audio. They collaborate with peers to solve problems and complete assignments in a relaxed atmosphere. Students can learn at their speed and follow their objectives, while teachers assume the role of facilitators rather than



## PEDAGOGIKA

knowledge providers. This approach increases the effectiveness of language instruction and learning [6; 25-36].

Interactive multimedia tools (IMTs) refer to digital technologies that allow learners to interact with content through various formats, such as videos, quizzes, simulations, and games. These tools are designed to make learning more engaging and immersive, offering students opportunities to actively participate in the learning process [5]. IMTs have been shown to support SRL by providing immediate feedback, allowing learners to reflect on their performance and adjust their strategies accordingly [4].

Several studies have investigated the influence of interactive multimedia technologies (IMT) on student motivation and involvement. For instance, a study conducted by Plass et al. discovered that gamified learning settings enhance motivation and cognitive involvement among students, resulting in improved academic performance [8; 258]. Furthermore, research by Schunk and Zimmerman underscores the significance of utilizing multimedia tools to develop metacognitive abilities such as self-assessment and goal-setting among students [10].

However, while the beneficial effects of IMTs on SRL (self-regulated learning) have been well documented, there are still areas of uncertainty regarding the specific ways in which different types of multimedia tools influence various aspects of self-regulatory processes. For example, video-based learning materials may enhance cognitive engagement, but it is not always clear if they also contribute to the development of metacognitive abilities. Furthermore, the influence of individual differences in learners' backgrounds and characteristics on the efficacy of IMTs has not yet been fully investigated.

**Participants**

This study involved 54 undergraduate students from Fergana State University who are taught in the credit module system. Based on the curriculum, different types of independent work can be assigned and given to students in advance, depending on the nature of the subject. To ensure the correct and efficient organization of independent study, teachers should provide students with relevant scientific and technical materials. The participants were selected using purposive sampling to ensure they had experience using interactive multimedia tools in their self-regulated learning.

**Data Collection**

Qualitative data were collected through semi-structured interviews. The interviews focused on the participants' experiences with interactive multimedia tools and their perceived impact on self-regulated learning. Key areas of inquiry included motivation, cognitive engagement, and the use of metacognitive strategies. Each interview lasted between 30 and 45 minutes and was conducted via Zoom.

**Data Analysis**

The data were analyzed using thematic analysis. The transcripts were coded for recurring themes related to self-regulated learning processes and the role of interactive multimedia tools. Codes were grouped into categories representing different aspects of SRL, including motivation, cognitive engagement, and metacognitive strategies.

**RESULTS AND DISCUSSION****Motivation and Autonomy**

A significant theme that emerged from the interviews was the role of IMTs in enhancing student motivation and autonomy. Many participants reported that the interactive nature of multimedia tools, such as quizzes and simulations, made learning more enjoyable and less monotonous. One student remarked, "The videos and quizzes keep me interested and motivated because I can see immediate results."

Several participants also noted that IMTs allowed them to take control of their learning. The ability to pause and replay video lectures uploaded into Google Classroom, for example, helped students manage their pace and revisit difficult concepts. This aligns with Zimmerman's (2008) model of SRL, which emphasizes the importance of autonomy in fostering self-regulation.

**Cognitive Engagement**

IMTs were found to significantly improve cognitive engagement, particularly through the use of simulation-based and gamified learning activities. One participant commented on how a simulation-based learning module aided their understanding of complex concepts: "It was easier to



comprehend the topic as I was actively engaged in the learning process and not just passively receiving information". Participants also appreciated the immediate feedback provided by IMTs, which enabled them to monitor their progress and adjust their learning strategies. For instance, quizzes embedded within video lectures provided instant results, allowing students to identify gaps in their understanding.

### Metacognitive Strategies

In terms of metacognitive strategies, IMTs played a role in helping students plan and monitor their learning. Many participants reported using multimedia tools to set goals and track their progress. One student noted, "The quizzes give me a sense of how much I've learned and what I need to focus on next." This reflects the importance of self-monitoring, a key component of metacognition, in SRL.

However, while IMTs were effective in promoting cognitive engagement and motivation, some participants expressed concerns about their limited role in fostering deeper metacognitive strategies. As one student pointed out, "The tools are great for keeping me engaged, but they don't really teach me how to plan or reflect on my learning." This suggests that while IMTs can enhance some aspects of SRL, additional support may be needed to develop more advanced self-regulation skills.

The findings of this study indicate that interactive multimedia tools can play a significant role in enhancing self-regulated learning in higher education. IMTs promote motivation and cognitive engagement by making learning more interactive and providing immediate feedback. These tools also support metacognitive processes by helping students monitor their progress and set learning goals.

However, the results also highlight some limitations of IMTs in fostering deeper metacognitive skills. While students reported that these tools helped them stay motivated and engaged, they also indicated that IMTs alone were not sufficient to develop more advanced self-regulation strategies, such as planning and reflection.

### Implications for Practice

Educators should consider integrating IMTs into their teaching practices to promote self-regulated learning, particularly in online and blended learning environments. However, to fully support SRL, these tools should be supplemented with additional scaffolding, such as explicit instruction on goal-setting, time management, and reflection.

### CONCLUSION

Interactive multimedia tools have the potential to enhance self-regulated learning by fostering motivation, cognitive engagement, and self-monitoring. However, these tools should be used in conjunction with other instructional strategies to support the full range of self-regulation skills. Future research should explore the impact of different types of IMTs on various aspects of SRL and investigate the role of individual differences in moderating their effectiveness.

### REFERENCES

1. Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies and academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, 27, 1-13.
2. Dent, A. L., & Koenka, A. C. (2015). The relation between self-regulated learning and academic achievement across childhood and adolescence: A meta-analysis. *Educational Psychology Review*, 27(3), 1-50. doi:10.1007/s10648-015-9320-8
3. Johnstone, J., and Milne, L., "Scaffolding second language communicative discourse with teacher-controlled multimedia," *Foreign Language Annals*, 28, 315-329, 1995.
4. Kizilcec, R. F., Pérez-Sanagustín, M., & Maldonado, J. J. (2017). Self-regulated learning strategies predict learner behavior and goal attainment in Massive Open Online Courses. *Computers & Education*, 104, 18-33.
5. Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
6. Mayer, R. E., Plass, J. L., Chun, D. M., and Leutner, D., "Supporting visual and verbal learning preferences in a second-language multimedia learning environment," *Journal of Educational Psychology*, 90, 25-36, 1998.
7. Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385-407.
8. Plass, J. L., Homer, B. D., & Kinzer, C. K. (2015). Foundations of game-based learning. *Educational Psychologist*, 50(4), 258-283.
9. Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 451-502). San Diego: Academic Press.
10. Schunk, D. H., & Zimmerman, B. J. (2012). *Motivation and self-regulated learning: Theory, research, and applications*.
11. Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-72. doi:10.1207/s15430421tip4102\_2