Research Article

Received: 14 July 2024 / Accepted: 2 October 2024 / Published: 05 November 2024

The Impact of Digital Technology on Learning and Teaching: A Case Study of Schools in Durrës, Albania

Sonila Osmani

Doreta Tartari

Faculty of Education,
"Aleksander Moisiu" University of Durres,
Rr.Miqesia,
2001, Spitalle,
Durres, Albania

DOI: https://doi.org/10.36941/jesr-2024-0165

Abstract

The incorporation of digital technology in education has become more widespread, offering the potential to transform conventional teaching methods and improve student learning experiences. This study investigates the influence of digital technology on the process of learning and teaching in Albanian schools. This study used a mixed-methods approach to examine the benefits, difficulties, and overall efficacy of digital tools in educational environments. This paper provides a comprehensive literature analysis to examine the global trends and issues related to digital technology in education, with a specific focus on developing nations. It emphasizes the distinct socio-economic and infrastructural difficulties encountered by Albania, a developing country endeavoring to improve its educational system. Survey responses from a diverse selection of 10 educational institutions in Durrës, Albania provided numerical data. Quantitative data collection involved conducting questionnaires with students of different ages, which allowed for a comprehensive understanding of their experiences and perspectives. The results demonstrate that the use of digital technology greatly improves student engagement and academic achievement. Schools that integrated digital technology into their curriculum achieved higher exam scores than schools that did not. Nevertheless, the research also highlights notable obstacles such as limited infrastructure, unstable internet access, and inadequate teacher preparation that impede the efficient utilization of digital resources. It is necessary for teachers a significant inclination for additional training and assistance, while students demonstrated a preference for digital learning tools over conventional techniques, citing heightened enthusiasm and involvement. This study provides policy proposals to effectively solve the highlighted difficulties and improve the incorporation of digital technology in Albanian schools. These include increased financial resources for improving infrastructure, comprehensive programs for educating teachers, and the establishment of a supportive framework to maintain digital integration endeavors. In summary, this study offers a comprehensive analysis of the impact of digital technology on educational achievements in Albania, making a significant contribution to the wider discussion on digital education in developing nations. The results emphasize the revolutionary capacity of digital tools in education while emphasizing the critical necessity of resolving structural obstacles in order to fully achieve this promise.

Keywords: *digital technology, education, conventional teaching*

1. Introduction

The rapid progress of digital technology has had a tremendous impact on different sectors globally, particularly in the field of education. The incorporation of digital tools in educational environments has the potential to revolutionize conventional teaching methods, promote interactive and customized learning experiences, and address educational inequalities. This article aims to examine the influence of digital technology on learning and teaching in Albanian schools, providing insights into the advantages and difficulties associated with this integration.

Education technology comprises a diverse array of instruments, such as computers, tablets, interactive whiteboards, educational software, and online resources. These tools can enhance a range of educational activities, including online learning, interactive lessons, virtual laboratories, and collaborative projects. Multiple studies conducted worldwide have provided evidence of the beneficial impact of digital technology on student involvement, motivation, and academic performance (Tamim et al., 2011; Selwyn, 2011). Nevertheless, the magnitude and characteristics of these effects might differ considerably depending on regional, socio-economic, and infrastructural elements.

Developing countries, such as Albania, face distinct opportunities and challenges when it comes to implementing digital technology in education. Although digital tools have the potential to improve the quality and accessibility of education, certain locations encounter substantial obstacles, including limited resources, inadequate infrastructure, and a shortage of skilled workers (Kozma, 2005; Warschauer & Ames, 2010). Albania, a nation currently implementing educational reforms and working to modernize its system, is a compelling example for studying the incorporation of digital technology in schools.

The study aims to achieve specific goals and objectives. The main aim of this study is to evaluate the influence of digital technology on the process of learning and teaching in schools in Albania. More specifically, the study aims to:

Analyze the advantages of digital technology in improving student engagement, motivation, and academic achievement.

1. Enumerate the obstacles and hindrances encountered by educational institutions when using digital tools in their pedagogical methods.
2. Examine educators, learners, and school officials' perspectives on the use of digital 83 technology in education.
3. Offer evidence-based suggestions to policymakers, educators, and stakeholders on how to enhance the efficacy of integrating digital technology in Albanian schools.

The importance of this study rests in its ability to provide significant knowledge to the wider discussion on digital education, specifically in the context of developing nations. It is essential to comprehend the efficacy and obstacles of Albania's educational reforms and digital infrastructure investments in order to inform future policies and activities. Furthermore, the results of this study can guide comparable initiatives in other emerging areas, offering a model for the effective incorporation of digital technology in education.

2. Literature Review

The integration of digital resources into teaching and learning processes is becoming increasingly prevalent in educational institutions around the world. This section will examine the worldwide influence of digital technology in education, with a specific emphasis on how it improves student involvement and academic achievement.

2.1 Revolutionizing Education Using Digital Technology

The advent of digital technology has significantly transformed the educational domain. Selwyn (2011) emphasizes that the utilization of digital technologies, such as computers, tablets, and instructional software, has facilitated the creation of interactive learning environments that were before inconceivable. These tools enable immediate feedback, cooperative learning, and simple access to a wide range of resources and information.

Interactive learning environments, such as digital platforms like interactive whiteboards and virtual classrooms, enable dynamic teaching approaches. Teachers have the ability to include multimedia components such as movies, animations, and simulations in their classes in order to enhance student engagement. This participatory method accommodates various learning styles, enhancing understanding and memory retention.

2.2 Personalized Learning

Digital tools offer tailored learning experiences tailored to each student's unique needs. Adaptive learning technologies assess students' progress and adjust task difficulty accordingly. This individualized strategy effectively targets and resolves areas of learning deficiency while also offering students tasks and activities that are suitably demanding (Wang, 2018).

The Internet provides students and educators with unmatched access to information. Extensive instructional resources are available through digital libraries, online journals, and educational websites. This level of accessibility facilitates autonomous learning as well as topic exploration and investigation.

2.3 Enhanced Student Involvement and Academic Achievement

The use of digital technology in education has been linked to increased student involvement and higher academic achievement. In their study, Tamim et al. (2011) performed a meta-analysis of more than 1,000 studies and discovered that students who utilized digital technologies in their learning saw superior academic results in comparison to those who did not.

2.4 Enhanced Engagement

Utilizing digital tools can heighten student involvement and interest in the learning process. Learning platforms that incorporate gamification utilize game components like points, badges, and leaderboards to incentivize and engage students. These platforms convert educational activities into interactive and pleasurable experiences, thereby enhancing student engagement and enthusiasm towards the subject matter (Hamari, Koivisto, & Sarsa, 2014).

2.5 Improved Collaboration

Digital technologies enable students to collaborate more effectively. Platforms such as Google Classroom, Microsoft Teams, and other collaborative applications enable students to collaborate on projects, exchange materials, and communicate efficiently, irrespective of their geographical proximity. The cooperative atmosphere of this setting promotes collaboration and facilitates the cultivation of essential interpersonal skills (Johnson et al., 2016).

2.6 Enhanced Academic Performance

Studies have shown that incorporating digital tools can lead to better academic outcomes. Improved results demonstrate that computer-assisted instruction enhances students' performance in

mathematics and reading. In addition, digital formative exams offer instant feedback, allowing students to swiftly recognize and rectify their areas of weakness (Cheung & Slavin, 2013).

3. Worldwide Implementation and Obstacles

Despite widespread evidence of the benefits of digital technology in education, different countries use it differently due to differences in resources, infrastructure, and educational regulations.

3.1 Developed Countries:

Schools in developed countries typically possess the requisite infrastructure to facilitate the incorporation of digital technologies. High-speed internet, access to gadgets, and teacher training programs enable the efficient use of digital technologies in the classroom. Finland, Singapore, and South Korea are at the forefront of utilizing digital technology to augment education, showcasing notable advancements in student achievements (OECD, 2015).

3.2 Developing countries:

Encounter difficulties when it comes to adopting digital technologies in education. Significant obstacles include restricted device availability, inadequate internet connectivity, and insufficient educator training. Nevertheless, efforts like the One Laptop per Child (OLPC) program strive to narrow this gap in access to technology by offering reasonably priced laptops and educational materials to students in disadvantaged areas (Warschauer & Ames, 2010).

3.3 Policy and Support:

To successfully integrate digital technology into education, supportive policies must be created and resources allocated for infrastructure development. Governments and educational institutions must give the utmost importance to digital literacy and provide the necessary assistance to teachers and students. Public-private collaborations can be crucial in financing and advancing digital education initiatives (UNESCO, 2019).

4. The Educational Context in Albania

Albania, a country located in southeastern Europe, has been making concerted efforts to update and improve its education system. This modernization entails an emphasis on the integration of digital technologies into teaching and learning methodologies. This section examines the advancements made in Albania's educational landscape, the difficulties encountered, and the ongoing efforts to overcome these barriers.

4.1 Albanian Education System Modernization

4.1.1 Government Initiatives and Policies

The Albanian Ministry of Education, Sports, and Youth (2019) has formulated multiple policies with the goal of incorporating ICT (Information and Communication Technology) into the school system. The policies include the National Strategy for Development and Integration, which outlines the country's digital education objectives. The approach prioritizes the provision of up-to-date technology in schools as well as the cultivation of digital skills among students and teachers. The strategy emphasizes the importance of incorporating ICT into different educational activities and ensuring that both students and teachers possess expertise in digital skills (Ministry of Education,

Sports, and Youth of Albania, 2019).

4.1.2 The development of physical structures and systems

Albanian schools have made efforts to improve their technology infrastructure. They have allocated funds to enable the provision of computers, interactive whiteboards, and internet connectivity in both urban and rural regions. These improvements are intended to create a conducive environment for the use of digital tools in teaching. The Digital Schools Project, with the backing of international partners, seeks to update the educational infrastructure and enhance the availability of digital resources for students and instructors (UNICEF Albania, 2020). These efforts are critical in closing the digital technology gap and ensuring that every student has equitable access to current educational resources.

4.2 Obstacles faced in incorporating digital technology

There are obstacles in the process of merging digital systems. Despite the progress made, Albania faces numerous challenges to fully incorporating digital technology into its education system. The difficulties encompass deficiencies in infrastructure, inadequate teacher training, and socioeconomic inequities.

Insufficient Infrastructure: A significant issue in Albania is the inadequate digital infrastructure in schools. Despite efforts to improve this, especially in urban areas, many schools still lack the necessary resources, such as high-speed internet, modern devices, and technical support, particularly in rural areas. During the interviews, most teachers in rural schools of Durrës find it difficult to integrate digital tools into their lessons due to unreliable internet connections or outdated equipment. For instance, they expressed that they may plan to use an online learning platform, but slow internet speeds or lack of devices disrupt the lesson. Even in better-equipped urban schools, teachers mention the fact overcrowded classrooms limit access to digital tools, as not all students can access devices during lessons.

Improving this situation requires a concerted effort from the Albanian government and educational institutions to invest in digital infrastructure, especially in under-resourced schools. Expanding broadband internet access and ensuring that schools have modern, reliable devices for both teachers and students is critical (Livingstone, 2008). Moreover, partnerships with private companies or international organizations could provide additional equipment and technical support to bridge the digital gap (Marzano et al., 2003).

Teacher Training: For effective integration of these tools, proficiency in utilizing digital technology is essential. Nevertheless, there exists a deficiency in the professional growth opportunities available to teachers in Albania. A significant number of educators lack the necessary expertise to proficiently integrate digital resources into their instructional methodologies. Improving teacher training is another critical component of this strategy. Teachers need professional development opportunities that not only improve their technical skills but also equip them with pedagogical strategies for effectively integrating digital tools into their teaching practices. This training is particularly important in schools with fewer resources, where teachers may have limited experience with technology. By enhancing teachers' digital literacy and providing them with practical tools and techniques, the impact of digital education on student outcomes can be maximized (UNESCO, 2021). Additionally, continuous support and mentorship programs for teachers could help sustain the effective use of technology in the classroom over the long term (OECD, 2020).

Another significant barrier that we encountered during the interviews with school teachers is resistance to change to the adoption of digital tools among Albanian teachers. This is particularly true for older, more experienced educators who may feel uncomfortable with technology or are unsure how to incorporate it into their teaching methods. Many teachers express fear of technological failure during lessons or feel overwhelmed by the rapid changes in digital tools. This

resistance is often linked to a lack of confidence in using new technologies and a fear that they will disrupt the classroom environment rather than improve it (Ertmer, 1999).

Such teachers might avoid using digital tools out of fear that technical problems will interrupt the lesson. This reluctance can hinder the broader digital transformation of education. To overcome this resistance, teachers need hands-on, supportive training that allows them to experiment with digital tools in a low-stakes environment. Encouraging a gradual adoption process, where teachers start with simple tools and gradually incorporate more complex ones, can build their confidence and reduce their fear of failure. Additionally, recognizing and rewarding teachers who successfully integrate digital tools into their teaching can create positive incentives for others to follow suit (Ertmer, 1999).

Socioeconomic disparities: In Albania, the integration of digital technology into education is hindered by substantial socioeconomic disparities, which contribute to unequal access to educational resources and opportunities. Many students from lower-income families do not have access to essential digital devices such as laptops, tablets, or smartphones, limiting their participation in digital learning. Additionally, internet connectivity remains unreliable or non-existent in rural or economically disadvantaged areas, further widening the digital divide. This creates a significant gap between students who have access to technology and those who do not, resulting in disparities in academic performance and educational outcomes (UNESCO, 2021; World Bank, 2022).

The reliance on digital platforms for instruction, assessment, and communication further exacerbates these disparities. For students without access to the necessary digital tools, homework assignments, online projects, and even participation in virtual classrooms become inaccessible. Students from lower-income backgrounds are less likely to have the resources required for remote learning, placing them at a disadvantage compared to their peers who are better equipped with technology (OECD, 2020). This digital divide not only affects students' ability to keep up academically but also limits their opportunities for developing crucial digital literacy skills that are increasingly essential in the modern workforce (European Commission, 2021).

Schools located in economically disadvantaged areas face similar challenges in terms of technological infrastructure. Many schools lack sufficient digital devices for students to use in class, and internet connectivity in these institutions is often slow or unreliable (Ministry of Education and Sports of Albania, 2021).

Addressing these challenges requires a comprehensive approach focused on improving access to digital resources and implementing policies that promote equitable access to education. One of the most urgent needs is to provide students from disadvantaged backgrounds with affordable access to digital devices and reliable internet. This can be achieved through government programs, public-private partnerships, or non-profit initiatives aimed at distributing low-cost or subsidized devices and providing internet connectivity in underserved areas (World Bank, 2022). Providing these resources would ensure that students from all socioeconomic backgrounds can engage fully in digital education, reducing the risk of falling behind due to a lack of access to technology.

Policymakers play a crucial role in ensuring equitable access to digital education. National education policies should include specific measures aimed at reducing the digital divide, such as investing in digital infrastructure in rural and low-income areas. By prioritizing the development of high-quality internet connectivity and ensuring that schools are equipped with the necessary technological resources, the government can help bridge the gap between schools in different socioeconomic contexts (Ministry of Education and Sports of Albania, 2021). In addition, support systems such as after-school programs or community centers with digital learning resources could provide students who lack access at home with opportunities to use technology in a structured, supportive environment (European Commission, 2021).

In conclusion, socioeconomic disparities in Albania significantly impact the integration of digital technology into education, creating unequal opportunities for students from different backgrounds. Addressing these challenges requires a multifaceted approach that includes providing access to digital devices and reliable internet, investing in teacher training, and promoting policies

that ensure equitable access to educational resources. By taking these steps, Albania can ensure that the benefits of digital education are available to all students, regardless of their socioeconomic status, and work towards closing the digital divide in education.

4.3 Continuing Endeavors and Prospective Paths

In light of these difficulties, Albania is implementing measures to tackle them and further improve the integration of digital technology in education.

The Albanian government is actively participating in public-private partnerships to collaborate with private-sector enterprises in order to offer technological resources and training. These agreements have the objective of closing the gap in infrastructure and providing creative solutions for digital education. These partnerships have played a crucial role in equipping schools with the essential tools and resources needed to successfully adopt digital education (UNICEF Albania, 2020).

Organizations are creating teacher professional development programs to provide educators with ongoing opportunities for professional growth. These programs place a high priority on improving digital literacy and the pedagogical abilities required for proficiently utilizing technology in educational settings. The objective is to enable instructors to assume the role of facilitators in the realm of digital learning (Ministry of Education, Sports, and Youth of Albania, 2019). These programs encompass workshops, online courses, and practical training sessions aimed at enhancing teachers' self-assurance and proficiency in utilizing digital resources.

Monitoring and evaluation are crucial for assessing the impact and identifying areas for improvement in digital education programs. The Ministry of Education is instituting procedures to gather data and input from schools to guide future policies and practices. This encompasses routine surveys, interviews, and evaluations to monitor advancement and tackle any obstacles that emerge (Ministry of Education, Sports, and Youth of Albania, 2019). Through a methodical assessment of these endeavors, Albania can guarantee that its digital education tactics will continue to be efficient and adaptable to the requirements of pupils and educators.

Albania has made significant strides in updating its education system by incorporating digital technology. Despite the existence of considerable obstacles, the government, educators, and the community are making continuous efforts to establish a digital education framework that is more inclusive and efficient. To fully harness the promise of digital technology in Albanian education, it is crucial to address infrastructure deficiencies, ensure sufficient teacher training, and mitigate socioeconomic inequities.

5. Methodology

To make sure that the chosen educational institutions represent a broad range of situations and experiences connected to digital technology integration, the research uses a purposive sample technique. The type of institution, geographic distribution, technological availability, use of digital tools, and student diversity are the main parameters for sampling. The study's chosen institutions include the university " Aleksander Moisiu", secondary schools, and primary schools, allowing it to look at the effects of digital technology at different educational levels. Because of this diversity, the research is guaranteed to capture a wide range of perspectives on the opportunities and difficulties associated with Albania's integration of digital technology.

All educational institutions from various geographic regions and educational levels of the city were first identified in order to choose the 10 institutions. This ensured that the list included a mix of urban and rural schools as well as the university with varying degrees of digital integration. After contacting these institutions to evaluate their interest in taking part, ten were ultimately chosen, using the predetermined standards for teacher support, student demographics, and technological access, making sure that they fairly represented both geographic representation and technology integration throughout our city.

Students from the chosen institutions were given surveys to complete, asking them about their experiences with digital technology. This allowed for the collection of primary data. The purpose of the surveys was to gather important data, including how often students use digital tools, what kinds of tools they use, how effective they think technology is, what obstacles they confront, and how supportive their professors are. A selection of students and teachers participated in focus groups and in-depth interviews in addition to the quantitative data. A greater comprehension of the individual experiences, viewpoints, and obstacles around the use of digital technology in the classroom was made possible by these qualitative methodologies. Interviews delved into the perspectives of educators and learners regarding the influence of digital technology on education, as well as their opinions on the present state of technology integration and recommendations for enhancements.

The study used both quantitative and qualitative methods for data analysis in order to provide a thorough understanding of how digital technology is affecting schooling. Descriptive statistics, such as percentages and frequency distributions, were used to summarize the quantitative data from the surveys, and comparative analysis was used to identify trends among various demographic groups. Theme analysis was used to examine the qualitative information gathered from the focus groups and interviews. The information was categorized based on recurrent themes, including difficulties utilizing digital tools, the advantages of digital learning as viewed by users, and the importance of instructor support.

The study used triangulation to combine the quantitative and qualitative data, making sure that the results from both approaches complemented and enhanced one another. For instance, in order to confirm and investigate the rationale behind students' choices for particular tools, survey data on the frequency of digital tool usage were compared with interview responses.

The research design included ethical issues from the very start. Every participant gave their informed consent after being made aware of the study's objectives and their part in it. All information was anonymised in order to safeguard the participants' privacy and prevent any individual comments from being linked to a specific person. The researchers also made sure that the data was stored securely and that only individuals with permission could access it, protecting the confidentiality and integrity of the research process.

This research methodology ensures that the data is representative and reflective of a variety of experiences across various educational settings by combining quantitative and qualitative approaches to enable a thorough investigation into the integration of digital technology in education.

6. Results

This survey aims to gather insights on the impact of digital technology on education in the city of Durrës, Albania. The questions are designed based on a comprehensive analysis of existing empirical data and literature. The survey will collect data from students to understand their experiences, perceptions, and the challenges they face with digital technology integration.

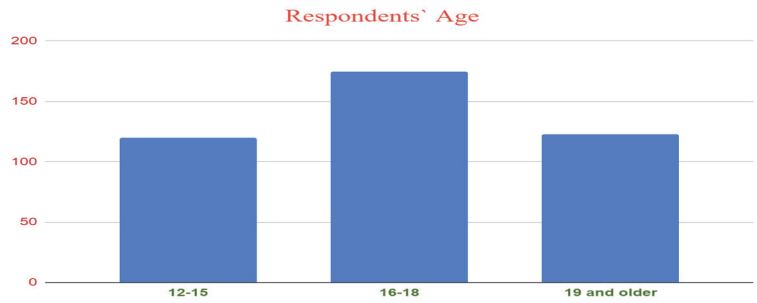


Figure 1: The distribution of respondents shows a comprehensive representation across different stages of adolescence and early adulthood, providing a well-rounded view of the technological needs and preferences across these age ranges.

To analyze the data, we will calculate the percentage of respondents in each age group and provide a comparative analysis.

Total Number of Respondents: 418

Age 12-15: 120 respondents

Age 16-18: 175 respondents

Age 19 and older: 123 respondents

Age 12-15: This age group represents approximately 28.71% of the total respondents. This shows a significant representation of younger teenagers in the survey. Their responses could reflect the needs and preferences of students in early to mid-adolescence.

Age 16-18: This age group has the highest percentage, at 41.86%. This suggests that older teenagers, likely high school students preparing for higher education or the workforce, are the largest demographic in this survey. Their responses might indicate more mature or advanced technological needs and preferences.

Age 19 and older: This group makes up 29.43% of the respondents. These individuals are likely to be young adults, possibly in post-secondary education or early in their careers. Their technological needs could reflect more specialized or advanced requirements compared to the younger age groups.

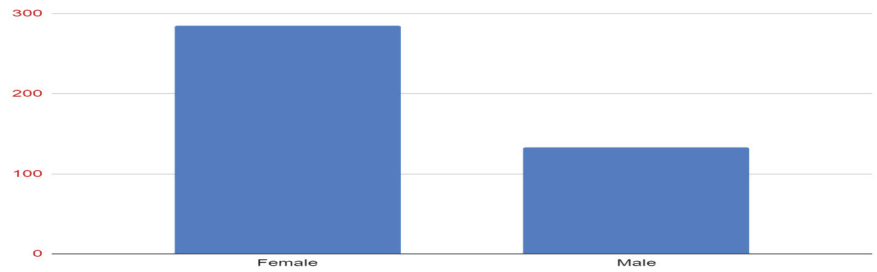


Figure 2: Gender Distribution Analysis

Total Individuals: 418

Male: 133 (31.8%)

Female: 285 (68.2%)

Females make up more than twice the number of males.This analysis reveals a substantial gender disparity, with females constituting a larger portion of the total population.

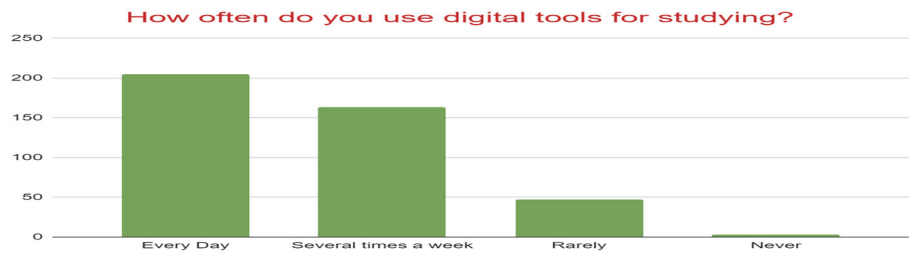


Figure 3. Digital Technology Usage Frequency

The data provides a comprehensive overview of how frequently respondents use digital technology for studying. The largest group consists of those who use digital technology every day, with 205 occurrences, representing approximately 49 % of the total respondents. This indicates that nearly half of the participants integrate digital technology into their daily study routines.

The second most common frequency is using digital technology several times a week, with 163 occurrences, accounting for about 39% of the total. This suggests that a significant number of respondents rely on digital tools multiple times within a week for their studies.

A smaller portion of respondents, 47 individuals, use digital technology rarely, making up roughly 11.2% of the total. This group shows a less frequent engagement with digital tools for studying.

Finally, only 1 respondent, or approximately 0.7% of the total, reported never using digital technology for studying. This highlights the near-universal adoption of digital tools among the participants, with only a negligible fraction abstaining from their use.

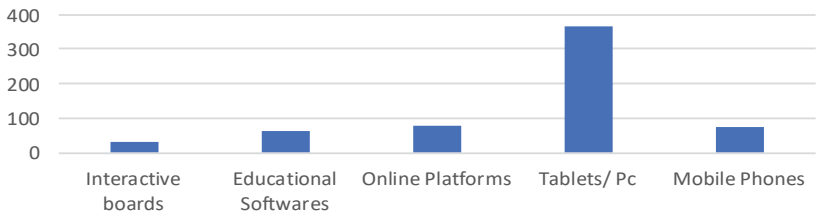


Figure 4: What kind of digital tools do you usually use for studying.

The data showcases a diverse range of digital tools being employed, with mobile phones being the dominant choice, followed by online platforms, tablets, educational software, and interactive whiteboards.

The most frequently used tool is the Mobile phone, which is utilized by 366 respondents (87.6%). This indicates a strong preference and reliance on mobile phones as a primary means for accessing educational content and resources.

Following this, Online learning platforms are the next most common tool, with 77 instances (18.4%). This reflects a significant engagement with online platforms, suggesting that many learners benefit from structured, web-based learning environments.

Tablets/PC comes closely behind with 73 mentions (17.5%). This shows that tablets are also a popular choice, likely due to their portability and versatility in accessing digital content.

Educational software is used by 62 respondents (14.8%). This category includes various applications and programs specifically designed to facilitate learning, highlighting the substantial use of specialized educational software.

Interactive whiteboards are mentioned 30 times (7.2%), indicating their presence, though less common compared to other tools. Interactive whiteboards are often used in classroom settings to enhance interactive learning experiences.

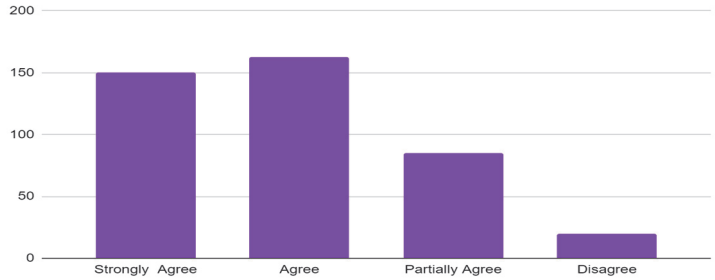


Figure 5: Digital techonolgy makes learning and teaching more interesting

"Technology makes learning more interesting." As illustrated, the majority of participants either strongly agree or agree that digital technology makes learning more interesting, with fewer participants partially agreeing and only a small number disagreeing.

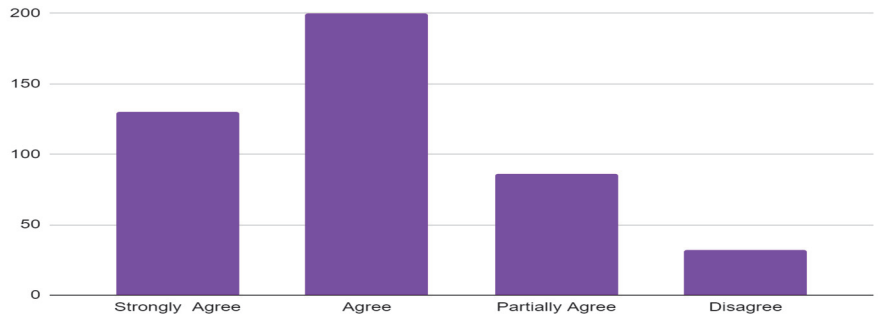
Strongly Agree: This category has the highest number of responses, with 150 participants (approximately 35.9%) indicating a strong belief that digital technology enhances the interest in learning.

Agree The second most common response, with 163 participants (approximately 39%) agreeing with the statement, showing a significant level of support.

Partially Agree: This category has 85 participants (approximately 20.3%) who moderately agree that digital technology makes learning more interesting.

Disagree The least number of responses, with only 20 participants (approximately 4.8%), indicating disagreement with the statement.

The data indicates a strong overall positive perception of digital technology's role in making learning more interesting, with the vast majority of respondents either agreeing or strongly agreeing with the statement. Only a small fraction of participants do not find digital technology beneficial in this regard.



Question 6. I understand subjects better when digital tools are used.

Here is the graphical representation of the responses to the statement "I understand subjects better when digital tools are used".

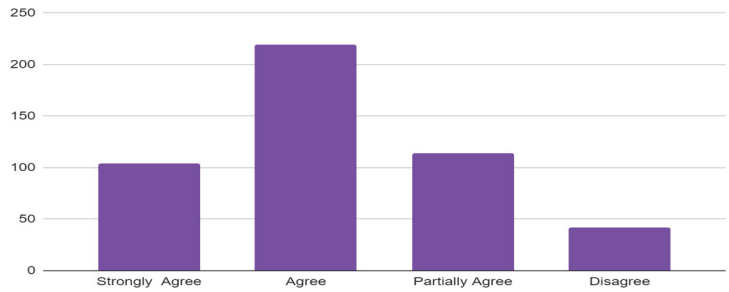
Agree: This category has the highest number with 200 participants (47.8%). indicating a strong belief that they understand subjects better when digital tools are used.

Strongly agree: This category has 130 participants (31.1%) agreeing with the statement, showing substantial support

Partially agree: This category has 86 participants (20.6%) who moderately agree with the statement.

Disagree: The least number of responses, with only 32 participants (7.7%) indicating disagreement with the statement.

The data shows a strong overall positive perception that digital tools enhance understanding of subjects, with the majority of respondents either strongly agreeing or agreeing with the statement. Only a small fraction of participants do not find digital tools beneficial for their understanding of subjects.



Question 7: I prefer to use digital tools over traditional methods of studying

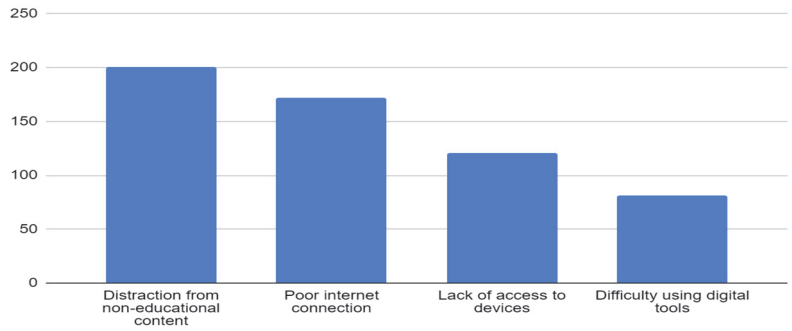
The chart contains a list of responses to the statement "I prefer to use digital tools over traditional methods for studying" The data indicates a strong overall preference for using digital tools over traditional methods for studying, with the majority of respondents either strongly agreeing or agreeing with the statement. Only a small fraction of participants do not prefer digital tools for their studies Here is a summary of the data:

Agree: This category has the highest number of responses with 219 respondents (52.4%) , indicating that many participants strongly prefer using digital tools over traditional methods for studying.

Strongly Agree: The second most common response with 104 respondents (24.9%), showing that a significant number of participants agree with the statement.

Partially agree: Some participants, 114 respondents (27.3%) are moderately in agreement with the statement.

Disagree The least number of responses with 42 respondents (10%) , indicating that a few participants do not prefer using digital tools over traditional methods.



Question 8: Challenges faced when using digital technology for learning

Here is a graphical representation of the challenges faced when using digital technology for learning.

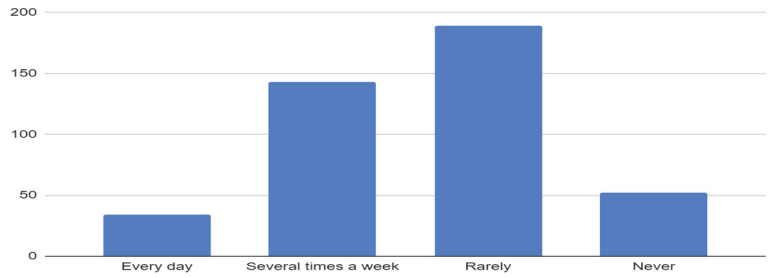
Distractions from non-educational content: This challenge has the highest number of mentions, with 201 responses (48.1%) indicating that distractions are a significant issue.

Poor internet connection: The second most common challenge, with 172 responses (41.1%) highlighting the problem of unreliable internet access.

Lack of access to devices: This challenge has 212 mentions (30%), showing that some participants face difficulties due to not having adequate devices.

Difficulty using digital tools: This challenge also has 81 mentions (19.4%), indicating that some participants struggle with using digital tools effectively.

The data suggests that the primary challenges in using digital technology for learning are distractions from non-educational content and poor internet connections. Access to devices and difficulty using digital tools are also notable challenges but to a lesser extent.



Question 9: How often are digital tools used in your educational institution?

Rarely: This category has the highest number of responses, with 189 participants (45.2 %) indicating that digital tools are used very rarely in their institutions.

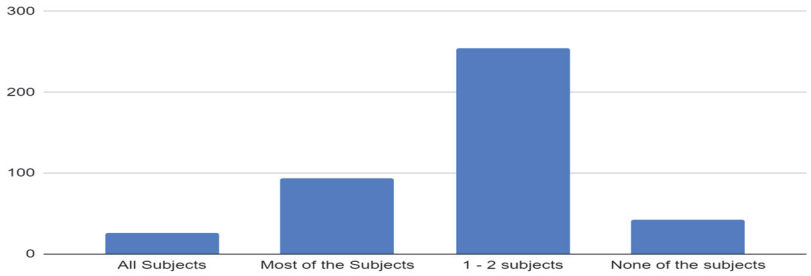
Several times a week: The second most common response, with 143 participants (34.2%) indicating frequent usage of digital tools.

Every day: This category has 34 responses (8.1%), showing that some institutions use digital tools daily.

Never: This category also has 52 responses (12.4 %), indicating that some institutions never use digital tools.

The data suggests that digital tools are generally underutilized in educational institutions, with the majority of respondents indicating very rare or occasional use. Only a small fraction of

institutions use digital tools on a daily basis, and a 12.4% never using them at all.



Question 10: How many subjects use digital tools in your educational institution?

The data on the usage of digital tools in educational subjects reveals a diverse landscape of adoption across various institutions.

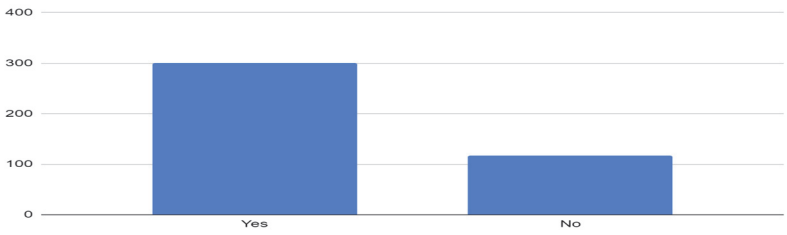
The predominant response, representing 61% with 255 responses, indicates that digital tools are used in just one or two subjects. This suggests that while digital tools are present, their integration is limited to specific areas rather than being widespread.

94 respondents, about 22.5% ,shared that digital tools are employed in most subjects. This reflects a significant commitment to incorporating technology across the curriculum, aiming to enhance learning experiences in multiple areas.

A smaller number of 43 respondents, 10.3% , noted that digital tools are not used in any subjects. This points to institutions where traditional teaching methods still dominate, with little to no integration of digital resources.

The least common response, from 6.2% of participants with 26 responses, is that digital tools are utilized in all subjects. These institutions represent a fully integrated approach, embracing technology across the entire educational spectrum.

The data paints a picture of varied adoption levels of digital tools in education. Most institutions appear to be selectively integrating digital tools in a few key subjects, while a smaller portion are either minimally or extensively using these tools across their entire curriculum. This diversity highlights the ongoing transition and adaptation to digital resources in the educational field, with different institutions at various stages of this integration journey.

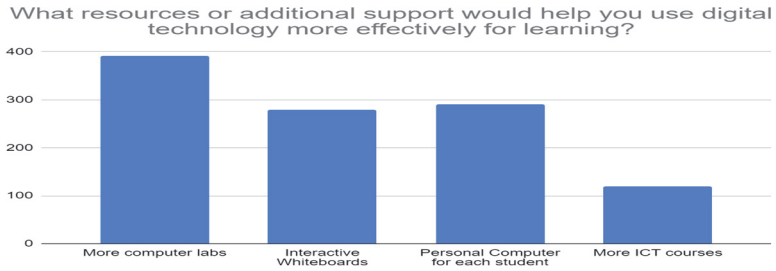


Question 11: Do you feel you have enough support from teachers when using digital tools to learn?

The responses to the question " Do you feel you have enough support from teachers when using digital tools to learn? are as follows:

A significant majority of respondents, 301 responses , approximately 72%, feel that they have sufficient support from their teachers when using digital tools for learning. This indicates a generally positive perception of teacher support in this area. However, about 28% of respondents (117

responses) do not feel adequately supported, highlighting a need for improved teacher assistance and resources to ensure all students can effectively use digital tools for their studies.



Question 12: What resources or additional support would helo you use digital techonolgy more effectively for learning?

More Computer Labs: This is the most frequently requested resource, with 93.5% of participants (391 responses) expressing the need for more computer labs.

More Personal Computers and More Interactive Whiteboards: Both resources are requested by 67.0% of participants (280 respectively), indicating a significant demand for these technologies.

More ICT Courses: Around 120 respondents (28.7% of participants) feel the need for more ICT courses, suggesting a considerable interest in improving digital literacy.

Participants in this survey have expressed a strong need for increased access to technology and modern teaching tools. The highest demand is for more computer labs, followed by a considerable interest in more personal computers and interactive whiteboards. Additionally, there is a notable interest in expanding ICT education to enhance digital literacy. These insights can guide decisions on resource allocation and curriculum development to better meet the educational needs of the participants.

7. Findings

The case study of schools in Durrës, Albania provides evidence that digital technology can significantly enhance both learning and teaching. The integration of digital tools has led to increased student engagement, improved academic performance, and a more interactive and enjoyable learning experience. These positive outcomes highlight the transformative potential of digital technology in education. However, the study also reveals significant challenges that must be addressed to fully realize the benefits of digital integration.

Based on the results of the questionnaire and also on the interviews conducted, digital learning presents both engaging and challenging aspects for students, with socioeconomic disparities playing a key role in influencing these experiences. On the engaging side, digital tools offer significant interactivity, enabling students to actively participate in their learning through dynamic exercises, games, and simulations. This interactivity, coupled with the personalized learning opportunities that many digital platforms provide, enhances student motivation by allowing them to progress at their own pace and receive immediate feedback. The wide range of multimedia resources, from videos to podcasts and research articles, also allows students to explore subjects in greater depth and in ways that suit their learning preferences. Additionally, digital tools foster collaboration, as platforms like Google Classroom and Microsoft Teams allow students to work together on projects and communicate with teachers, further enhancing their engagement (OECD, 2022; UNESCO, 2021).

However, digital learning also comes with significant challenges. One of the most common difficulties is the potential for distractions, with non-educational content such as social media and

entertainment easily accessible during online learning. This issue, particularly prevalent among younger students, reduces focus and productivity (UNESCO, 2021). Technical problems, including poor internet connectivity—especially in rural areas—and limited access to devices, also create barriers to full participation in digital education. These technical challenges affect students from disadvantaged backgrounds, exacerbating existing educational inequalities (Ministry of Education and Sports of Albania, 2021).

Another challenge is the lack of technical support for students navigating digital platforms. Many students, particularly those unfamiliar with educational technology, struggle with submitting assignments or using online learning tools effectively. This can lead to frustration and disengagement, further hindering their learning experience (OECD, 2022). Additionally, "digital fatigue" is an emerging issue, with students experiencing physical and mental exhaustion from prolonged screen time, which negatively impacts their motivation and engagement. Moreover, the lack of face-to-face interaction in digital learning environments can make students feel isolated, reducing their sense of community and connection with peers and teachers (World Bank, 2022).

Teacher training is another critical area that requires attention. The study underscores the importance of equipping teachers with the skills and confidence needed to integrate digital tools into their teaching practices. Many educators currently lack the necessary training and professional development opportunities to effectively use technology in the classroom

The findings from this case study emphasize the need for a coordinated effort among all stakeholders to create an enabling environment for digital learning. This includes collaboration between the government, private sector, and international organizations. The government must take the lead in developing and implementing policies that support digital integration, including increased funding for infrastructure and teacher training. Public-private partnerships can provide the necessary resources and expertise to enhance digital infrastructure and support educational initiatives. By integrating digital technology into the broader educational framework, policymakers can create a more cohesive and effective education system that prepares students for the demands of the digital age.

In conclusion, the case study of 10 institutions in Durres demonstrates the significant potential of digital technology to enhance educational outcomes. However, realizing this potential requires addressing the challenges related to infrastructure and teacher training. A coordinated effort among all stakeholders, supported by robust policies and sustained investment, is essential to create an enabling environment for digital learning. By working together, Albania can harness the power of digital technology to create a more inclusive, effective, and future-ready education system.

References

Cheung, A. C. K., & Slavin, R. E. (2013). The effectiveness of educational technology applications for enhancing mathematics achievement in K-12 classrooms: A meta-analysis. Educational Research Review, 9, 88-113.

Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. Educational Psychologist, 36(2), 103-112.

Ertmer, P. A. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. Educational Technology Research and Development, 47(4), 47-61.

European Commission. (2021). Digital Education Action Plan (2021–2027): Resetting education and training for the digital age. European Union.

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies on gamification. In Proceedings of the 47th Hawaii International Conference on System Sciences (pp. 3025-3034).

Johnson, D. W., & Johnson, R. T. (1999). Learning together and alone: Cooperative, competitive, and individualistic learning. Boston, MA: Allyn and Bacon.

Johnson, D. W., Johnson, R. T., & Holubec, E. J. (2016). Cooperation in the classroom. Edina, MN: Interaction Book Company.

Kozma, R. B. (2005). National policies that connect ICT-based education reform to economic and social development. Human Technology, 1(2), 117-156.
Livingstone, S. (2008). Taking risky opportunities in youthful content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. New Media & Society, 10(3), 393-411.
Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2003). Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement. Association for Supervision and Curriculum Development.
Ministry of Education and Sports of Albania. (2021). National Strategy for Pre-University Education Development.
Ministry of Education, Sports, and Youth of Albania. (2019). National strategy for development and integration. Official Gazette of Albania, 65, 120-135.
OECD. (2015). Students, Computers and Learning: Making the Connection. Paris: OECD Publishing.
OECD. (2020). Learning remotely when schools close: How well are students and schools prepared? Insights from PISA.
OECD. (2022). Digital Education Outlook: Pushing the Frontiers with AI, Blockchain, and Robots.
Selwyn, N. (2011). Education and Technology: Key Issues and Debates. London: Bloomsbury Academic.
Tamim, R. M., Bernard, R. M., Borokhovski, E., Abrami, P. C., & Schmid, R. F. (2011). What forty years of research says about the impact of technology on learning: A second-order meta-analysis and validation study. Review of Educational Research, 81(1), 4-28.
UNESCO. (2019). Global Education Monitoring Report 2019: Migration, displacement and education – Building bridges, not walls. Paris: UNESCO Publishing.
UNESCO. (2021). Digital Learning in Albania: Challenges and Opportunities.
UNICEF Albania. (2020). Digital Schools Project: Enhancing Education through Technology. UNICEF Albania Annual Report, 2020, 23-35.
Wang, M. (2018). Personalizing learning with adaptive technology. Educational Technology Research and Development, 66(1), 45-59.
Warschauer, M., & Ames, M. (2010). Can One Laptop per Child save the world's poor? Journal of International Affairs, 64(1), 33-51.
World Bank. (2022). Addressing the Digital Divide in Albania: Policy Recommendations.