

## The Impacts of Artificial Intelligence on the Learning and Teaching of English Literature and Linguistics: A Study of Northern University, Nowshera

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### Abstract

This study investigates the role of artificial intelligence on the learning and teaching of English literature and linguistics in Northern University, Nowshera. Though artificial intelligence is widely used in every field of social science, little is known whether it has positive or negative impacts on the learning and teaching of English literature and linguistics. This study mainly focuses on the impacts that artificial intelligence has on the teaching and learning of English literature and linguistics. The study utilized a quantitative research design and was based on positivist paradigm. The study employed a closed-ended questionnaire based on Likert-five scale to collect data from the population, which constituted the English department of Northern University. Simple random sampling, which consists of 10 teachers and 100 students, was utilized in the present study. The data was analyzed using SPSS software. The findings revealed that AI has both positive as well as negative impacts on the teaching and learning of the English literature and linguistics at northern university, Nowshera. The study concluded that while using AI a more sophisticated, simple and pragmatic approach be adopted to strike a balance between the positive and negative effects.

**Keywords:** Artificial Intelligence, Quantitative Research Design, Positivist Paradigm, Closed-Ended Questionnaire, Simple Random Sampling, SPSS Software

### Introduction

The incredible speed of development in Artificial Intelligence (AI) has impacted all sectors of society, including education. Homles, Bialik, and Fadel (2019) explain that AI technologies have changed educational practices because of the automated assessment, feedback, and adaptive assessment technologies. Also, Luckin et al. (2016) explain how AI has contributed to the decentralization of pedagogy, shifting the focus of teaching from the teacher to the learner, and from the learner to the machines. In Higher Education, and specifically in English Literature and Linguistics, AI technologies such as intelligent tutoring systems, automated writing assessment, chatbots, and other NLP tools have been widely used. The leading researchers in the field, Russell and Norvig (2021) define Artificial Intelligence as a field of computer systems that can perform tasks that require human-level intelligence such as reasoning, learning, language processing, and making decisions. McCarthy and McNamara (2021) focus on AI's role in language and literature education, stating that it has made available new kinds of textual and discourse analysis, language learning support, and other forms of education support such as Chat GPT, Grammarly, Turnitin, and corpus tools. Traditional educational practices have had to change as a result of these technologies, other than the promotion of autonomy, the increase of learner centered pedagogy, and the provision of feedback (Kukulska-Hulme et al., 2020).

Boden (2016) points out that in English literature classes, AI helps students engage more deeply with literary works by generating summaries, thematic analysis, style critiques, and

intertextuality analyses. Fitzpatrick (2019) claims that AI tools could help students grasp more challenging literary texts as long as they are used as additional learning resources. In a similar way, Ellis (2015) notes that most applications that use AI assist in the acquisition of a new language by providing feedback on grammar, pronunciation, and discourse, while Biber et al. (2021) explains that AI corpus tools improve students' language skills. All of these studies show that, while integrating new technologies into the classrooms, AI is likely to support and enhance, rather than completely change, more traditional educational approaches. While there are still concerns regarding the the impact of AI's integration into English language studies. Selwyn (2019) concerns the possibility of critical thinking, creativity and analysis, which are the pillars of education within the study of literature and linguistics, being diminished with the ot reliance on artificial intelligence and the possible increase in academic dishonesty and plagiarism (Eaton, 2020). This has only been augmented by Perkins et al. (2023). Moreover, Bishop (2023) points out the potential of a decline in originality and independent thought with unmitigated AI. From the developing world, these are particularly present in UNESCO (2021) concerns related to the lack of policy and teacher preparation to the safe integration of AI into classrooms. Rasheed, Rana and Mahmood (2020) comment on Pakistan's higher education system and note the lack of equitable and comprehensive deployment of the latest technological advances in teaching English. Although digital technology in education has been adopted by many universities, the aid of artificial intelligence changes teaching and learning is still a challenge, especially in public universities like Northern University, Nowshera. Previous research in Pakistan has focused, more than one way, on the language of literature technology, as opposed to AI (Warschauer & Healey, 1998). There is a research gap to be filled. Also, contextual elements shape the efficacy of AI incorporation. Ali, Hussain, and Ahmed (2022) state that AI adaptation in Pakistani universities is challenged by restricted technological frameworks and a lack of digital competence. Likewise, Khan, Ahmad, and Malik (2021) indicate that a lack of pedagogical shifts, coupled with a lack of training, shape the perceptions of AI tools of educators and learners. Therefore, localized contexts must be analyzed to create educational frameworks and practices that are pedagogically sound. Therefore, the current study examines the net effects—beneficial and adverse— of the use of Artificial Intelligence (AI) in teaching and learning of English Literature and Linguistics at Northern University, Nowshera. The study examines the perceptions of both learners and educators and, in doing so, hopes to fill a gap in the existing literature on the use of AI in education and the contextual constraints of the Pakistani higher education system.

### **Literature Review**

AI technology is rapidly changing the landscape of education, designating new pathways for the development of teaching styles, learning tactics, and evaluation systems for all fields of study. The past few years have seen the incorporation of AI technology in the education of various arts and literature disciplines, and its various software programs have produced new avenues for critical reading, individualized and differentiated learning, and the provision of educational scaffolds. The positive and negative implications of AI technology in these contexts will help utilize the purposes of teaching and learning most effectively. In order to examine the transformative potential of AI technology on teaching practices, Holmes, Bialik, and Fadel (2019) focused on promises and implications for teaching and learning in Artificial Intelligence in Education. The researchers constructed a literature review, and through the case study method, analyzed reports in AI Educational Integration from various countries, and concluded that AI has the potential to increase learner engagement and personalized learning, and to streamline assessment in educational settings, as long as the appropriate ethical and pedagogical frameworks are followed. Luckin et al. (2016), in their analysis of the AI supported learning environments, adopted a conceptual and policy review framework, and in contrast to the former researchers, also examined the shifts from teacher centered/pedagogies to learner centered adaptive pedagogies that AI technologies produce, while emphasizing the requirement of teacher training, and the need for development of the educational infrastructure. McCarthy

and McNamara (2021) analyzed Automated Writing Evaluation and Feedback in the scope of language learning using a quantitative approach pertaining to AI writing tools. AI feedback, as they noted, enhanced learners' grammar, vocabulary, writing, and confidence. Conversely, Selwyn (2019) examined the question, Should Robots Replace Teachers? AI and the Future of Education from a qualitative practice-based review perspective, stating that losing the ability to think critically and create as a result of dependence on technology suggests the need for teaching to be a human-centering process, and is, for the most part, a valid concern. In this context, Zawacki-Richter, Marín, Bond, and Gouverneur (2019) analyzed 146 individual studies, offering the only systematic review on the application of artificial intelligence in higher education. They noted that while the incorporation of AI in education provides the possibility of customizing learning experiences and automating assessments, practical challenges associated with insufficient technological support, the preparedness of educators, and the ethics surrounding the application of AI often hinder its efficient utilization.

While the above-mentioned information may be correct, there is a dearth of information pertaining to the particular context of the teaching and learning of the English Literature and Linguistics in Pakistan, especially in the public-sector universities like Northern University, Nowshera. Most of the studies have been done in the general context of application of AI and technology-assisted language learning, and there is very little documentation of the constructs of the participants in the teaching and learning of English Literature and Linguistics with regards to the benefits and challenges of integrating AI in the process. Therefore, the current research has been designed to address the impact of AI on teaching and learning of English Literature and Linguistics, with a view to providing evidence which would help in the development of strategies, policies, and future research for the teaching and learning of English Literature and Linguistics at the higher education level.

### **Methodology**

This research work uses quantitative analytical methods, focusing specifically on Artificial Intelligence (AI) technologies in teaching and learning English Literature and Linguistics at Northern University, Nowshera. The study uses a positive research paradigm. The aim is to understand the quantifiable effects AI has on the teaching and learning processes, and to draw conclusions that can be applied in different situations. The primary aim is to explore AI's impact, both positive and negative on students' learning and teachers' teaching. The researcher has designed a questionnaire to achieve the research objectives. The questionnaires include closed questions measured on a 5-point Likert scale, where 1 equals "Strongly Disagree" and 5 equals "Strongly Agree" and each section is meant to capture information on the respondents' demographics, as well as their attitudes towards AI in Teaching, AI-aided Learning, and the Pros and Cons of Integrating AI in Teaching English Literature and Linguistics. Likert scales allow researchers to collect quantitative data in a standardized manner. The study focuses on the students and faculty members of the English Department at Northern University, Nowshera. For the study, participants are chosen using a simple random sampling method, which guarantees the equal opportunity for each person in the population to be chosen. The participant pool consists of 10 faculty members and 200 students, which is deemed adequately large for producing dependable quantitative data and performing statistical calculations. The researcher uses the SPSS (Statistical Package for Social Sciences) tool to study and analyze the quantitative data. In order to summarize the responses of the participants, the researcher uses descriptive statistics (frequencies, percentages, means and standard deviations). The researcher also employs inferential statistics to understand the relationship between the variables and to provide evidence for the patterns observed. The researcher adheres to ethical guidelines during the study. The researcher guarantees to the participants that the research is confidential and that the data will only be used for academic purposes. The researcher uses a structured questionnaire to collect data and the participants are allowed to remain anonymous in order to comply with ethical standards of research. This method attempts to capture the impact of AI on teaching and learning English Literature and Linguistics, on a more empirical level. It is hoped that the

outcomes of the study will add to the knowledge base of teaching, institutional frameworks, and future research on the AI phenomenon in the field of higher education.

## Analysis and Discussion

### Section A: Awareness and use of Artificial Intelligence

In order to know whether the students and teachers of English literature and linguistics at Northern University are aware with the use of AI or not the researchers made four questions in the questionnaire related to the awareness and use of Artificial Intelligence. The purpose of this part was to know if the use of technology and innovation is welcomed by the students and teachers in the discipline of literature and linguistics or they believe in status quo. The following discussion presents the results of each question related to the awareness and use of Artificial Intelligence with regards to, percentages and bar chat in the form of table and graph.

**Table:1 Awareness and use of Artificial Intelligence**

Statements	Strongly Disagree(%)	Disagree(%)	Neutral(%)	Agree(%)	Strongly Agree(%)
<b>1.Familiarity With AI tools</b>	3.0	4.0	6.9	65.3	20.8
<b>2. Frequent use of AI tools</b>	2.0	4.0	14.9	51.5	27.7
<b>3.Teachers encourage AI use</b>	5.9	11.9	6.9	52.2	22.8
<b>4. Use of AI for academic purposes</b>	9.9	34.7	17.8	31.7	5.9

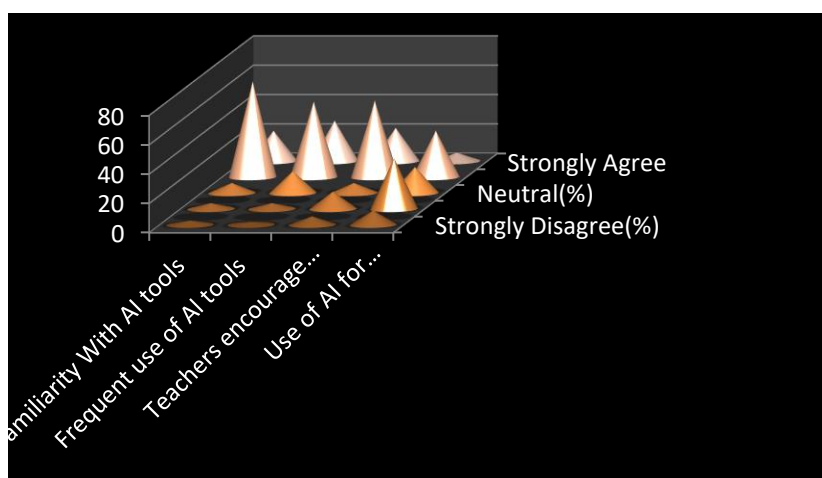


Figure: 1 Awareness and use of Artificial Intelligence

### Description

The above table and the figure clearly show that 20.8 % of participants strongly agreed and 65.3% of participants agreed to statement no. 1. There were just 6.9% of participants who were neutral whereas there were 3 % participants who strongly disagreed and 4 % participants who disagreed with the statement. This shows that teachers and students of English literature and linguistics are familiar with the various tools of AI. Regarding statement no.2, 27.7% of participants strongly agreed and 51.5% agreed to the statement that AI tools are frequently used in Northern University, Nowshera. There were just 14.9% of participants who were neutral whereas there were 2% participants who strongly disagreed and 4% students who disagreed with the statement. This shows that AI tools are widely used in the university. When asked about statement no 3 which states whether the use of various AI tools is encouraged by teachers for learning or not, there were 22.8% participants who strongly agreed and 52.5% who agreed to the statement. There were just 6.9% of participants who were neutral whereas, another 5.9%

of participants strongly disagreed, and 11.9% students disagreed with the statement. This means that the use of AI is strongly encouraged by teachers in Northern universities. Finally, regarding statement no. 4 there were 5.9% participants who strongly agreed, and 31.7% of participants agreed to the statement. There were 17.8% participants who were neutral whereas there were 9.9% participants who strongly disagreed and 34.7% of participants who disagreed with the statement. This shows that many teachers and students use AI for academic purposes in Northern University, Nowshera.

### Section B: The Negative Impacts of Artificial Intelligence

In order to explore that whether artificial intelligence has any negative impacts on the teaching and learning of English literature or not this part of the questionnaires is designed which consists of 4 questions the results of each question are discussed separately with regards to percentages and Bar chat.

**Table: 2 The Negative Impacts of Artificial Intelligence**

Statements	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
1.Excessive use of AI reduces students' creativity and critical ability	3.0	3.0	13.9	46.5	33.7
2.AI gives wrong explanation of literary and linguistics terms	2.0	7.9	16.9	49.5	23.8
3.Excessive use of AI deprives students of reading original texts	1.0	11.9	11.9	38.6	36.6
4.AI affects students' thinking skills	1.0	18.8	11.9	40.6	27.7

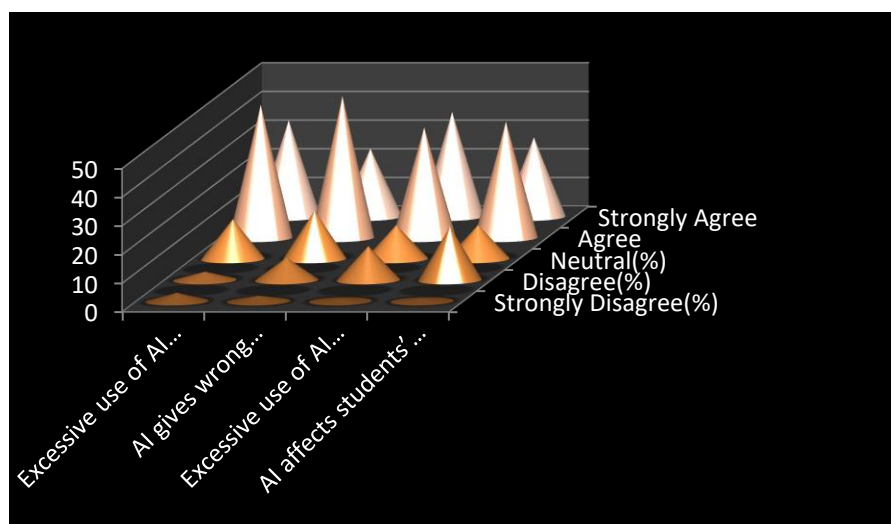


Figure :2: The Negative Impacts of Artificial Intelligence

#### Description:

The above table clearly shows that 33.7 % of participants strongly agreed and 46.5% of participants agreed to statement no. 1. There were just 13.9% participants who were neutral whereas, there were 3 % participants who strongly disagreed and 3 % participants who disagreed with the statement. This shows that excessive use of AI reduces students' creativity and critical ability. Regarding statement no.2, 23.8% of participants strongly agreed and 49.5% agreed to the statement that AI gives them sometimes wrong explanations of literary and

linguistics terms. There were just 16.9% participants who were neutral whereas there were 7,9% participants who strongly disagreed and 2.0% students who disagreed with the statement. These responses show that AI responses should not be taken for granted. When asked about statement no 3 which states whether excessive use of AI deprives students of reading original texts or not, there were 36.6% participants who strongly agreed and 38.6% who agreed to the statement. There were just 11.9% participants who were neutral whereas, another 11.9% participants strongly disagreed, and 1.0% students disagreed with the statement. This means that excessive use of AI deprives students of reading original texts. Finally, related to statement no. 4 there were 27.7% participants who strongly agreed and 40.6% agreed to the statement. There were 11.9% participants who were neutral whereas there were 18.8% participants who strongly disagreed and 1% participants who disagreed with the statement. This shows that AI affects students' thinking skills.

### Section B: The Positive Impacts of Artificial Intelligence

To examine whether AI has positive impact on the teaching and learning of English literature and linguistics, there were four questions in the questionnaire the results of each question are discussed separately with regards to percentages and Bar chat.

**Table: 3 The Positive Impacts of Artificial Intelligence**

Statements	Strongly Disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly Agree (%)
<b>AI helps students to understand complex literary and linguistic works</b>	6.3	9.4	18.8	49.9	18.8
<b>AI improves students' language and imaginary writing skills</b>	15.6	0	28.1	28,1	28.1
<b>AI enhances classroom engagement and interactive learning</b>	12.5	12.0	15.6	46.9	25..0
<b>AI helps teachers in lesson planning for literature and linguistics</b>	15.6	0	25.0	43.8	15.6

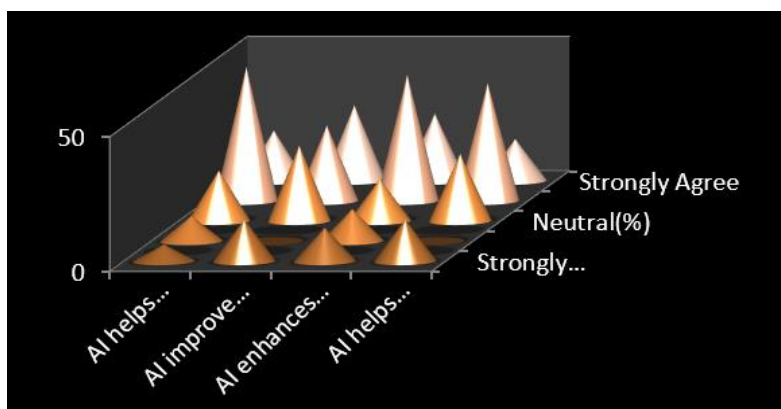


Figure: 3 The Positive Impacts of Artificial Intelligence

The above table and the figures clearly show that 18.8 % of participants strongly agreed and 49.3% of participants agreed to statement no. 1. There were just 18.8% participants who were neutral whereas, there were 6.3% who strongly disagreed and 9.4 % of participants who disagreed with the statement. This shows that AI helps students to understand complex literary and linguistic works. Regarding statement no.2, 28.1% of participants strongly agreed and 28.1% agreed to the statement AI improve students' language and imaginary writing skills. There were just 28.1% of participants who were neutral whereas, there were 0% participants

who strongly disagreed and 15.6% students who disagreed with the statement. This shows that AI improves students' language and imaginary writing skills. When asked about statement no 3 which states that AI enhances classroom engagement and interactive learning or not, there were 25.0% participants who strongly agreed and 46.9% who agreed to the statement. There were just 15.6% of participants who were neutral whereas, another 12.0% of participants strongly disagreed and 12.5% of students disagreed with the statement. This means that the use of AI enhances classroom engagement and interactive learning. Finally, related to statement no. 4, 15.6% of participants strongly agreed and 43.8% participants agreed to the statement. There were 25.0% participants who were neutral whereas there were 15.6% of participants who strongly disagreed and 0% participants who disagreed with the statement. This shows that AI helps teachers in lesson planning for literature and linguistics.

### **Findings and Conclusion**

This research examined the impact of the presence and use of artificial intelligence in the teaching and learning of English literature and linguistics at Northern University, Nowshera. The results of the study illustrate that artificial intelligence is an integral part of the educational system, and is recognized and used by a large number of teachers and students. The large amount of people who know and use AI tools shows that people are ready to use advanced technology in the study of various subjects in higher educational institutions. The study found that instructors support students' use of AI tools, which means that there is a positive attitude in the institution towards the use of advanced technologies in teaching. AI is believed to assist in the simplification of literary texts and linguistic theories, engage students in the learning process, develop writing skills and imagination, and provide teaching aids for lesson and unit plans. These positive perceptions illustrate that AI is able to enhance comprehension, assist the teaching process, and promote an active learning environment in literature and linguistics classes.

The study also emphasizes the great unease of the unregulated and excessive use of artificial intelligence. Many of the study participants felt that an over reliance on A.I. adversely impacts the creativity, critical thinking, and autonomous reasoning of students. Furthermore, A.I. is also regarded as giving inappropriate feedback on literary and linguistic phenomena which may confuse students. Another unease is that an over reliance on A.I. may result in students not engaging with primary literary materials which in turn undercuts the close reading, text analysis, and reading interpretation that are vital in literary studies. To sum up, the study outlines the complexities in the use of artificial intelligence in the teaching of English literature and linguistics. While A.I. can be considered to have positive impacts in facilitating learning, enhancing students' engagement and providing teachers with valuable insights into instructional flow, there is also the downside of threatening students' intellectual independence and the level of cognitive challenge posed to them. It is therefore imperative that in A.I. use in teaching and learning in higher education, a more sophisticated, simple and pragmatic approach be adopted to strike a balance between the positive and negative effects.

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