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ARTIFICIAL INTELLIGENCE AND ICT INTEGRATION IN SMART EDUCATION SYSTEMS

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ABSTRACT

In the wake of the merger of the Artificial Intelligence (AI) and the Information and Communication Technology (ICT), the modern-day education systems are rapidly transforming by giving them the capability to become more dynamic, more efficient, and more data-driven in their learning processes. Digital technologies are employed by Smart education systems to streamline teaching habits, personalize the learning process and enhance teaching in general. The paper will take into account how AI and ICT integration changes the nature of smart education systems and evaluate the impact they can have on teaching efficiency, student learning, and school efficiency. The article looks at the use of AI based applications such as intelligent tutoring system, automated assessment, learning analytics and virtual learning assistant as a means of providing personalized learning as well as real-time student feedback. ICT infrastructure also facilitates collaborative and flexible learning environments (through cloud computing, learning management systems, mobile learning platforms, and digital communication tools). With these technologies integrated, the delivery of the content in an educational institution can be more efficient, and the performance and learning progress of the students can be tracked down using data-driven knowledge. The study is theoretical and analytical in basing on the literature available, reports and technological developments within the field of smart education. It describes the beneficial side of the artificial intelligence and ICT integration, including the enhanced availability of learning resources, the high degree of student autonomy, the effective running of the administration and the ease with which new pedagogical practices are made. Meanwhile, other issues that are examined in the research are digital divide, the problem of data privacy, absence of technological infrastructure, and the necessity of educating teachers in new technologies. The results indicate that effective implementation of AI and ICT can have a significant positive impact on the quality, inclusiveness, and sustainability of education systems. With such technologies, smart learning spaces can also transform the institutions to be more responsive to the changing needs of the learners in a digital society. The paper concludes that it is necessary to invest strategically in digital infrastructure, capacities to empower educators, and ethical governance of technologies to achieve the full potential of AI-powered smart education systems..

KEYWORDS: Artificial Intelligence, Information and Communication Technology (ICT), Smart Education Systems, Digital Learning, Intelligent Tutoring Systems, Learning Analytics, Educational Technology Integration, Personalized Learning, Smart Classrooms, Technology-Enhanced Education.

1 INTRODUCTION

The dynamism in the development of digital technologies has reshaped the face of contemporary education to a large extent. Among such technological advancements, Artificial Intelligence (AI) and Information and Communication Technology (ICT) have become strong instruments to enhance efficiency, accessibility and quality of the educational systems. With the use of digital platform, intelligent learning systems, and network-based communication tools, educational establishments around the globe are shifting towards more dynamic and adaptable learning environments. In this respect, the notion of smart education systems has attracted great interest because it is a combination of the most sophisticated technologies, which improve learning and teaching, and management of education.

Artificial Intelligence can help smart education by facilitating adaptive learning, automated grading, intelligent tutoring, and data informed decision-making. The AI-powered tools can be used to analyze the student learning patterns, identify the areas of their knowledge weakness, and provide them with particular feedback, thereby supporting personalized learning. Concurrently, ICT plays a significant role in guaranteeing digital connectivity, online learning platforms, cloud computing as well as team-based interaction among the students and the teachers. The integration of these new technologies enables interactive learning systems and enables the learning institutions to respond adequately to the changing demands of the learners in a digital society.

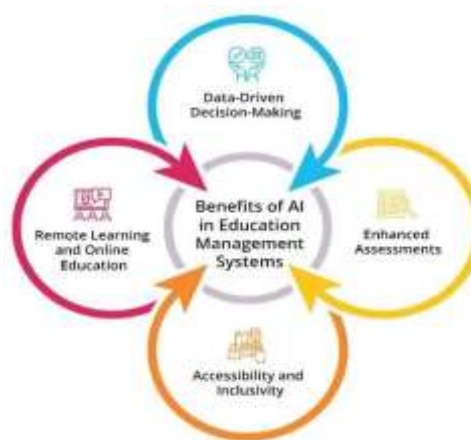
The combination of AI and ICT also contributes to the enhanced innovation of smart classrooms, virtual learning and the intelligent system of content delivery. The technologies help the instructors develop new methods of work and improve the quality of knowledge transfer in general. Furthermore, smart education system assists in making education more affordable, as it eliminates geographical and time distance unconsciously making use of online learning platform.

Despite these advantages, the other problem with the application of AI and ICT in the education sector is the difficulties with infrastructure, digital inclusion, ethics, and privacy of information. Therefore, to understand how these technologies can be effectively implemented to turn smart education systems into sustainable and inclusive systems, one will have to research what functions and impact these technologies bring.

2 BACKGROUND OF THE STUDY

The rapid evolution of digital technologies has transformed the landscape of the educational process

in the world on a very dramatic scale. Others of such technological changes are Artificial Intelligence (AI) and Information and Communication Technology (ICT) which have emerged as powerful tools that can reshape the process of teaching and learning. Colleges and schools are starting to adopt the application of digital technologies to enhance the quality of learning space and its availability and effectiveness. The integration of AI and ICT within the education sector has resulted in the establishment of the so-called smart education systems, which aim at establishing adaptive, personalized, and technology-based learning processes to both students and teachers.



Source: <https://www.iitms.co.in/>

Traditionally, the education system relied on teacher-centred education where knowledge was relayed through the conventional classroom exercises. However, the growing requirement of imaginative and responsive models of learning has triggered learning institutions to adopt digital applications and intelligent technologies. ICT has played a leading role in this change by enabling the use of digital resources, electronic learning resources, virtual learning and classrooms. ICT integration exposes the learners to the learning material that is not limited by geographical and time factors thus making learning inclusive and life-long.

Artificial intelligence also strengthens the opportunities of ICT in the field of education with new advanced technologies, such as information analytics, machine learning, smart tutoring systems, and automatic assessment tools. These technologies may be applied to perform a study of the extensive learning data and provide personalized learning paths according to the requirements of the specific students. The applications of AI based systems could be in helping the educators identify learning gaps, anticipate the performance of the students, and

develop a personalized teaching plan. As a result, AI plus ICT results in the emergence of smart educational systems, which are concerned with the student-oriented approach to learning, real-time feedback, and adaptive learning environments.

In recent years, the concept of smart education has gained huge popularity as the academic institutions have been increasingly integrated, alongside the emergence of digital infrastructure. The developers of technology, the government and learning institutions have been encouraging the use of smart technologies that will boost learning outcomes and efficiency of institutions. The application of smart classrooms, virtual labs, learning management systems, and education applications powered by the AI is gradually becoming a part of the modern educational systems. Such innovations enhance the interactive learning process, promote the collaboration of students and teachers, and permit making education management decisions on the data basis. Irrespective of these changes, AI and ICT integration in education also have a number of challenges. The technological infrastructure, digital literacy, data privacy, and ethical use of AI technologies are issues that still have an impact on the successful implementation of the smart education systems. Learning institutions should therefore implement relevant strategies and policies so that the use of technologies can facilitate effective teaching and learning without causing ethical, and irresponsible practices.

Taking into account the increased significance of intelligent technologies in education, the question on how AI and ICT integration can be involved in the creation of efficient and sustainable smart education systems needs to be analyzed. The knowledge of how such technologies can improve teaching practices, learning outcomes, and facilitate the management of institutions can offer important information to educators, policymakers, and developers of technologies. Thus, this paper will discuss the presence of Artificial Intelligence and ICT in the smart education system, as well as examine how they might reshape the future of education.

3 JUSTIFICATION

The fast progress of digital technologies has had an impressive impact on the educational field throughout the world. The combination of Artificial Intelligence (AI) and Information and Communication Technology (ICT) has become a potent instrument of enhancing effectiveness, accessibility, and customization of the learning fields. To enhance the teaching process and student

learning outcomes, AI-based tools, digital solutions, and data-oriented decision-making are becoming more popular in educational institutions due to the use of smart education systems. However, one of the aspects that should be investigated in an academic fashion includes the role of AI and ICT integration in the creation of efficient smart education systems. The traditional paradigm of education is usually biased towards the uniform approaches of teaching which may not satisfy the requirements of various learners. The AI technologies such as intelligent tutoring systems, learning analytics, and adaptive learning systems have the potential to provide the opportunities to make the education process individualized regarding the abilities and preferences of the specific learners.

Likewise, ICT tools are used in interactive learning, teamwork and access to immense learning resources outside the classroom. It is thus important that educators, policymakers and institutional administrators should understand how the combination of these technologies can lead to the creation of efficient smart education ecosystems.

The other significant reason why this study is undertaken is that there is an increasing need to have digital learning infrastructure, especially following the growth of online and hybrid learning environments. Learning institutions are also becoming more and more invested in smart classrooms, digital learning management systems, and AI-assisted educational tools. In spite of all these advancements, issues like technological preparedness, digital divide, teacher training, issues of data privacy and infrastructure constraints continue to influence effective deployment of AI-powered smart education systems. Researching on these points would allow defining both opportunities and challenges in the successful implementation of AI and ICT in education.

Moreover, most developing nations are struggling to modernize their education systems in order to adopt the knowledge economy. The introduction of AI-based educational tools can potentially assist in implementing new pedagogical measures, enhancing work with students, and improving their learning outcomes. Simultaneously, the effective consequences, advantages, and difficulties of such technologies deserve to be analyzed to provide sustainable and accessible education growth.

As such, the study is warranted since it aims to understand the role of Artificial Intelligence and ICT integration in e-learning systems development. The results of the proposed research will be relevant to the current body of knowledge as they will help to

understand the potential of the emerging technologies in enhancing the quality of education, facilitating the new forms of pedagogical practice, and ensuring the efficient learning process. The study can also help the educational institutions and policymakers to develop effective strategies that can enhance a successful adoption of smart education system which is technology-based.

4 OBJECTIVES OF THE STUDY

To examine the definition and meaning of artificial intelligence and ICT integration in smart education systems development.

To analyze the different uses of artificial intelligence and information technology tools in teaching and learning and in academic management.

To test how AI-based technologies and ICT platforms influence the quality and effectiveness of the teaching-learning process.

To evaluate the role of smart education systems in improving student engagement, personal learning, and knowledge.

To determine the advantages and issues that the use of ICT and artificial intelligence in educational institutions entails.

5 LITERATURE REVIEW

The fast development of the Artificial Intelligence (AI) and Information and Communication Technologies (ICT) has changed the educational systems all over the world dramatically. Smart education systems are based on the use of digital technologies, intelligent algorithms and networked learning platforms to build personalized, adaptive and data-driven learning environments.

Early investigations on ICT integration put more focus on how technology can be used to improve teaching processes and interactive learning settings. Sosa-Diaz, Sierra-Daza, Arriazu-Muñoz, Llamas-Salguero, and Duran-Rodriguez (2022) confirm that ICT integration in education is a multifaceted process that is dependent on the institutional structure, teacher competencies, and policy frameworks. The systematic review that they conducted also pointed to the fact that proper integration of technology needs strategic planning, training of educators as well as support in the organization of learning institutions.

The introduction of AI in learning has also enhanced the learning systems that are based on ICTs. According to Ahmad, Rahmat, Mubarik, Alam, and Hyder (2021), AI solutions like intelligent tutoring system, smart learning space, and social robots have improved the capacity of learning

platforms to provide learning experiences that are personalized. The technologies facilitate adaptive teaching, which can be defined as the ability of learning systems to modify content and feedback based on the unique needs of students in learning.

Recent reports highlight the collaboration of the AI and ICT in the construction of the smart education ecosystem. As Mukkala, Vuyyuru, Murthy, Rao, and Al-Said (2025) observed, AI, when integrated with ICT infrastructure, allows making decisions based on data, automating the evaluation process and tailoring teaching methods. Student performance data can be analyzed by use of machine learning algorithms to determine learning patterns and give feedback on them, thus enhancing student engagement and academic performance.

Equally, Vesna and Manolkar (2025) pointed out that the adaptive learning systems powered by AI are able to dynamically adapt their teaching resources according to the progress and the level of understanding in learners. They suggest that these systems can increase the level of access, facilitate the retention of knowledge and active learning based on interactive digital platforms.

The process of smart education is not limited to digital educational resources but also to the newer technologies of the Internet of Things (IoT), big data analytics, and intelligent classroom systems. A study by Badshah, Ghani, Daud, Jalal, Bilal, and Crowcroft (2023) proposed that with the adoption of IoT and AI in the learning space, smart classrooms are possible to monitor student interaction, facilitate learning, and enhance classroom management. It is also through these technologies that communication and distance learning opportunities can be realized in real time.

Moreover, Mallik and Gangopadhyay (2023) looked at the way AI applications assist in various elements of education such as admissions, course planning, knowledge delivery, and performance assessment. In their research review of more than 190 articles, they found that AI-based analytics and predictive models could help educators to detect students who may perform poorly academically and take timely actions.

The other major aspect of intelligent education systems is creation of intelligent tutoring systems (ITS). Liu, Latif, and Zhai (2025) state that intelligent tutoring technologies can offer individual learning remedies by interpreting the thought patterns of students and modifying the teaching exercises in accordance with them. Their systemic review revealed that AI-based tutoring systems could be very useful in increasing the engagement of learning

and enhancing academic outcomes in online education.

Along with the advantages, some researchers point out the issues related to the implementation of AI and ICT in the educational process. The research has shown that such problems as privacy of personal data, biased algorithms, digital disparity, and teacher preparedness can impede the successful adoption of smart education technologies. The issue of AI-based decision-making and the necessity of responsible technology regulation also becomes more and more widely discussed in modern studies.

6 MATERIAL AND METHODOLOGY

Research Design:

In the present study, the research design is descriptive research design and the analytical research design to examine the use of Artificial Intelligence (AI) and information and communication technology (ICT) in smart education systems. The target of the study is the understanding of how AI-based applications and ICT platforms contribute to the improvement of the teaching and learning processes and the efficiency of the institutions in the modern learning contexts. It is a mixed methodology that is used to generate qualitative knowledge and quantitative data. The descriptive component helps to identify the existing practice of the application of AI and ICT in institutions of learning and the analytical component examines its impact on the effectiveness of teaching, student interest and learning outcomes. Such a design would enable the researcher to break down the associations between adoption of technology and quality of education.

Data Collection Methods:

Data collection of the study is based on the primary and secondary sources. The structured questionnaires and the interviews with teachers, students and academic administrators who engage in digital learning environments will be utilized as the main method of collecting primary data. The points regarding the use of AI-related learning platforms, smart classrooms, adaptive learning systems, and ICT during teaching and assessment are included in the questionnaire. The interviews will even provide additional qualitative data regarding the practical issues and the advantages of the combination of those technologies in education. Secondary data are obtained using academic journals, research reports, policy reports, and conference reports, credible online databases that are associated with artificial intelligence, digital learning technologies, and smart

education systems. The secondary and primary data will be useful in giving a comprehensive understanding of the subject.

Inclusion and Exclusion Criteria:

The participants of the research is individuals with firsthand experience regarding AI-support educational technologies and the use of ICT-enabled learning spaces, including the educators using digital teaching platforms, students who attended the course of educational technologies, and administrators who managed to implement smart education programs. The schools which have implemented AI solutions, learning management, or digital pedagogical resources are also included in the field of the research. The study will exclude people having little or no experience with ICT-based learning systems to preserve the relevance and accuracy of the results. In addition, old studies and sources that are not oriented in educational technology or AI application in education are not used in the secondary data review.

Ethical Considerations:

There is ethical conduct observed in the research. The process is a voluntary participation in the study, and respondents are made aware of the objective of this study before giving out their responses. The participants anonymity and confidentiality are highly maintained and the data obtained is not utilized in any other way other than its use in academics. Results are not analyzed or reported with the use of personal identifiers. It is also important that all secondary materials are referenced in a proper manner by the researcher in order to prevent plagiarism and to appreciate the work of other scholars in the past. The information is stored in a safe place and utilized in a responsible manner following the established research ethics and academic integrity principles.

7 RESULTS AND DISCUSSION

Results:

1. Demographic Profile of Respondents

The research gathered the answers of 120 participants such as teachers, students, and educational administrators of the institutions implementing AI-enabled and ICT-supported learning systems. The demographic structure gives the information about the nature of respondents that participated in smart education systems.

Table 1: Demographic Characteristics of Respondents

Category	Frequency	Percentage (%)
Teachers	45	37.5
Students	60	50.0
Administrators	15	12.5
Total	120	100

The findings indicate that students make the biggest percentage (50%), then the teachers (37.5%), and lastly the administrators (12.5%). This spread shows that there is a representation of the views of both the learners and the educators in the distribution, which is significant in terms of measuring AI and ICT integration in an educational setting.

2. Usage of AI and ICT Tools in Smart Education

The respondents were requested to provide information regarding their level of utilization of various AI and ICT applications like learning management systems, intelligent tutoring systems, virtual classes, and data analytics applications.

Table 2: Usage of AI and ICT Tools in Education

AI/ICT Tool	Frequently Used (%)	Occasionally Used (%)	Rarely Used (%)
Learning Management Systems	72	20	8
Virtual Classrooms	68	22	10
AI-based Learning Assistants	54	30	16
Data Analytics for Learning	48	35	17

Findings show that ICT tools used most are the learning management systems and virtual classrooms as they represent the growing use of online platforms in learning institutions. Nevertheless, artificial intelligence tools like learning assistants and data analytics are yet to become widespread.

3. Perceived Impact of AI and ICT on Education Quality

The respondents rated the impact of the AI and ICT integration on the quality of education in the context of effectiveness of learning, accessibility, and student engagement.

Table 3: Impact of AI and ICT on Education Quality

Impact Dimension	Mean Score	Interpretation
Improved learning engagement	4.28	High
Personalized learning support	4.15	High
Accessibility to learning resources	4.32	Very High
Improved teaching efficiency	4.05	High

The findings demonstrate that the mean score of accessibility to learning resources (4.32) was the highest, which shows that AI and ICT technologies are beneficial in improving access to learning resources. Individual learning and student interaction were also rated highly, which demonstrated how smart education systems may ensure adaptive learning conditions.

4. Challenges in AI and ICT Integration

In spite of the benefits, there are a number of challenges that the respondents cited regarding the incorporation of AI and ICT in education.

Table 4: Challenges in Implementing Smart Education Technologies

Challenge	Percentage (%)
Lack of technical training	34
Inadequate infrastructure	28
High implementation cost	22
Data privacy concerns	16

The findings demonstrate that the absence of technical training (34%) is the greatest hindrance to the effective implementation of AI-based education systems. Other factors that prevent the adoption of advanced educational technologies are the infrastructure limitations and financial constraints.

8 DISCUSSION:

The findings show that the combination of artificial intelligence and information and communication technologies can considerably improve the performance of the contemporary education systems. The prevalence of learning management systems and virtual learning classrooms is an indication that digital platforms are now at the centre of the provision of educational content in smart learning classrooms.

Moreover, the mean scores associated with learning engagement, accessibility, and personalized learning are high, which means that AI-based technologies contribute to the development of more adaptive and student-centered learning. These data prove the thesis that smart education systems can enhance learning performance through the ability to provide real-time feedback and personalized learning as well as access to more digital learning content.

Nevertheless, the findings also show that there are a variety of challenges that need to be resolved to ensure that AI-based education can reach its full potential. Inadequate infrastructure and low level of technical training of the educators are key factors that impede implementation. These challenges suggest

that in a move to ensure that AI and ICT are integrated as much as possible in the educational practice, institutions must invest in capacity building, digital infrastructure, and teacher training programs. Overall, the findings indicate that AI and the ICT technologies are disruptive in terms of their influence on modern education; increasing accessibility, personalization, and effectiveness of learning. At the same time, it has to be strategically planned, equipped well, and teachers should be continuously trained as professionals to be implemented successfully.

9 LIMITATIONS OF THE STUDY

Although the current study has provided important information about the purpose of artificial intelligence and information and communication technologies in smart education systems, it has a number of limitations that one must take into consideration when analyzing the outcome.

To begin with, the research can be based on a small sample or data available in a particular group of institutions or participants. Consequently, the results might not be a true reflection of the varying educational situations in various geographical areas, companies, and educational grades. The differences in the educational infrastructure, technological preparedness, and digital literacy with respect to different institutions do exist and that might influence the overall generalizability of the results.

Second, the study is mainly concerned with artificial intelligence and ICT integration in the formal education systems. The informal learning environment, like the independent online learning community or the non-institutional platforms, is not fully analyzed. This could restrict the generalizability of the research to other kinds of digital learning environments.

Third, the research can rely on the self-reported information provided by educators, students, or administrators. These data can be characterized by individual impressions, the level of technology knowledge, or even bias in the response. There is a likelihood that the participants over- or underestimate the efficacy of AI-based educational resources and ICT infrastructure.

The other constraint is that technological evolution in the area of artificial intelligence and digital education is fast moving. The field of innovations in AI-based learning systems, adaptive platforms, and educational technologies is constantly developing rapidly. Thus, not all the results of the research might be timely because new instruments and methods of teaching appear.

Another limitation to the study is that they are not able to possess the technological infrastructure. The disparity in the internet access, access to digital means, and the institutional funding to implement smart education system can influence the success of implementation of AI and ICT. These types of inequalities may frustrate the actual implementation of the proposed suggestions. Finally, technological and pedagogical characteristics of smart education systems can be the main focus of the paper, and the effect of such aspects as ethical questions, data protection, algorithmic discrimination, and policy rules cannot be discussed exhaustively. These are important factors to the wise application of AI in education and they should be investigated in the new research. On the whole, the research study can aid the comprehension of how artificial intelligence and ICT may be integrated in the educational process, but these shortcomings present the necessity of extensive empirical research, various data sets, and ongoing analysis of the emerging technologies within the context of smart learning.

Future Scope

Growth of artificial intelligence (AI) and information and communication technology (ICT) in smart education systems is still in progress and therefore, there are still a number of opportunities that can be pursued in future studies and development. The investigation of AI-driven personalized learning environments is one of the directions that should be taken in the future. The scholars will have an opportunity to investigate how smart algorithms can process the data on the learners, their styles of learning, their performance, and develop tailored learning paths to enhance academic success and student interest.

The other possible line of study is the creation of adaptive assessment. Further research could be devoted to AI-based assessment applications that are able to deliver real-time feedback, automatized grading and learning analytics. These systems might assist the teachers in recognizing the strong and weak sides of the students better and create specific interventions to achieve better results in the learning process.

The second focus of research may be the use of the new technologies in education such as augmented reality (AR), virtual reality (VR), and Internet of Things (IoT) integration of AI and ICT. These technologies may be applied in creating immersive learning experiences which aid in accomplishing a better conceptualization of particularly the subjects which require visualization and actual application.

The ethical and governance problems of AI in education are another potential area of future research. The issue of data privacy, algorithmic bias, digital surveillance, and responsible AI use can be explored by researchers in academic institutions. To ensure that AI technologies will be used to establish an inclusive and equitable education, it will be needed to develop ethical standards and rules that will be required to be adhered to. It is also possible to conclude that the further research can be focused on teacher readiness and professional growth of AI-powered education systems. The studies of the relevant training models and support systems will enable teachers to create the technological and pedagogical skills necessary to introduce AI and ICT tools into the instruction process. The other possible future progress is the studies of AI-based decision-making in educational management. Learning analytics and predictive modelling can help the student performance to be tracked and reduce the rate of dropouts, as well as support the educational administrators in planning and distribution of resources. Further, the future study has the potential to explore how AI and ICT can be applied to the rural and underdeveloped education. Digital infrastructure and accessibility and technological literacy learners can help policy makers create inclusive smart education programs that would bridge the digital divide. Finally, longitudinal research is needed to establish the potential long-term outcomes of AI-controlled smart education systems on the quality of learning, the effectiveness of the institution, and preparedness of the workforce. These researches will illuminate further on how intelligent technologies will transform the education systems and cause the sustainability in the development of knowledge in the future.

10 CONCLUSION

The introduction of information and communication technology and artificial intelligence into smart education systems is a colossal shift in the overall conceptualization and implementation of teaching and learning process. As stated in this paper, the introduction of advanced digital technologies, smart learning programs and data-driven technologies in particular can ensure that

education becomes more efficient, accessible, and personalized in general. The artificial intelligence has formed the adaptive learning environment that responds to the requirements of individual students and ICT has the technological infrastructure required to support interactive and collaborative learning experience.

The findings highlight the clues that AI-enable systems can help teachers to automate routine processes and that learning data, which are huge, can be analyzed, and feedback provided in time help to augment the engagement and academic performance of the students. At the same time, ICT devices such as digital classrooms, learning management system, and cloud-based resources take the learning opportunities to the limits of classroom. All these are technologies involved in the creation of flexible, inclusive, and student-based learning environment to address the changing needs of modern education.

However, it is only under the influence of many challenges that the introduction of AI and ICT into smart education systems can be successful. Issues related to digital infrastructure, training of the educators, data confidentiality and accessibility of the technology must be sorted out to avail the benefits of smart education to the learners in equal measure. Learning institutions and policy-makers therefore have a role to play in developing supportive systems, investing in the technological infrastructure, and adopting the digital literacy in the teaching and learning process.

In conclusion, a successful integration of artificial intelligence and ICT can revolutionize the educational systems through promotion of innovation, better learning outcomes, and lifelong learning. By a wise and cautious approach of integrating technology solutions with optimal pedagogical solutions, smart school systems will have a chance to create more responsive and efficient learning ecosystem that will be capable of preparing learners with the demands of a rapidly changing digital society. It is likely that in future, further studies will be done on the long term impacts of these kinds of technologies on the quality of education, the role of teachers, as well as the learning processes of students in different institutional and socio-economic settings

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