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Dear Esteemed Professors and Researchers,

We often hear about your aspirations to publish articles in international journals. Inspired by your academic potential, we are pleased to announce the launch of Econoscitech-Integration, an international scientific journal specializing in socio-economics, science and technology, and innovation. Our journal is committed to fostering collaborative ties with prominent research centers across Central Asia and Europe, promoting the exchange of new knowledge and innovations.

Through Econoscitech-Integration, we aim to bring valuable research, analyses, and practical insights focused on the socio-economic development of our country to a wide audience. Here, we provide an opportunity to address issues in economics, technology, innovation, and social sciences through modern scientific approaches and to implement them in practice. The research published in our journal covers not only theoretical knowledge but also addresses relevant and impactful practical topics.

If you have innovative ideas in fields such as economics, engineering, education, tourism, or other critical areas, and wish to explore solutions, we invite you to collaborate with us. We value every article submitted, recognizing its importance for societal and national development, and we approach each submission with dedicated attention.

Zufarova Nozima Gulamiddinovna
DSc., Dean of Tourism Faculty, TSUE

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THE INFLUENCE OF GADGET USE, TEACHERS, AND SCHOOL ENVIRONMENT ON STUDENTS' COGNITIVE DEVELOPMENT, CHARACTER FORMATION, AND ACADEMIC SUCCESS

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Abstract. This article analyzes the influence of gadget use, teacher quality, and school environment on students' cognitive development, character formation, and academic success. The study examines both the positive aspects of moderate gadget use and the negative consequences of excessive screen time. It also highlights the impact of teacher support, positive school climate, and parental supervision on students' motivation, discipline, and emotional well-being. The findings show that responsible technology use, qualified teachers, and a supportive school environment contribute significantly to students' overall development.

Keywords: gadget use, cognitive development, academic success, teacher quality, school environment, character formation, emotional well-being, screen time, parental supervision.

Аннотация. В данной статье анализируется влияние использования гаджетов, качества преподавания и школьной среды на когнитивное развитие, формирование характера и академическую успеваемость учащихся. В ходе исследования рассмотрены как положительные стороны умеренного использования гаджетов, так и негативные последствия их чрезмерного использования. Также освещается влияние поддержки со стороны учителей, позитивного школьного климата и родительского контроля на мотивацию, дисциплину и эмоциональное состояние учащихся. Результаты исследования показывают, что рациональное использование технологий, квалифицированные учителя и благоприятная школьная среда способствуют всестороннему развитию учащихся.

Ключевые слова: использование гаджетов, когнитивное развитие, академическая успеваемость, качество учителя, школьная среда, формирование характера, эмоциональное благополучие, экранное время, родительский контроль.

1. INTRODUCTION.

In the modern digital era, students are increasingly influenced by multiple factors that shape their cognitive development, character formation, and academic success. Among the most important of these factors are gadget use, teacher quality, and the school environment. While digital technologies have created new opportunities for learning and communication, excessive or unregulated gadget use may negatively affect students' attention, concentration, memory, and academic performance. At the same time, supportive teachers and positive school environments continue to play a crucial role in promoting intellectual growth, emotional well-being, and responsible behavior.

The rapid expansion of smartphones, tablets, laptops, and social media has significantly changed students' daily lives. Many students spend several hours each day using digital devices for entertainment, communication, and learning. Although gadgets can improve access to information and educational resources, excessive screen time is often associated with reduced concentration, sleep problems, lower academic performance, and weaker cognitive outcomes. Research shows that

prolonged screen exposure may negatively affect attention, executive functioning, memory, and language development, particularly among children and adolescents.

Studies also indicate that screen time exceeding two to three hours per day is often associated with poorer educational outcomes and weaker mental health. Media multitasking and excessive smartphone use may reduce students' ability to focus on academic tasks and increase stress, anxiety, and behavioral difficulties. At the same time, moderate and well-regulated use of educational technologies can have positive effects when gadgets are used for learning, creativity, and communication.

Teacher quality remains one of the strongest factors influencing student success. Effective teachers improve not only academic achievement but also students' self-confidence, classroom behavior, motivation, and emotional well-being. Research demonstrates that highly qualified teachers have a significant impact on students' learning outcomes, especially when they use interactive teaching methods, maintain supportive classroom environments, and encourage critical thinking.

The school environment is equally important in shaping students' development. A positive school climate characterized by safety, discipline, respect, and supportive peer relationships contributes to stronger school belonging, higher attendance, and better academic performance. In contrast, schools with weak discipline, limited support systems, and poor teacher-student communication often experience higher levels of absenteeism, bullying, and low motivation among students.

Therefore, understanding the combined influence of gadget use, teachers, and school environment on students' cognitive development, character formation, and academic success is essential for improving educational quality. This study aims to examine how these factors interact and influence students' learning outcomes, behavior, emotional well-being, and long-term development.

2. LITERATURE REVIEW.

The influence of gadget use, teachers, and school environment on student development has become one of the most widely discussed topics in modern educational research. Recent studies show that cognitive development, character formation, and academic success are affected by both technological and social factors. While digital technologies can support learning and creativity, excessive gadget use may negatively influence attention, memory, communication, and behavior. At the same time, supportive teachers and positive school environments can reduce these risks and contribute to better student outcomes.

One of the most important topics in the literature is the relationship between gadget use and cognitive development. Researchers argue that moderate and educational use of digital technologies can improve problem-solving skills, creativity, digital literacy, and access to information. Educational applications, digital storytelling, games, and interactive learning platforms may help students understand complex concepts more effectively and strengthen critical thinking skills. However, excessive gadget use is often associated with lower concentration, weaker memory, reduced executive functioning, and poorer academic performance. Studies show that prolonged screen exposure may negatively affect children's cognitive development, especially when it replaces sleep, reading, and face-to-face communication.

Another important area of research concerns the influence of gadget use on character formation and behavior. Excessive use of smartphones, tablets, and video games may reduce students' social interaction, empathy, discipline, and responsibility. Students who spend long hours using gadgets often show lower participation in family activities, less communication with peers, and weaker adherence to school rules. Some studies also suggest that heavy screen time may increase anxiety, emotional instability, and aggressive behavior. On the other hand, when gadgets

are used under parental and teacher supervision, they can contribute positively to communication skills, collaboration, and digital citizenship.

Teacher quality remains one of the strongest school-related factors affecting students' academic success. Effective teachers do more than deliver subject knowledge; they motivate students, provide emotional support, encourage discipline, and help students develop self-confidence. Research shows that students taught by highly qualified teachers tend to achieve better academic results, demonstrate stronger classroom behavior, and develop greater motivation to learn. Teacher support is particularly important for students who face difficulties related to excessive gadget use because teachers can guide students toward more balanced and productive use of technology.

Teacher–student relationships are also emphasized in the literature as a major factor affecting both character formation and academic achievement. Positive teacher–student relationships improve school belonging, emotional well-being, classroom participation, and academic motivation. Students who feel respected and supported by teachers are more likely to develop positive attitudes toward learning and demonstrate responsible behavior in school.

The school environment is another important factor influencing student development. School climate includes safety, discipline, peer relationships, learning resources, teacher support, and the general emotional atmosphere of the school. Research indicates that students perform better in schools with positive climates, clear behavioral expectations, and supportive peer networks. A healthy school environment encourages students to participate in learning activities, develop social skills, and avoid negative behaviors. Conversely, schools with poor discipline, weak teacher support, and negative peer influence often experience lower academic achievement and more behavioral problems.

Overall, the literature shows that gadget use, teachers, and school environment influence student development through interconnected mechanisms. Moderate and educational use of technology can support learning, but excessive gadget use may negatively affect cognitive development, behavior, and academic performance. Teachers and schools play a crucial role in reducing these negative effects by creating structured, supportive, and motivating learning environments.

3. RESEARCH METHODOLOGY.

The methodological basis of the study is based on a combination of systematic, comparative, and analytical approaches. The systematic approach made it possible to examine students' cognitive development, character formation, and academic success as interconnected processes influenced by gadget use, teacher quality, school climate, and family support. The comparative approach was used to analyze the differences between the positive and negative effects of technology use and to compare the influence of teacher-related and school-related factors on student outcomes.

The empirical basis of the study includes scientific articles, educational reports, books, and international research devoted to screen time, teacher quality, school climate, and student behavior. Particular attention was given to the works of Linda Darling-Hammond, Robert C. Pianta, Wang and Degol, Joseph and Nair, Clemente-Suárez et al., and other researchers who studied the impact of digital technologies and educational environments on student development.

The study mainly relies on qualitative analysis of existing literature and descriptive evaluation of research findings. Various factors influencing student development were grouped into three main categories: gadget-related factors, teacher-related factors, and school environment factors. Within these categories, the study examined the influence of screen time, teacher support, classroom management, peer relationships, extracurricular activities, and parental supervision.

The research also used comparative analysis to identify how different levels of gadget use affect students' concentration, memory, motivation, discipline, and academic performance. In addition, the study considered several major indicators of student development, including cognitive

skills, emotional well-being, communication skills, school belonging, and academic achievement. This methodological approach allows for a comprehensive understanding of how technology, teachers, and school environment interact in shaping students' overall development.

4. ANALYSIS AND RESULTS.

The analysis of scientific literature shows that gadget use, teacher quality, and school environment significantly influence students' cognitive development, character formation, and academic success. These factors are closely interconnected, and their combined effect determines students' ability to learn, communicate, behave responsibly, and succeed in school.

One of the main findings is that moderate and educational use of gadgets can have positive effects on cognitive development. Digital tools, educational applications, interactive games, and online learning platforms may improve students' problem-solving skills, creativity, digital literacy, and access to information. Students who use gadgets for educational purposes often develop better research skills and are more familiar with modern technology. However, excessive screen time and uncontrolled gadget use may reduce concentration, weaken memory, lower academic performance, and negatively affect emotional stability. Studies indicate that students who spend more than three to four hours per day on non-educational screen activities are more likely to experience lower academic achievement and weaker classroom engagement (Table 1).

Table 1

Positive and Negative Effects of Gadget Use on Students

Type of Gadget Use	Positive Effects	Negative Effects
Educational applications and online learning	Improves problem-solving skills, creativity, and digital literacy	May reduce face-to-face interaction if overused
Moderate screen time	Supports access to information and communication	Can lead to distraction if not supervised
Excessive social media use	Expands online communication	Increases anxiety, stress, and reduced concentration
Excessive gaming and entertainment use	Improves some visual and reaction skills	Lowers academic performance and weakens discipline

Source: Developed by the author based on Joseph & Nair (2022), Clemente-Suárez et al. (2024), and Feng et al. (2025).

Another important result concerns the role of teachers. Teacher quality strongly affects students' academic performance, motivation, and behavior. Effective teachers help students manage gadget use more responsibly by integrating technology into lessons in productive ways and encouraging balanced screen habits. Students taught by supportive and experienced teachers often demonstrate better academic performance, stronger self-confidence, and more positive attitudes toward learning. Positive teacher-student relationships also improve school belonging and emotional well-being.

The school environment is another important factor affecting students' development. Schools with a positive climate, strong discipline, supportive teachers, and safe peer relationships usually produce better academic and social outcomes. Students who feel safe and respected at school are more likely to participate actively in class, attend school regularly, and avoid risky behaviors. In contrast, negative school climates often increase stress, absenteeism, bullying, and behavioral problems (Table 2).

The Influence of Teachers and School Environment on Student Development

Factor	Influence on Cognitive Development	Influence on Character Formation	Influence on Academic Success
Teacher quality	Improves critical thinking and problem-solving	Encourages responsibility and discipline	Increases academic achievement
Positive teacher–student relationships	Strengthens motivation and attention	Builds confidence and respect	Improves classroom participation
Positive school climate	Supports concentration and emotional stability	Encourages cooperation and good behavior	Raises attendance and school performance
Extracurricular activities	Develops creativity and communication skills	Improves leadership and teamwork	Strengthens school belonging and engagement

Source: Developed by the author based on Darling-Hammond (2000), Pianta et al. (2012), Wang & Degol (2016), and Eccles & Barber (1999).

The analysis also demonstrates that family background and parental supervision influence how gadgets affect students. Students whose parents regulate screen time and encourage educational uses of technology tend to achieve better academic and social outcomes. Without supervision, gadget use is more likely to become excessive and negatively affect students' learning habits and emotional well-being.

Overall, the results show that gadgets can either support or hinder student development depending on how they are used. Teachers and schools play a crucial role in guiding students toward healthy and productive use of technology. The most effective educational environments are those that combine responsible gadget use, strong teacher support, positive school climate, and active parental involvement.

5. CONCLUSION AND RECOMMENDATIONS.

The conducted analysis demonstrates that gadget use, teacher quality, and school environment have a significant influence on students' cognitive development, character formation, and academic success. The study confirms that digital technologies can positively contribute to learning when they are used in a balanced and educational way. Educational applications, online resources, and interactive learning platforms help students improve problem-solving skills, creativity, and digital literacy. However, excessive and uncontrolled gadget use may negatively affect concentration, memory, emotional stability, social interaction, and academic performance.

The findings also show that teachers play a central role in helping students use technology responsibly and productively. Effective teachers improve not only academic achievement but also students' motivation, discipline, self-confidence, and emotional well-being. Positive teacher–student relationships encourage school belonging, classroom participation, and responsible behavior. In addition, schools with supportive climates, clear rules, strong peer relationships, and extracurricular opportunities contribute positively to students' overall development.

The study further reveals that family support and parental supervision are important in reducing the negative effects of excessive gadget use. Students whose parents regulate screen time and encourage educational uses of technology are more likely to achieve better cognitive, emotional,

and academic outcomes. Therefore, cooperation between schools and families is essential for creating healthy and productive learning environments.

Based on the results of the study, several recommendations can be proposed. First, schools should develop clear guidelines regarding students' gadget use and encourage the use of digital devices mainly for educational purposes. Second, teachers should receive additional training on integrating technology effectively into classroom activities and promoting balanced screen habits. Third, schools should strengthen teacher–student relationships and create positive school climates that support emotional well-being and academic success. Fourth, parents should be encouraged to monitor their children's gadget use and maintain regular communication with schools about students' behavior and progress. Finally, policymakers should invest in digital education programs that promote responsible technology use while also supporting students' social, emotional, and academic development.

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