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**Technological Evolution, Educational Transformation and the Promise of Artificial  
Intelligence**

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**Abstract**

**Purpose:** The purpose of this study was to provide a historical overview of technological evolution and its impact on education, as well as to explore how artificial intelligence (AI) is likely to influence schools, classrooms, and the teaching and learning processes.

**Methodology:** The study was guided by systems theory as postulated by Ludwig von Bertalanffy in the 1940s. An exploratory sequential research design within the mixed-methods approach was adopted. The target population comprised 7,466 Bachelor of Education students from a public university in Kenya. A sample of 423 students comprising 384 questionnaire respondents, 12 interview respondents, and 27 focus group discussion respondents was selected using stratified, proportionate, simple random, and purposive sampling techniques. Data were collected using questionnaires, interview schedules, and focus group discussion (FGD) guides. The reliability of the questionnaire was established using Cronbach's alpha, which yielded a reliability coefficient of 0.83. Qualitative data were analysed thematically while quantitative data were analysed using descriptive statistics such as frequencies and means and presented using tables.

**Findings:** The findings indicated that, if current patterns of AI use persist, school and classroom attendance may decline. AI is also likely to replace some clerical jobs in schools. Additionally, students may experience reduced concentration in classroom activities and increased reliance on AI, potentially affecting their memory. Moreover, while AI may enhance the efficiency and effectiveness of learning and teaching, it may also encourage academic dishonesty and foster over-reliance among both learners and teachers, which would make them lazy.

**Unique Contribution to Theory, Practice and Policy:** Consequently, based on the research findings, this study recommends that both learners and teachers be trained in the responsible use of AI. Teachers should also devise authentic assessment strategies that accurately reflect learners' abilities. Furthermore, policies should be developed to guide the integration of AI in education systems in order to equip learners with relevant skills for an AI-driven society. Additionally, learners and teachers should always use AI as a tool instead of using it as a shortcut.

**Keywords:** *Technological Evolution, Artificial Intelligence (AI), Education System, Educational Transformation, Exploratory Sequential*

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## INTRODUCTION

Artificial intelligence (AI), which is a collection of technology algorithms and approaches that enable machines to perform human-like cognitive functions such as reasoning and learning, is the most recent technology that can be applied in life. As humanlike machines, they are likely to affect systems that humans play a key role. An example of such a system is the education system, where teachers and learners play a significant role. Additionally, since AI develops very fast, it has the propensity to transform the current educational system in ways that are quite unparalleled (Allam, Dempere, Akre, & Flores, 2023).

Although we consider AI as the most recent technology in education, technology has been with us across centuries of human history and as it evolved, human's ability to improve on it also progressed. Indeed, all major technological advancements have transformed a myriad elements of human life (Center for Agricultural Education Research and Training [CAERT], 2009). Education systems have also experienced transformations as a result of technological change. According to United Nations Educational, Scientific and Cultural Organization (UNESCO), technology is the means to apply knowledge, tools, and skills to solve problems and enhance human potential (UNESCO, 2003). Certainly, technology is meant to solve practical problems, in an endeavor to improve the human condition. However, technology can also be destructive in nature and some of its negative consequences may or may not have been anticipated during its creation. This is exemplified by Croteau, Hoynes and Childress (2022) who identify two general approaches to understanding the role of technology in society. One of them is called 'technological determinism', which suggests that technology itself causes change, which may be in the intended or unintended ways. The other one is called 'social constructionism', which emphasizes that technology is made up of inanimate objects, which people decide how to use or how not to use them.

Indeed, as the existence of humans on earth has a long history, stemming from the prehistoric time and with each historical era being associated with unique problems, it follows that technology also has a long history. Moreover, throughout the history, societies have witnessed transformative shifts as technological milestones redefined the very fabric of work (Challoumis, 2024). Each era has brought forth its own requisite skills critical for survival, demonstrating a persistent need for individuals to adapt to changing landscapes driven by innovation. Indeed, it is worth noting that technological breakthrough prompts a reanalysis of workforce competencies (Organisation for Economic Co-operation and Development [OECD], 2022; Challoumis, 2024). For instance, the early hominins and their ancestors would have picked up unaltered objects like stones for their properties, eventually realizing that by hitting stones together or other objects, they could produce sharp edges for cutting, a jagged edge for hammering, or a rounded shape for pounding (Shea, 2017). This led to the intentional fashioning of the first deliberate tools, marking a significant step in technological development (Nowell & Davidson, 2010). With time, new kinds of tools evolved and replaced stone tools, in parallel to the evolution of humans.

Using tools profoundly affected early humans by enhancing their ability to hunt, process food, build shelters and create complex social structures, leading to improved survival and population growth (Shea, 2017). This could have enabled the early humans to effectively exploit the resources that were available. The way the early humans used the tools could have also catalyzed further evolution of the tools. Certainly, as technological determinists would contend, the influence of

stone tools on the life of the early humans demonstrates that technology has some influence on human lifestyle (Ticau & Hadad, 2022).

Within the formal educational realm, technology is also as old as the education itself. The history of technology in education is a fascinating journey that reflects broader societal changes, pedagogical shifts, and technological breakthroughs (Parkin, 2025). In the early years of formal education, classrooms were the cornerstone of learning. Teaching tools primarily consisted of teacher's voice, writing surfaces such as slates, and later, chalkboards, carefully arranged desks, lively students participating or talking with their peers, and teachers loudly explaining their subjects, drawing and writing their ideas on the chalkboard, which greatly helped to standardize education (<https://avservices.net/the-rapid-evolution-of-technology-in-education-from-chalkboards-to-smartboards/>, 2025). In fact the basic structure of the classroom, teacher-led lectures, textbooks and note taking, was the cornerstone of education for thousands of years. Learning was a linear process and students had little access to knowledge beyond what the teacher provided. The adoption of the chalkboard, which was invented in 1801 by James Pillans, moved us from individual slates and individualized learning to group instruction (Muttappallymyalil, Mendis, John, Shanthakumari, Sreedharan & Shaikh, 2016). The chalkboard has continued to evolve until we now have the smart board, which can be connected to computers and mobile devices.

It was not until the invention of paper in China around the year 100 and printing, 500 years later, that communication using a medium began to be reproducible (Croteau et al., 2022). Things began to change with the invention of the printing press by Johannes Gutenberg in the 15<sup>th</sup> century, which allowed information to be mass produced and distributed, sparking the Renaissance in AD 1400 to AD 1750, marking a new awareness of education, knowledge and power (CAERT, 2009; Li, 2023). With the printing revolution, knowledge was fixed on printed matter and disseminated on a large scale. This led to a series of changes, including the reconceptualization of the role of the teacher and the content of teaching, a rethinking of teaching methods and a reconfiguration of the organization of education. These changes also triggered the democratization of education and laid the foundation for establishment of a public education system that caused growth in literacy (Li, 2023).

The idea of school as we know it, first started during the Middle Ages when paper and books became more accessible. Back then, the church was responsible for education, and classes were held in monasteries and temples and the main characteristic of education in this period was the major influence of religion on the curriculum. The evolution of school opened up education so as to be accessed by more people since in ancient times formal education was highly limited to those who were royal offspring, the rich or elite, and boys only in ancient Greece and Rome, and it was considered a luxury in ancient China. This was partly due to the fact that the tools needed for education were expensive and hence only very few people could afford them. Undeniably, from the historical perspective, a learner's educational opportunities have been limited by the resources found within the walls of a school. Hence, technology-enabled learning allows learners to tap resources and expertise anywhere in the world, which enhances the efficiency and effectiveness of learning. The opportunities offered by technology enabled learning expand growth possibilities for all students while affording historically disadvantaged students greater equity to high-quality learning materials, expertise, personalized learning, and tools for future planning.

Over time, printing accelerated the pace of innovation in philosophy, science, the arts, politics and other fields by helping spread information and ideas throughout and across cultures. Rather than be dependent upon a mentor, it was now possible for people to read and learn on their own, perhaps contributing to the rise of individualism in the Western society too (Infantino, 2014). It is believed that thinking changed because written texts required a disciplined approach to communication that favoured linear sequencing of thoughts and reasoned arguments, which became hallmarks of these philosophical and scientific traditions. The distribution of print publications tended to be slow and limited because of their need for physical delivery. The invention of telegraph in the 1840s by Samuel Morse allowed for near instantaneous communication over long distances. Although print media had been highly decentralized, the material nature of the telegraph lent itself to more centralized control. With this kind of control, the owners of the media could use it to promote their agenda using some biased information (Croteau et al., 2022).

The 19<sup>th</sup> century also saw the rise of textbooks, standardized curricula, and the pencil (mass-produced from the 1860s). In 1877, Thomas Edison predicted that motion pictures would make books obsolete in schools. While this prediction proved premature, visual aids like film projectors (1920s) and overhead projectors (1940s) did become valuable classroom tools (<https://schoolizer.com/en/article/453/the-evolution-of-education-technology-from-chalkboards-to-ai>). Projected aids are useful for large and small group learning (Muttappallymyalil et al., 2016). The overhead projector, which did not start as a technology for public or schools, was instead used for police identification work and pre-World War II army training. Only on the late 1950s and early 1960s, the device made it to school and continued to become a mainstay in classrooms through the 1970s, '80s and '90s. This confirms that most of the technologies, be it in education or outside the educational realm, are sometimes used in ways that were not initially anticipated. The projector's biggest strength at that time was how they could accommodate a better quality of visual presentations (like images) in terms of color and shape than writings or drawing on the chalkboard. With its ability to instantly project image, it also cut off the time needed for educators to manually draw or illustrate on the board. Projected aids are useful for large and small group learning (Muttappallymyalil et al., 2016). Apart from the overhead projector, another tool that made a big change in how teachers could give materials to learners was the photocopier. It is recorded that in 1949, Xerox introduced the first photocopier machine named Model A. Later on in 1959, the photocopier arrived in schools, allowing educators to mass produce instructional material more than before.

In 1876, Alexander Graham Bell was issued with a patent for the invention of the telephone, which opened the way for more widely accessible, personal, long-distance communication. In the US companies competed on how to deploy it, and eventually the government moved in to regulate it. All these shaped the evolution of the modern telephone. Telephone lines served as important information conduits for other media such as radio and television broadcasts. Telephone technology changed the way people lived by making communication faster, easier, and more personal. It brought people closer together, improved safety and business, and laid the foundation for all modern communication technology (Rogers, 1986). The patenting of sound recording by Thomas Edison in 1878 ushered in a new mass medium. Millions of people were able to use sound recordings to help themselves to learn how to play their own instruments.

Radio, a wireless technology that uses electromagnetic spectrum to transmit audio signals, was developed over the first two decades of the 20<sup>th</sup> century. With the radio technology, media producers no longer had to physically distribute their products. This further enabled privatized and individualized media experiences that enhanced distance learning. The radio system was used to broadcast news, music and entertainment programmes. Since it has the provisions for live and recorded programming, it can enable students to continue with their studies outside of school hours (Li, 2023). However, the developers of radio broadcasting did not envision it being used for advertisement. This made them worried, thinking that the advertisement would ruin the use of radio for education (Croteau et al. (2022). Hence, the evolution of radio and the variations in how it has been adopted in education illustrates the fact that both the technological components of a medium and the social processes shape its use.

Another technological tool, the television, combines the ability of film to record and display moving images and sound and the ability of radio to broadcast live. It provides detailed coverage of events and provide a rich source of television programmes for students (Li, 2023). Building on radios success, manufacturers and broadcasters marketed television as another form of privatized entertainment that people would enjoy without having to leave home. The television industry also tried to reshape family routines to be compatible with television viewing. Although cultural practices shaped its early developments and uses, the television eventually influenced and disrupted peoples' traditions, practices and habits. In the 1950s television brought some college courses to living rooms (CAERT, 2009). Despite the digital divide that could have accompanied this development, this expanded educational access for those with a television sets. However, because of the persistent allure of entertainment programs, television was later blamed for making people stupid, earning it nicknames like 'idiot box' or 'boob tube' (Croteau et al., 2022).

The advent of computers in the 20<sup>th</sup> century revolutionized and hastened the pace of change in educational technology. Apart from the mainframe computer that was not easily affordable to everyone because of its big size and high price, personal computers, which are smaller, cheaper, more powerful and faster, went available publicly in mid to late 1970s. This made computers to be accessible to the masses. Initially only the most prestigious schools integrated personal computers into their classrooms. Moreover, by the year 2000, most schools in developed countries had at least a computer lab, where students could engage in educational software, complete assignments, or research topics online (<https://avservices.net/the-rapid-evolution-of-technology-in-education-from-chalkboards-to-smartboards/>, 2025).

Certainly, the adoption of computers in schools has transformed education in ways which are quite unrivaled. For example, personal computers offer big data storage size for files and programs plus the flexibility to use personally because of its compact nature compared to the mainframe computer that preceded it. The wide availability of computers, laptops, the low cost of convenient storage media and the ease with which teaching materials can be distributed through local area networks (LANs) and the internet have greatly contributed to the abandonment of the cumbersome audio-visual aids of the past (Muttappallymyalil et al., 2016). Nevertheless, the fact that well-endowed schools and countries were the first to adopt these tools in education highlights the digital divide. Beyond this divide, ICT adoption in education raises concerns regarding misinformation, data

privacy, the centralization of power, copyright, intellectual property rights, and confidentiality (Johnson, 2004).

The 1990s internet explosion connected classrooms globally. Email, online research, and eventually learning management systems (LMS) transformed how students accessed information and completed assignments. The 2000s saw the rise of laptops, smartphones, tablets, Smart Boards, and one-to-one device programs, which enabled learning anywhere, anytime. The growth of internet has ushered in online education, which has changed the way in which teaching and learning is conducted. Online education provides solutions by addressing educational equity and improving the professional skills of teachers (Li, 2023). Online education also provides an opportunity for students to access high quality education that is not only delivered within the school, but can also be delivered online. However, internet has brought with it some challenges such as cybercrime, cyber violence and hacking, all of which are unsafe environments (Li, 2023). Additionally, the internet and smartphone technology have been criticized for possibly ‘ruining’ the young generation with their addictive properties. Furthermore, due to the proliferation of digital devices such as laptops, smartphones, tablets and ipads and the advent of AI, it is possible for all to access knowledge, without deliberate discrimination, since education opportunities have been opened to everybody who can connect to the internet. This is particularly prominent in higher education institutions, as colleges and universities have often been at the forefront of educational technology (Canaleiro-Cervino & Vera, 2020). Regrettably, a major downside of online learning is that individuals who lack internet access are left behind, potentially exacerbating existing inequalities related to ethnicity, gender, socio-economic status, and other factors (Obvia, 2025). Moreover, computer technologies have the potential to promote and even impose on the unsuspecting users a variety of different cultural and moral values. This highlights the need to encourage a reflective and critical attitude towards the information transmitted through computer systems (Johnson, 2004).

Currently, artificial intelligence offers personalized learning paths, automated grading, and intelligent tutoring systems. Indeed, virtual and augmented reality create immersive learning experiences, while blockchain technology verifies credentials. In less than two decades these technological tools have become integral to classroom learning, enabling individualized learning paths, real-time assessment, and interactive participation-possibilities that would have been unimaginable in a traditional classroom setting (<https://avservices.net/the-rapid-evolution-of-technology-in-education-from-chalkboards-to-smartboards/>, 2025). Moreover, there are concerns about the implementation and effectiveness of emerging technologies in education (Mena-Guacas, Lopez-Catalan, Bernal-Bravo & Ballesteros-Regana, 2025). This is because although the results of educational technology tools vary, some of them are used in ways which were not initially intended, hence causing unforeseen consequences (Canaleiro-Cervino & Vera, 2020; Croteau, et al., 2022; Tahir, Hassan & Shagoo, 2024). There are those who feel that AI will have a positive contribution to education while others feel that AI will affect education negatively. Those who have a negative perspective about AI feel that the current positive discourse on AI is merely a hype (Johnson, Seaman & Seaman, 2024). The tension raises an urgent question: Can AI become the transformative force it promises to be, or will it face the same challenges that have hindered previous technological innovations, such as equity gaps, teacher displacement fears, and passive consumption without any reflection? (Ortiz, Castro, Forero, Gambi, Giambruno, Prez-Alfaro &

Segura (2025). This study, therefore, offers a prediction of how AI is likely to affect schools and classrooms as well as teaching and the learning processes.

### **Statement of the Problem**

Artificial intelligence is one of the most recent technologies in the world. Other technologies that evolved earlier transformed education with far reaching consequences, sometimes positively or negatively and sometimes in ways that were not initially anticipated. For example, the evolution of chalkboards transformed education from individualized learning using slates to group instruction. The printing press triggered the renaissance and democratization of education and laid the foundation for establishment of a public education. The TV and radio improved on distance learning, but were blamed for interfering with learning because of their entertainment programmes. Computers have also improved distance learning and hastened the pace of educational technology. Although internet and mobile devices have transformed the place and time of learning, they have been criticized for being addictive. Moreover, despite the growing integration of AI in classrooms, there is a lack of longitudinal evidence regarding its impact on learning as compared to previous technological shifts. This study will contribute towards filling this gap.

### **Significance of the Study**

The results of this study are expected to be of significance to educational policymakers, education managers, teachers, learners, and AI application developers. The findings may guide policymakers in designing strategies that maximize the benefits of AI tools in education. Education managers can use the insights to create environments that support the effective integration of AI. Teachers may draw on the findings to better understand how to deploy AI tools in ways that enhance student learning. Learners, in turn, may gain awareness of how AI can influence their learning outcomes, particularly when used inappropriately. AI developers may benefit by identifying potential areas of misuse and designing systems that are more robust and resistant to abuse. Additionally, the study will contribute to addressing existing gaps in the literature.

### **Theoretical Framework**

This study was guided by the systems theory. This theory emerged during and after World War II (Banathy, 1968). The best known of the systems theorists is Ludwig von Bertalanffy. In 1940s and 1950s he proposed a theory of general systems that would explain the behaviour of all levels of science from that concerned with a single cell to the study of society. His work largely focused around the interconnections among the components (subsystems) of a system, the logic that the whole can be greater than the sum of its parts, and the dynamic relationship between open systems and the environment. According to this theory, systems take a variety of inputs and process them in some way, usually by an interaction of subsystems, and then they generate a set of outputs some of which are desired and some of which are unwanted by-products (UNESCO, 2003). This theory has led to the systems approach to issues. Indeed, all educational technologies are subsystems within the education systems.

A system is the structure or organization of an orderly whole, clearly showing the interrelationship between the different parts (sub-systems) and between the parts and the whole, while systems approach to education is the systematic application of educational technology to an educational or training problem, starting with the input (entry behavior) to the output (terminal behavior) and

determining how best to progress from the former to the latter (processing) (Percival & Ellington, 1988). The purpose of systems approach is to ascertain that the behaviour of an individual is controlled in a way which is consistent with the total demands of the system.

Systems theory fits into this study because as a transformative tool, AI can affect the inputs, process, outputs and feedback components of the system. Some of the inputs that accompany AI into the instructional system are digital platforms, internet, AI software and new content. At the process level, AI can personalize or support learning. It also relieves the teachers of tedious and time consuming administrative tasks leaving them with ample time to focus on classroom interaction and personalization of learning. This is likely to affect students' academic performance and motivation. AI also provides learners and teachers with continuous and timely feedback.

In any country, education of its citizens is achieved through schools, which are aimed at enabling a country to achieve its goals of education. The learners within schools are at different levels and use classrooms as part of their learning environments. To achieve the goals of education, all the subsystems within the system should systematically and harmoniously work together. Changes in the system by introducing a new subsystem (such as AI) is likely to disrupt the system's equilibrium, causing positive or negative consequences (Weller, 2020). In addition, as AI systems may not fully align with the goals for learning, education systems may need to be designed in such a way that they can situate AI in the right place (U.S. Department of Education, 2023). Moreover, since AI mimics human intelligence, learners who greatly apply it in their learning are likely to behave differently from those who do not apply it. Similarly, teachers who apply AI in their teaching are likely to affect learners differently from those who do not apply it. The possible change in the learners' behavior due to the influence of AI is likely to affect the way they perceive school and classroom activities. The properties of a system as perceived by the user are called affordances (Cox & Webb, 2004). This perception is a mental process. Affordances encourage specific types of behavior. Related to affordances but somehow external to the system is scaffolding. Scaffolding is where pupils build up knowledge and understanding by linking new concepts to those previously understood through mental frameworks. AI can bring about scaffolding of learning. Affordances and scaffolding can enhance concept learning and problem solving learning.

## **METHODOLOGY**

This study used exploratory sequential research design within the mixed methods approach. This study was mixed methods in nature because both qualitative and quantitative data were collected and then integrated in order to combine their strengths and overcome the limitations of each. The mixing also helped to gain more insight into the problem (Creswell & Creswell, 2023). This study adopted exploratory sequential research design because AI is a relatively new area and, hence the results from the initial qualitative phase informed the design of the questionnaire for the second phase. Research population comprised 7466 Bachelor of Education students from a public university in Kenya. The study was conducted in a university because higher education institutions act as hubs of innovation and talent development and are uniquely positioned to harness AI's transformative potential (Bong & Yunus, 2024). In addition, university is the subsector with the highest rate of digital technology adoption, with online management platforms replacing campuses

(UNESCO, 2023). This study focused on bachelor of education students because these are the future teachers and therefore there was need to find out their prediction on the influence of AI on schools, classrooms, teaching and the learning processes.

Sample size was 423 individuals, comprising 384 individuals for the quantitative part of the study and 39 individuals for the qualitative part. Sampling was by stratified, proportionate, simple random, and purposive sampling techniques. Purposive sampling was used to select class representatives, who took part in the interview and focus group discussions. Class representatives were considered suitable for the interview and focus group discussions because as class representatives, they could be relied on to provide information about the classes they represented. Proportionate random sampling was used to select respondents to the questionnaire. The respondents were selected proportionately according to their years of study from first year to fourth year. The sample size of 423 was considered adequate because Gall, Gall and Borg (2007) suggest different minimum sample sizes based on the research design: at least 30 individuals for correlational studies, at least 15 for causal-comparative and experimental studies, and at least 100 for major subgroups and 20–50 for minor subgroups for survey research. In addition, according to Krejcie and Morgan table, a population of 10 000 and more needs to have a sample of about 384 (Bukhari, 2020; Bukhari, 2021). Consequently, the sample size in this study is considered adequate.

The data collection instruments for this study were a questionnaire, an interview schedule and a focus group discussion guide. The data collection instruments were piloted in order to assess their appropriateness. The pilot sample consisted of 43 individuals and was considered adequate because Mugenda and Mugenda (1999) recommended a pilot sample ranging from 1% to 10% of the planned main study sample. Piloting was done in a campus that did not take part in the study. The reliability of the questionnaire was ascertained by Cronbach's alpha and the reliability coefficient was 0.83. This was considered acceptable because Creswell and Creswell (2023) consider reliability coefficients of 0.7 to 0.9 to be optimal. Apart from the reliability, validity of the instruments was ascertained by experts and undergraduate students. They determined the extent to which the items measured what they purported to measure and whether or not they were arranged in the required order.

Data was first collected from 12 interviewees using the interview schedule. Focus group discussion was then conducted from 3 focus groups of 9 participants in each group. The interviews and focus group discussions were conducted face-to-face. The responses to the interview and focus group discussion questions informed the formulation of questionnaire items, to create a questionnaire that was used to collect quantitative data in the second phase of this study (Creswell & Creswell, 2023). The questionnaires were administered to groups of students, who filled them and then they were collected immediately after filling.

Qualitative data was analysed thematically as outlined by Braun and Clarke (2006). This method was selected because it allows for the identification, analysis, and reporting of themes within the data. The analysis followed six key phases. First, all interviews and focus group discussions were transcribed verbatim and reviewed multiple times to ensure familiarity with the data. During this stage, initial ideas and observations were noted. Second, initial codes were generated by systematically coding interesting features of the data across the entire dataset. In the third phase, the codes were organized into potential themes by identifying patterns and relationships among

them. These themes were then reviewed and refined in the fourth phase to ensure they accurately reflected the dataset and addressed the research questions. Some themes were merged or split during this process. The fifth phase involved defining and naming each theme, providing clear descriptions of their scope and content. Finally, in the sixth phase, the findings were reported by selecting compelling extracts from the data to illustrate each theme and linking the analysis back to the research objectives and existing literature. To enhance the trustworthiness of the analysis, strategies such as member checking, peer debriefing, and maintaining an audit trail were employed. These measures helped ensure the credibility, dependability, and confirmability of the findings. Quantitative data was analyzed by descriptive statistics such as frequencies, percentages and means. These were summarized using tables. The three instruments were used together for triangulation purposes.

The research adhered to ethical standards by, for example, using the principle of anonymity, where respondents were coded as INT1, INT2, INT3, etc for interviewees and FGD1, FGD2 and FGD3 for the focus groups. Informed consent was also sought from the respondents before the data collection process. The aim of the research was explained to the participants, and their consent to participate in the study was sought before being involved in providing data. Furthermore, to ensure confidentiality and anonymity of participants, names of participants were neither sought nor written on data collection instruments. Instead, codes were used. Moreover, to ensure confidentiality of interviewees, the interviews were conducted in a secluded room. Sources of information were acknowledged in order to address the problem of plagiarism. Additionally, all materials used in the literature review were acknowledged accordingly.

## **RESULTS AND DISCUSSIONS**

This study set out to predict how AI will influence schools and classrooms as well as learning and teaching processes. The study achieved a response rate of 82.0 %, 100% and 100% for the questionnaire, interview schedule, and focus group discussion (FGD) schedule, respectively. The response rate is considered adequate because Gall et al. (2007) recommend a minimum questionnaire response rate of 80% for data analysis.

### **Possible Effect of AI on Schools**

One item in the interview schedule, questionnaire, and FGD schedule sought to explore how AI is likely to affect schools. One theme that emerged from the interviews was that AI may contribute to increased student absenteeism. This view was expressed by most of the interviewees. One respondent stated:

*“AI will enhance absenteeism because students assume that what they should learn in school is provided in AI” (INT4).*

Another interviewee said:

*“Days are coming when students will not be going to school. You can create a class with ChatGPT, including a teacher and students” (INT6).*

These perspectives from the two respondents suggest that some students will fail to attend school due to the perception that the knowledge they would seek from school could be obtained through AI. This view is further supported by findings from the FGDs, where participants noted that the advent of AI is associated with a rising rate of school absenteeism. In one FGD, it was stated that:

*“AI will encourage absenteeism in school and class in that if students know what they want to learn, they can download the information they want from AI and read” (FGD3).*

This information implies that the use of AI will make some learners not to see the need to attend school. The results from the interview and FGD are confirmed by questionnaire results as shown in Table 1 below.

**Table 1: Questionnaire Results on Students’ Predictive Perspectives Regarding the Effect of AI on Schools**

Perspectives	N	Minimum	Maximum	Mean	Std Deviation
AI will reduce school absenteeism	315	1	5	1.90	1.29
AI will make school more relevant	315	1	5	2.71	1.49
AI will enhance respect for school personnel	315	1	5	2.01	1.20
AI will enhance student transition	315	1	5	3.35	1.38
AI will enhance the use of library	315	1	5	1.86	1.32

**Scale:**

1 = Strongly disagree

2 = Disagree

3 = Undecided

4 = Agree

5 = Strongly Agree

It is worth noting that the first item in Table 1 above, which states that AI will reduce school absenteeism, had a mean score of 1.90 on a five-point scale (1 = strongly disagree to 5 = strongly agree). This indicates that respondents generally disagreed with the statement. Therefore, the questionnaire findings are consistent with the interview and FGD results, all of which suggest that AI is likely to increase school absenteeism. This concurs with Dahiya and Singh (2021) who argued that as everything is now accessible through computer or mobile devices, it results in students who are not interested to go to school. Additionally, now days students are more dependent on internet instead of their books and input from teachers. Furthermore, AI offers flexibility and convenience that allows learners to learn in their own space and time (Tahir, et al., 2024). Tahir et al. (2024) add that the flexibility presented by AI can enhance accessibility to education as more and more learners can access quality educational resources regardless of their economic background or geographic location. Undeniably, some students report late to the learning institutions due to economic challenges. Another reason why some students do not get the motivation to attend school is the one-size-fits-all methodology, applied by most teachers (Allam, et al. (2023).

Nonetheless, by enabling students who are absent from school to continue learning shows that AI can be used to provide equitable and inclusive education, which eventually helps in the achievement of SDG 4, whose objective is to ensure inclusive and equitable quality education as well as promote lifelong learning opportunities for all. Consequently, AI can make students to continue learning even in crises (UNESCO, 2019). If more learners would choose to be absent this

way, it may lend credence to Scotland's Futures Forum and Goodison Group (2023) argument that AI technology might challenge the purpose of schools. It seems that as AI application in education becomes widespread, learners may not see the need to go to school because they consider it to be a better alternative to what happens in school. If this is allowed to continue, and coupled with online learning platforms, it could be fulfilling Illich's 1971 proposal to replace institutional schooling with non-institutional large-scale educational infrastructure (Jandric, 2014). Although we have not yet deschooled as Illich had suggested, the fact that learners can absent themselves from school and continue with learning using AI means that the existence of schools is being challenged. However, although learners' absenteeism from school can sometimes be an aspect of indiscipline, the fact that they can use AI to continue learning even if not at school exposes one strength of the technology. Indeed, Allam et al. (2023) argue that in the last decade college dropout rate and perhaps absenteeism are at all-time high, a testament to disinterested students and low student morale. Giannini (2023) argues that although AI has somehow improved the pace of education, it has come with challenges such as: widening digital divide, undermines the authority and status of teachers, which may eventually lead to teacher-less schools and school-less education. Some learners who use AI in learning have started behaving as if they do not need teachers and schools. The absenteeism could also be due to the pedagogical strategies applied by teachers, which may not motivate learners to stay in school. Canaleiro-Cervino and Vera (2020) argue that the global digital agenda reflects a consensus on the need to transform educational institutions' pedagogical models to meet the demands of the knowledge society. Similarly, Gocen and Aydemir (2020) contend that emerging technologies captivate students, potentially leaving schools with no choice but to integrate them into teaching and learning processes.

Another theme identified from the interview responses was that AI will render libraries less relevant. This is because learners can access a wide range of learning materials online, many of which were traditionally obtained from libraries. In addition, AI can synthesize information from multiple sources, making access to knowledge more efficient. This is illustrated by one interviewee who stated that:

*"There is no need for library as there is no need for reading books, especially hard copy books" (INT1).*

This view was also reflected in the FGDs. In one FGD, participants stated that:

*"AI may render school library and research materials like books useless" (FGD1).*

Participants further emphasized the convenience of AI, with one learner saying:

*"AI will make learning easier since there is no need to go to big libraries" (FGD2).*

To triangulate the interview and FGD findings, a questionnaire was administered, and it contained an item assessing students' agreement with the statement: AI will enhance the use of libraries. This item yielded a mean score of 1.86, indicating general disagreement with the statement among respondents. However, this finding contrasts with the views of Chandrashekara and Mulimani (2024) and Chakraborty (2025), who argued that AI can enhance user experiences in libraries. Chakraborty (2025), for instance, suggested that AI technologies are redefining library functions by providing personalized support, streamlining research processes, and enhancing learning.

Similarly, Olubiyo and Olubiyo (2023) contend that AI and advanced computing technologies will have a significant impact on the future of libraries.

Another theme that emerged from the interview schedule was that AI will negatively affect some of the school personnel. In the interview schedule, one respondent said:

*“AI will create a situation where there will be no respect for school personnel because learners can consult AI and sometimes get better help than consulting people” (INT3).*

FGD findings supported this concern. In one FGD a participant stated that:

*“Trained school personnel may be rendered jobless eg secretary, lab technician, teachers and librarians” (FGD3).*

From the questionnaire, there was an item that sought student’s agreement with the item which stated that: AI will enhance respect for school personnel. This item had a mean score of 2.01, suggesting general disagreement. Together, the interview, questionnaire, and FGD findings suggest that continued adoption of AI in schools may negatively affect certain categories of school personnel, as learners- and even teachers- may increasingly rely on AI rather than human support, potentially rendering some roles redundant. This aligns with Muresan’s (2023) argument that by mid-2030, one third of all employees will face automation risks, and the labour force segment most likely to be affected is people with a low level of education. Such trends can contribute to increased unemployment (Bhosale, Pujari & Multani, 2020). Belwalkar and Maki (2023) noted that clerical and data entry jobs are potentially vulnerable. Perhaps the workers looked down upon by the students are the ones who do these jobs. This echoes Naik’s (2023) and Khanzode and Sarode (2020) argument that AI has the potential to impact jobs negatively by replacing human workers in many sectors, reinforcing Amiri, Hakimi, Rajae and Hussaini (2024)’s concern that AI is going to cause widespread job displacement. Similarly, Cox (2022) argued that technology disrupts existing jurisdictions, creating new areas of work but also removing the value of some types of expert knowledge, and so eroding previously established jurisdictions.

However, alternative perspectives suggest a more complementary role for AI. Murugesan (2024) and Centre for Innovation, Design and Digital Learning (2024) argued that AI is more likely to complement human expertise rather than replace it. This is particularly relevant in education. Fitria (2021) echoes Murugesan’s argument by pointing out that machines cannot teach empathy, sympathy and other emotions that are an important part of our personality development. Certainly, for learners to fully develop their human potential, they need human interaction. This means that no matter how sophisticated AI is, no matter how many examples of using AI, this technology will not be able to replace the role of teachers or educators (Allam et al., 2023). The role of AI is limited to helping and empowering teachers in making the learning process a fun experience for students.

### **Possible Effect of AI on Classrooms**

Another item in the interview schedule, questionnaire, and FGD schedule sought to explore how AI is likely to affect classrooms. One of the themes that emerged from the interview schedule was that AI will make students to lose concentration on classroom activities. This was indicated by most of the interviewees. One interview respondent said:

*“There will be no concentration on classroom activities as learners will be sure that they will ask AI about what was taught” (INT3).*

This view was supported by FGD where it was also stated that widespread use of AI in the teaching and learning process is likely to make learners to lose concentration in classroom activities. From one of the FGD it was said that:

*“AI will make students to lack concentration during the class since students know that they will use AI during exams” (FGD2).*

A reflection on the above excerpts shows that awareness that AI can provide some of the information may make learners not to concentrate on learning. The above excerpt further suggests that AI is also used as a tool for cheating in exams. Nonetheless, questionnaire respondents seem to be undecided on whether or not AI would make students not to concentrate on class activities. Questionnaire results on students’ predictive perspectives regarding the influence of AI on classrooms is shown in Table 2 below.

**Table 2: Questionnaire Results on Students’ Predictive Perspectives Regarding the Effect of AI on Classrooms**

Perspectives	N	Minimum	Maximum	Mean	Std Deviation
AI will improve class attendance	315	1	5	2.08	1.20
AI will enhance learners’ concentration on class activities	315	1	5	2.93	1.14
AI will improve class management	315	1	5	2.90	1.40
AI will enhance class interaction				2.55	1.43
AI will enhance class discipline	315	1	5	2.78	1.19
AI will destroy traditional class arrangement	315	1	5	3.01	1.55

**Scale:**

1 = Strongly disagree

2 = Disagree

3 = Undecided

4 = Agree

5 = Strongly Agree

As shown in Table 2 above, the respondents to the questionnaire scored 2.93 on the item that assessed whether AI would enhance learners’ concentration on classroom activities. This suggests that most respondents were undecided on the statement. This confirms Chigora, Makore and Manokore (2024)’s argument that if students become overly reliant on AI-generated feedback and solutions, they may lose the intrinsic motivation to engage with learning materials. This may eventually make them not to develop independent problem-solving skills.

In relation to the item that sought whether or not AI would improve classroom management, the questionnaire responses yielded a mean score of 2.90, indicating that most learners were undecided. Similarly respondents recorded a mean score of 2.28 on the item examining whether AI would enhance classroom discipline, suggesting that they generally disagreed with the statement. Nevertheless, Futerrer, Goldberg, Bühler, Sikimić, Trautwein Gerjets, and Kasneci

(2025) argued that AI tools can streamline classroom management and offer detailed insights into student behavior. Consequently, teachers can improve class discipline and management by leveraging AI technologies.

Another theme that emerged from the interview schedule in relation to transformation of classroom, is the increase in the rate of absenteeism. The learners may not see the need for joining others in the classroom because what they would learn in the classroom can be obtained by consulting AI. One interviewee said:

*“AI can make learners not to attend all classes because they already have the notes obtained from AI” (INT5).*

The above excerpt demonstrates that AI is trying to move learners away from what happens within the classroom. This was confirmed by questionnaire results, in Table 2, which yielded a mean score of 2.08 on the item that sought the respondent’ level of agreement on whether AI would improve class attendance. This demonstrates that respondents did not agree with the statement. This could be due to lack of motivation to attend classes because teachers still offer the outdated one-size-fits-all curriculum in a physical classroom and yet we are in the knowledge society (Niroula, 2023). Similarly, Canaleiro-Cervino and Vera (2020) observed that there was consensus that the global digital agenda highlights the need for a change in educational institutions’ pedagogical model to meet the demands of the new knowledge society. Educators need to be progressive in their pedagogical approaches because new forms of technology captivate students, which could leave schools with no choice but to make room for them (Gocen & Aydemir, 2020). If not learners may stay out of the classroom, but seek help from AI.

Another theme that emerged from the interview was on classroom seating arrangement. One interviewee stated:

*“AI will help in seating arrangement to put the class in order since it can generate the image of the class” (INT6).*

This suggests that AI can be used to organize classroom seating. Similar views were expressed during the FGDs. In one of the FGD, a respondent stated:

*“The seating arrangement in rows and columns will be interfered with to make learners to sit in a way that will depict learner-centeredness” (FGD3).*

Although the interview and FGD findings indicated that AI may alter the traditional classroom seating arrangement, questionnaire respondents were undecided on this issue. As shown in Table 2, the item *“AI will destroy traditional class arrangement”* had a mean score of 3.01. The interview and FGD findings concur with the study by Lekhi, Kumar, Priyanshu, Sigh, Bhardwaj and Kaur (2023) who argued that by implementing seating changes based on AI, there was improved student involvement, group activity and even academic achievement. Similarly, Sharma (2026) argues that recent advances in AI, machine learning, and data analysis creates new possibilities to optimize seating for better engagement, collaboration and learning outcomes.

Another theme that emerged from the interview schedule concerned classroom interaction. Some respondents were of the opinion that AI would interfere with interactions within the classroom. One respondent stated:

*“AI will interfere with classroom interaction because students will use their phones without asking friends or the teacher” (INT1).*

This view was also confirmed during the FGD, where one participant stated:

*“AI will lower classroom interaction since learners will be glued on the screen” (FGD2).*

The questionnaire results showed a mean score of 2.55 for this item, implying that most respondents were undecided, while others disagreed with the statement. These findings contradict those of Seo, Tang, Roll, Fels and Roon (2021), who did research and found that AI can enhance personalized instructor-learner interaction.

### **Possible Effect of AI on Learning**

Another item in the interview schedule, questionnaire, and FGD explored how AI is likely to affect learning. One of the themes that emerged from the interview schedule was over-reliance on AI. This would make some students not to concentrate on learning due to awareness that they could use AI. This is reflected in the statement by one interviewee who stated that:

*“AI has brought laziness since students rely on AI than do research in the library. Students just rely on AI” (INT5).*

The poor content retention due to reliance on AI is confirmed by FGDs. For example, in one of the FGD one respondent stated:

*“AI use leads to poor content retention because of over-reliance on it” (FGD3).*

The interview and FGD findings were confirmed by questionnaire results as shown in Table 3 below.

**Table 3: Questionnaire Results on Students’ Predictive Perspectives Regarding the Effect of AI on Learning**

<b>Perspectives</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std Deviation</b>
AI will make learning easier	315	1	5	3.71	1.49
Learners will over-rely on AI for everything	315	1	5	4.75	1.04
AI will make learning individualized	315	1	5	4.15	1.33
AI will make learning enjoyable				3.50	1.50
AI will increase cheating in exams	315	1	5	4.54	1.24
AI will improve memory	315	1	5	2.45	1.43
All information given by AI is accurate	315	1	5	1.87	1.26

#### **Scale:**

1 = Strongly disagree

2 = Disagree

3 = Undecided

4 = Agree

5 = Strongly Agree

Table 3 above shows students' predictive perspectives regarding the effect of AI on learning. Considering the second statement, "*Learners will over-rely on AI for everything*" the mean score was 4.75 out of 5.00, indicating a strong agreement among respondents. The over-reliance on AI could be the one making the respondents to score 2.45 (disagreement) for the item: *AI will improve memory*. This suggests that with time, students who over-rely on AI may not handle complex tasks that require their memory. The above findings confirm Khanzode's and Sarode's (2020) argument that AI has increased technological dependence. The over-reliance on AI can make the students lazy, and with weak thinking capacity and low in problem solving skills (Seng, Li, & Cheong, 2025 and Bhosale et al., 2020). Regretably, this is likely going to cause a drag to future generations, who would be mechanical thinkers and low in confidence (Bit, Biswas, & Nag, 2024 and Gocen & Aydemir, 2020). Similarly, Al-Huwail, Al-Hunaiyyan, Alainati and Alhabshi (2025) argued in their research report that the impact of AI on Pakistani and Chinese culture accounts for 68.9% of human laziness. Moreover, Thoutam (2015) in a study titled: *Pros and cons of artificial intelligence* and supported by Naik (2023) are predicting that due to massive dependence on AI and with AI tools becoming more intelligent, humanity might lose the sense of purpose in life and face severe negative consequences for human cognition.

Another theme that emerged from interview was that AI promotes learning. This is exemplified by one interview respondent who stated:

*"AI has helped learning. If you are given an assignment ChatGTP helps understand the question. Learning is now easier"* (INT6).

Another interview respondent stated:

*"Learning will be faster because students can use their phones ahead of the teacher and get information before the lesson"* (INT1).

This was confirmed by FGD where in one of the groups it was stated that learning will be faster, easier and interesting (FGD3). This was also confirmed by the questionnaire results, because on the item: *AI will make learning easier*, the mean score was 3.71, implying that most respondents agreed with the statement. This is in agreement with Mariyono and Alif (2025), Slimi (2023) and Almasri (2024) who did research and found that AI has the ability to enhance learning. However, Ukwandu, Omisade, Jones, Thorne and Castle (2025) argued that although AI can promote independent learning, it does not improve the learner's academic achievement because it sometimes provides inaccurate responses to questions. Similarly, Chan and Tsi (nd) argued that AI undermines learners' holistic competency development.

Another theme that emerged from the interview concerned making learning individualized. One interview respondent said:

*"AI makes learning more individualized since a learner can consult it anytime and to get information according to what they want"* (INT1).

In addition to the interviews, all the FGDs reported that learning will be individualized. Similarly, questionnaire results on the item: *AI will make learning individualized*, attained a mean score of 4.15, implying that the respondents agreed with the statement. This finding confirms Sain and Baturay (2024) argument that AI creates individualized, engaging, flexible, and inclusive learning

environments. It also confirms Hassan's (2023) research on the transformational effects of technology on educational practices where it was found that AI tailors education to individual needs and provides experiential realms of learning that were previously unattainable. Moreover, UNESCO (2019) and Seng, et al. (2025) also confirm that AI can help personalize learning by creating a better professional environment for teachers to work more on students with difficulties. A dual-teacher model entailing a teacher and AI, which can take over the teacher's routine tasks frees up teacher's time, enabling them to focus on student guidance and one-to-one communication. It also agrees with OECD (2024), Jaca (2024), Xiao, Pei, Yuan, Bu, and Cai (2024) and Gocen and Aydemir (2020) who argued that personalization of learning is one of the defining features of AI. Consequently, AI can contribute to individualization of learning in two ways: Firstly by personalizing content and activities on the AI tool itself and secondly by freeing the teachers of the tedious repetitive routine tasks leaving them with enough time to focus on individual learners.

Another theme identified from the interview was the use of AI to facilitate cheating in exams and assignments. One respondent stated:

*"Some students waste their time chatting with ChatGTP because they know that they will cheat in exams using AI" (INT4).*

This was confirmed during the FGDs. In one FGD, a participant stated:

*"AI causes copying assignments and cheating in exams" FGD3*

The questionnaire results also support these findings, with respondents recording a mean score of 4.54 out of 5.00 on the item *"AI will increase cheating in exams"*. Certainly, the questionnaire respondents strongly agreed with the statement. The interview, FGD, and the questionnaire findings, above, confirm Scotland's Futures Forum and Goodison Group's (2023) argument that AI in education raises ethical and moral concerns such as determining the boundaries of legitimate learning support and cheating. Indeed, AI tools offer students new ways to cheat on exams and assignments (Chigora et al., 2024).

Another theme which was identified in the interview schedule was that AI sometimes provides inaccurate information. For example one interview respondent stated:

*"People just depend on ChatGTP which sometimes gives wrong information or omits some things which are important" (INT4).*

Another respondent said:

*"You can ask a question which AI does not know and if you insist it can just give anything" (INT6).*

This was confirmed in the FGDs. For example in FGD2 one respondent stated that:

*"Sometimes AI gives varying answers to the same question, which leads to confusion".*

It was also confirmed in the questionnaire where the respondents scored 1.87 (disagreed) on the item: *All information given by AI is accurate*. This, therefore, implies that most learners disagreed with the statement. The inaccurate information could be due to what Allam et al (2023) call algorithmic biases that mirror the ideals of the creators of the AI applications. This can distort facts, perpetuate discrimination and deepen inequality (Xiao, Pei, Yuan, Bu & Cai (2024); Abbey,

2023;). Additionally, Erbas and Maksuti (2024) confirm that one of the concerns raised about AI is misinformation. This can eventually amplify distorted or inaccurate ideas (Ortiz et al., 2025). The instances where the output significantly deviates from the intended prompt, resulting in inaccurate answers or reasoning is called hallucinations (Ukwandu, et al., 2025; Senget al., 2025). Arancibia and Soria (2023) also point out that AI responses to queries may contain errors or outdated information. This is likely to impact negatively on students' assessments (Slimi, 2023). Seng, et al. (2025) argue that the outputs of generative AI exhibit randomness and inconsistency, which is particularly prominent in disciplines that require precise terminologies such as academic writing. In addition, asking the same question multiple times may yield different answers, and this variability makes it difficult for teachers and students to rely on its outputs as authoritative references. Consequently, as the AI has the potential to manipulate its users, the wrong information can create a generation that may not differentiate reality from what is not real (Giannini, 2023).

In relation to the item that sought whether or not AI will make learning enjoyable, the responses from questionnaire respondents attained a mean score of 3.50, implying that most learners agreed with the statement. This could be due to the ability of AI to make education more personalized and interactive (Sain et al., 2004)

### **Possible Effect of AI on Teaching**

Another item in the interview schedule, questionnaire, and FGD schedule sought to explore how AI would affect teaching. One theme that was identified in the interview concerned the efficiency and effectiveness of teaching. For example one interviewee stated:

*“AI will make teaching to be faster since activities like setting and marking exams will be easier” (INT7).*

Another interviewee said,

*“Teaching will be faster and flexible. You can leave questions for students to research at their own time. This will save on time since there will be no need to visit the library” (INT4).*

The same information was confirmed by the FGDs. For example in one FGD, one respondent stated that:

*“AI will help save time since teachers can consult AI which is faster” (FGD3).*

The questionnaire results, shown in Table 4 below, confirm the above interview and FGD results.

**Table 4: Questionnaire Results on Students' Predictive Perspectives Regarding the Effect of AI on Teaching**

Perspective	N	Minimum	Maximum	Mean	Std Deviation
AI will make teaching easier	315	1	5	3.50	1.51
AI will fasten content coverage	315	1	5	3.57	1.42
AI will increase the demand for teachers	315	1	5	2.12	1.44
AI is likely to make teachers lazy	315	1	5	3.75	1.43

Results in Table 4 above indicate that since the respondents scored 3.50 on the items “*AI will make teaching easier*” it implies that the respondents agreed with the statement. This finding agrees with Fitria’s (2021) finding in a study which explored how AI tools influence teaching and learning and found that teachers could save more energy and focus more on non-systematic work to create a more golden generation with good character and intelligent. This is in line with Allam et al’s (2023) argument that technology may assist instructors in reallocating some of their time to student learning by spending less time on repetitive tasks but take more time to interact with their students on a deeper level. Similarly, Bit et al., (2024) in their study found that AI systems can boost productivity, free up teacher’s time, and deliver more precise and consistent feedback. International Bank for Reconstruction and Development/The World Bank (2024) support this by arguing that AI technology has the potential to empower teachers to be more effective, efficient and responsive to the diverse needs of their students. This will eventually improve teaching efficiency (Seng, et al., 2025).

Another theme that emerged from the interview is that AI will make teaching easy. This is exemplified by the following excerpt from one interviewee:

*“AI will make teaching easy because you can use it to make professional documents, set exams and get answers. This has made teaching simpler” (INT6).*

This is confirmed by questionnaire results on the item: *AI will make teaching easier*, which scored 3.50, implying that respondents agreed with the statement. The interview and questionnaire findings confirm the findings by Jaca (2024) and Mulyani, Istiaq, Shauki, Kurniati and Arlinda (2025) who argued that AI significantly enhances teaching performance by improving ease of use, usefulness and students’ learning outcomes.

Another theme that emerged from the interview concerns laziness. One interviewee stated:

*“Teachers may not put in more effort if they discover that learners are using AI” (INT3).*

This was confirmed by the FGDs. In FGD2 one respondent stated:

*“Over-reliance on AI will make teachers lazy such that they cannot consult other materials and therefore students may not receive the right information”.*

The questionnaire results confirm interview and FGD results because the questionnaire respondents scored 3.75 on the item: *AI is will make teachers lazy*. Hence, questionnaire respondents agreed that AI will make teachers lazy. These findings agree with Khanzode and Sarode’s (2020) argument that AI makes those who use it so much to become lazy.

## CONCLUSION AND RECOMMENDATIONS

Based on the research findings and in relation to the research objectives, this study concludes that:

- AI is likely going to enhance school and classroom absenteeism. This will be caused by factors such as teachers' failure to adopt teaching strategies that would motivate learners to attend school. In addition, AI's use instead of hard copy books is likely going to disrupt operations in libraries. Furthermore, although AI is likely to make clerical jobs within the schools obsolete, it may not replace teachers because teaching is accompanied by empathy and emotions, which AI cannot provide.
- In relation to classroom transformation, it can be concluded that for classes where teachers will continue using traditional teaching strategies, AI will make the learners to lose concentration on classroom activities. It will also interfere with classroom interaction as learners will opt to consult AI instead of consulting the teacher or classmates.
- Regarding the influence of AI on learning, it can be concluded that AI will enhance learning, by making it more individualized. This is because AI provides content in a variety of ways, which may address a variety of learning styles. However, learners' over-reliance on AI is likely going to make them lazy. Moreover, learners need to reflect on the answers obtained from AI because some of them are inaccurate. Furthermore, AI will enhance academic dishonesty in exams and assignments.
- If properly used, AI will make teaching more efficient and effective. This is because AI can relieve teachers of the tedious and time consuming tasks leaving them with enough time to attend to individual learners' needs. However, teachers' over-reliance on AI will make them lazy, hence without the help of AI the teachers could be defeated to handle simple tasks.

Based on the research findings, this study recommends that:

- The government and the school management should support learners by providing relevant infrastructure and devices for them to access AI content.
- The study also recommends the establishment of ethical frameworks to guide responsible use of AI in education.
- There is need for teachers and learners to be trained on how to consider AI as a collaborator instead of using it as a shortcut.
- Teachers and learners should be aware of AI hallucinations and always reflect on the information provided by it, so as to prevent amplification of distorted ideas.
- Teachers should devise authentic assessment strategies that can accurately reflect learners' abilities.
- Further research should be conducted on the influence of AI on libraries as well as on classroom interactions.

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