



AI-ASSISTED ASSIGNMENT WRITING: PATTERNS, COMPETENCE, AND ETHICAL AWARENESS

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Abstract

The methods of incorporating the tool of artificially intelligent (AI) into the educational emphasis on higher education have transformed the very process of academic writing with the new opportunities on the one hand and the ethical and pedagogical issues on the other. The current paper will explore the usage patterns, perception, and influence of the AI-powered tool, that is, ChatGPT, Grammarly and Quillbot between BS English students in the international Islamic University, Islamabad (IIUI). It uses the Technology Acceptance Model (TAM) (Davis, 1989) and Constructivist Learning Theory (Piaget, 1952; Vygotsky, 1978) in carrying out the research on the adoption trends, perceived usefulness, ease of use, competence in writing, and ethical awareness among the students. To obtain the needed responses, 30 students of BS English were surveyed using the independent online and structured questionnaire and processed using the descriptive statistics. As it has been found, AI tools have primarily been used with students in whom the tools are meant to produce ideas, correct grammar and spelling, paraphrase information and organize it, with ChatGPT being the most popular. But moral considerations like over dependency, plagiarisms and originality are nevertheless colossal. The article is dedicated to AI tools because they are effective scaffolds that help to learn writing skills and develop them independently as well as emphasizes the importance of using it responsibly. The offered findings suggest that the field of AI technologies should be considered by educators and policy makers as the mean of using it consciously to required improvements in academic writing and developing students as those who can approach learning with greater criticality and technological awareness.

Keywords: *Academic Writing, AI-Assisted Tools, ChatGPT, Constructivist Learning Theory, Ethical Awareness, Grammarly, Quillbot, Technology Acceptance Theory*

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1. Introduction

1.1 Background of the Study

Such rapid development of the Artificial Intelligence (AI) has been capable of fundamentally overhauling the academic activities, i.e., the essay and assignment writing (Escalante et al., 2023). Over the past decade, we have witnessed the idea of AI technologies, which have made some of the simplest grammar-checkers into the sophisticated systems of generating accessible, situational and stylistically viable text (O'Donnell et al., 2025). The use of AI by university students is also based more on correcting their errors, although students also find it important to develop their creativity, help them structure the text logically, and effectively paraphrase the complex sentences. Among such applications, ChatGPT, Grammarly, and QuillBot are the most active websites, as they offer a convenient tool, are associated with any academic discipline, and help simplify the writing process. They assist in the linguistic performance elevating its accuracy, reducing time stress and delivering the student with immediate feedback (Alshraideh et al., 2024), which makes them particularly beneficial in the context where the academic load of the tasks is high, and the child has to make a deadline.

There are several ways on how AI-assisted writing tools may enhance the competence of the students in their writing skills, support second language learners, and allow them to be able to exercise higher order cognitive skills such as synthesis, analysis, and argumentation (Nhan, 2024). It has been shown that ChatGPT can help a learner in

performing brainstorming to come up with coherent arguments, logical progression of the essay and receive detailed feedback on grammar, syntax and style with the help of Grammarly. QuillBot, in its turn, assists the user in perceiving different opportunities of explaining the ideas and, therefore, forms the range of vocabulary and minimizes the variety of sentences (Chen & Liu, 2023). All of these can be considered an example of cognitive scaffolds and provides students with the opportunity to immerse into the process of writing, not to mention that a piece of writing can be evaluated in relation to the academic standards according to the acceptable level of clarity, cohesion as well as precision.

The utilization of AI-augmented tools is slowly emerging to be a regular occurrence in the Pakistani higher education system particularly in the South Asian universities (Awareness, benefits, threats, attitudes, and satisfaction with AI tools..., 2024). Students in other courses have begun applying the platforms in their education to complete tedious homework assignments and meet the high standards of work and improve the quality of their works (Mahmood et al., 2025; Alshraideh et al., 2024). It empirically has been noted that ChatGPT is used by students to come up with novel concepts and organize their work, Grammarly is used to identify and fix their informational and stylistic errors and mistakes, and Quillbot is employed to paraphrase, rephrase, and synthesize thick information (Sallam, 2023). An effective usage of these tools is such an indicator that students became much more conscious of technological resources and their ability to supplement the conventional instructional learning.

Despite the evident positive benefits, the continuous reliance on AI products has provoked a large number of pedagogic and ethical problems. Over dependence on such technologies may also contribute towards the underdevelopment of personal writing, thought,

and an academic voice that constitute the most important points on the learning higher educational curriculum. The issues of not being original and not engaging deeply with ideas, as well as plagiarism, is also an area where researchers have paid more attention, and the dangers that AI could introduce can be quite substantial (Aljuaid, 2024; Ikram, Silviyanti, and Yasin, 2025). Moreover, there is always a chance that the information that was provided by AI will be received by the students without questioning it in the long run, and such practice can paralyze the mind and suppress the intellectual growth in the future. These problems are compounded when it comes to the sphere of higher learning where integrity is the paramount value that makes it significant to introduce the idea of responsible and ethical AI utilization to the students.

Even though parts of the global research have considered the use of AI of general student population, there is a gap of research conducted on the application of AI on BS English learners at the International Islamic University, Islamabad (IIUI). The current research is focused on addressing these shortcomings by discussing the usage patterns, perceived effect and ethical implications of AI-aided systems that is, ChatGPT, Grammarly and QuillBot among the BS English students of IIUI. Combining a set of results of both Techno-Acceptance Model (Davis, 1989) and Constructivist Learning Theory (Piaget, 1952; Vygotsky, 1978), the research analyzes the concept of adoption, adaptation, and critical engagement in using AI technologies by the students with the background of academic writing. It also discusses all the benefits of using these tools in practice and thought as well as analyzing the weaknesses, ethical concerns and potential threats the excessive use may entail. The outcomes of the findings will also provide fresh evidence that is peculiar to the

environment of educators, policymakers, and curriculum designers regarding the ability to effectively and responsibly introduce AI tools into the learning process so that lean learners will have not only a solid command of technology but developed expertise in writing skills without cheating in academic environment.

AI has actually disrupted the academic writing. Such tools as ChatGPT, Grammarly, and QuillBot are no longer regarded as grammar-checkers but rather assist you in writing more correctly, smarter, and in your style. Students are given on the platforms to correct their language, structure their ideas and even initiate ideas. Better than that, they are training wheels to the brain; pushing it to go even deeper, to analyze, connect and create arguments that are even more solid.

1.2 Research Objectives

1. In order to establish the most popular AI tools (ChatGPT, Grammarly, QuillBot) among BS English students at IIUI in writing their assignments.
2. To explore the trends in the use of AI tools when doing academic assignments.
3. To estimate the influence of AI-based tools on the level of writing in the students.
4. To investigate the perception and moral awareness of students on AI application in work.

1.3 Research Questions

1. Which AI tools are most frequently used by BS English students at IIUI for assignment writing?
2. What are the common patterns of AI tool usage in completing academic assignments?
3. How do AI tools affect students' writing competence ?
4. What are students' perceptions and ethical concerns regarding the use of AI in assignment

writing?

1.4 Significance of the Study

The proposed research will be topical because it will provide an opportunity to understand how ChatGPT, Grammarly, and Quillbot have been used by the BS English students of the International Islamic University Islamabad (IIUI) to write assignments. Using the patterns of use, the study indicates the advantages, and the issues that may be encountered regarding AI-written academic papers through the students views and impacts AI has on their competencies in writing. The educators could use the results to introduce the AI tools in the teaching and grading process in a responsible manner in which the students would not be over-dependent on technology and would achieve the required academic success in writing.

Besides, the paper also briefly mentions the ethical considerations, i. e., originality, and responsible use of AI that will enable the students to preserve their academic integrity and still maintain the support of AIs. The study also symbolizes the limited comprehensive information on the Pakistani context of academic higher learning on AI concerning academic writing and that which could be applied to generate a curriculum, instruction and research. Lastly, the findings of the research will go a long way in bridging the gap between technology application and effective teaching of skills in institutions of higher learning.

2.Literature Review

The scope of application of artificial intelligence (AI) devices in higher education has largely affected the academic writing habits of learners. Due to increased access to applications like ChatGPT, Grammarly, and QuillBot, scholars have been keen on the issues that determine the adoption and adoptability of AI-supported technologies by students in their studies. Based on theoretical concepts like Technology Acceptance Model

(Davis, 1989) and constructivist learning models (Piaget, 1952; Vygotsky, 1978), the available research investigates the perception, learning processes, and ethical issues of the use of AI-based writing among students. The literature review involves the synthesis of the past to investigate the trends on AI adoption, and how it affects the development of academic writing, as well as the pedagogical and ethical issues that arise as a result of its implementation, especially in the English language learning setting in universities.

Many researchers have employed the Technology Acceptance Model (Davis, 1989) to examine the factors behind the decision to use AI tools in their academic activity. As an example, the assessment of Pakistani university students by Alshraideh et al. (2024) indicated that students tend to employ AI tools more often in case they believe that they are useful and easy to operate. This is the point why ChatGPT, Grammarly and Quillbot are gaining even more popularity among students. The importance of these two factors is concealed by the fact that Davis (1989) proposed TAM, and perceived usefulness and ease of use defined attitudes and intentions of users towards technology. The U.S. Department of Education also discovered that students will be more willing to take into consideration learning technologies as long as they presumed that they have value.

The studies of ChatGPT in scholarly writing are increasingly widespread in recent years. Balraj (2025) relies on the conclusions of the existing studies and claims that most of the undergraduates have a positive attitude toward ChatGPT, which is especially acceptable as a writing assistor despite remaining mindful of ethical concerns. This concerns particularly, the BS English students who do extensive writing. Similarly, Garcia (2025) found out that researchers feel more like using ChatGPT when they trust it and believe in

certain benefits to their work. These studies said that the among the student opinions about the usefulness of AI tools and their trust in the latter has a major influence on adoption.

A number of studies apply constructivist theory (Piaget, 1952; Vygotsky, 1978) to provide an understanding of the role of AI as per the learning perspective. Chen and Liu (2023) showed that the AI-generated feedback availed by ChatGPT enhanced and developed grammar, vocabulary, and organization of EFL learners, and thus, simplified and enhanced the revision process. A study by Sidra and Asma (2025) found out that AI tools facilitated communication, collaboration, and self-directed learning in Pakistan ESL learning settings. They can be compared to the focus on social interaction and scaffolding offered by Vygotsky (1978) and the cognitive development as provided by Piaget (1952) because AI technologies often provide instructions to students and allow them to actively build knowledge.

The usage trends and ethical concerns with AI-assisted writing have also been found by researchers. Ridho et al. (2024) state that students organize and brainstorm with the help of AI tools as well as involve their grammar correctors often because they are worried that they might become over-dependent on these applications. Al-Harabsheh et al. (2025) and Črček and Patekar (2023) also found the same concern regarding students being afraid of plagiarism and the loss of their originality. It is difficult to find other works such as Nazli et al. (2025) or Faiz Mahmood et al. (2025) that do not point out that AI tools can improve writing performance. Although supporting AI in writing performance has many positive aspects, its ethical application remains one of the major challenges, according to other researchers. In Apriani et al. (2025), they employed a mixed-method strategy and found that students that made use of ChatGPT scored higher in writing and felt more at ease

trying to organize their ideas. In the same line, Li et al. (2024) showed that the performance of ChatGPT-adopting non-native language learners was on a higher level regarding grammar, structure, and clarity. Such findings are specifically relevant to institutions of higher learning since Ashraf et al. (2025) established that the academic outcomes of students in Pakistan have enhanced due to the use of ChatGPT. Other researchers have undertaken research related to the impact of some AI writing tools on students. Rafiq and Alam (2023) perceived that Grammarly feedback allowed to write the paper more correctly and took students into responsible behavior on using the tool. Herda and her associates (2024) observed that QuillBot assisted students to improve their paraphrasing skills and work more autonomy as well as, triggered their thinking regarding academic honesty. Next, we can mention Ikram et al. (2025), who explained that AI paraphrasing tools increased the confidence of students, but nonetheless, people have concerns that the students will overuse it.

Recently, scholars have examined the use of AI by students who are experimenting with a variety of prompts. Woo, Guo, and Susanto (2025) observed that in cases where the prompts were correctly designed, EFL students overcame the writer block and generated ideas at will. The quality of literature reviews was not only improved by structured prompts but also by Islam and colleagues (2025), who nonetheless expressed the same concern about the originality. Jelson et al. (2025) included that style of prompting influenced the extent to which students perceived their writing to be part of them and the degree of confidence and this actually indicates the importance of being thoughtful and ethical about using AI tools.

Overall, as the reviewed literature hints, the AI-written-assisting tools can become an asset to academic writing of students when applied in a right way, because they can facilitate language accuracy, organization, and learner confidence. The studies supported by TAM (Davis, 1989) emphasize perceived usefulness, ease of use, and trust as the key factors influencing the uptake of AI tools in students, whereas constructivist (Piaget, 1952; Vygotsky, 1978) school of thought focuses on the support provided by AI tools and the promotion of autonomy among learners. However, issues pertaining to overreliance, academic trying, and originality are similar throughout the research, and the curriculum negligence to ethical consciousness and instruction. In general, it is possible to assume that AI tools are relatively valuable to the pedagogical process when they are incorporated in a wise way and do not replace the ability of the students to write independently.

2.2 Research Gap

Even though AI-aided tools have become more popularized in the educational context, particularly in the higher learning settings, various knowledge gaps in the utilization of these tools and the perception shift particularly among Pakistani BS English learners still remain. Most of the existing body of literature has been generic in character, covering a more significant number of universities (Alshraideh et al., 2024; Faiz Mahmood et al., 2025) and has not covered the topic of trends in the use of discipline, in the case of the English language programs. The existing gaps on the given research topic are not that significant since there were no empirical studies to monitor how AI tools the improvement of overall writing skills, including sentence structure, vocabulary, content organization, and academic tone (although the benefits of AI tools have been discussed in the context of idea generation, grammar correction, and paraphrasing, Chen and Liu, 2023; Ridho et al., 2024).

Furthermore, past research has been inclined towards the element of technology adoption (TAM-based researches) without attaching sufficient attention to the perceptions, the sensibilities in connection with the ethics and judicious use of AI tools when preparing academic manuscripts (Balraj, 2025; Ikram et al., 2025). The conceptual has dealt with over-reliance, originality and other issues but the reality of the same has not been thoroughly covered in the actual scenario of Pakistani universities. Moreover, a research conducted in ESL setting/EFL setting (Sidra and Asma, 2025; Li et al., 2024) has indicated the usage of AI tools to scaffold an ESL learning process; however, limited studies have been conducted regarding how BS English students enrolled in the International Islamic University, Islamabad (IIUI) can utilize AI tools in the writing of assignments and what effect AI tools have on the confidence, independent thinking, and critical thinking of writing original sources.

The provided research would curb these gaps providing a small research on the patterns of AI tools utilization, their influence on the degree of writing competence, and how students of BS English at IIUI perceive AI-assisted academic writing and ethical issues. In that sense, it will contribute circumstantial evidence to the literature on the concept of the incorporation of AI and its influence in the context of higher education and alter the practice of responsible AI usage in the English language instruction.

3. Research Methodology

3.1 Research Type

The research proposed will be quantitative research method, as the research will rely on numerical data collected through a structured close ended questionnaire. The correct type of approach is quantitative because the study will be aimed at identifying the views of the

students, their emotions, and their experiences with the use of AI tools to enhance their capabilities in writing English. Using the quantitative research one can collectively and systematically reproduce and statistically analyse data and thus a researcher can determine trends and compare answers to the research and generalise conclusions based on measurable trends and not interpreting responses based on subjective rather than objective responses which can be measured. The research will be objective, precise, and replicable because the investigators will employ such numerical scales as the rate of the AI tool usage, perceived usefulness, and self-assessed writing skills improvement.

In addition, the study is descriptive as it targets the description of behaviors, practices and attitudes of BS English students that are present in the International Islamic University Islamabad (IIUI). The descriptive design suits well because the research aim is not to perform any manipulation and identify the causal connections instead, an efficient and comprehensive description of how students are using AI-aided writing instruments nowadays is needed. The design will be applicable to reveal the patterns of the actual life use, the amount of reliance of the students on a tool like ChatGPT, Grammarly, and QuillBot, and the ethical aspects of using them.

3.2 Theoretical Framework

An excellent theoretical framework prepares any study- it allows you to relate your work to the larger concept and makes sense out of whatever you are seeing. In this case, we will build on two theories namely the Technology Acceptance Model (TAM) and Constructivist Learning Theory. Both assist in explaining the difference between the way students use AI tools in their academic writing, and what they derive out of the same.

3.2.1 Technology Acceptance Model (Davis, 1989)

In 1989, Davis had developed TAM to estimate the reason behind the adoption of new technology. It is reduced to two ones Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). PU has everything to do with the belief that a tool, such as ChatGPT or Grammarly, benefits a person in his or her work. PEOU relates to the ease and the convenience of the tool.

In this research, PU demonstrates the extent to which students would recognize these AI tools as an actual enhancement of their writing and homework. PEOU, in its turn, provides us with the information concerning whether students will have no problems and can easily incorporate these tools into their daily study process. TAM (Davis, 1989) helps to delve into what motivates students to test AI writing assistance- or what prevents them.

3.2.2 Constructivist Learning Theory (Piaget, 1952; Vygotsky, 1978).

Piaget invented Constructivist Learning Theory in the year 1952 and Vygotsky advanced in that in 1978. It hopes that fundamentally, people construct knowledge through leaping, experimentation, and collaborating with other individuals. It is everything learning through doing, solving some problems and sharing ideas.

In practice, AI assistance such as ChatGPT, Grammar and QuillBot would be perfectly integrated into such a strategy. They allow students to play around with language, narrow up their sentences and toy with new words and constructs and in other words, they practice and learn by doing it. The feedback is immediate and the students are able to see what works and does not hence they are able to improve with time.

In order to deconstruct the reasons behind student adoption of AI tools and expected outcomes therefore, TAM (Davis, 1989) comes in handy. The Constructivist Learning Theory

(Piaget, 1952; Vygotsky, 1978) demonstrates how these tools in fact lead them to become better writers. The combination of these two frameworks provides a complete understanding of the ways and the reasons students use AI in writing academic papers the practical and the learning ones.

3.3 Research Design

The following is an overview of the process of organizing the research and gathering data of this research study. We will take you step by step through the process I followed to receive the open truth about the way students used AI wholeheartedly in academic writing. The research design and the way how we constructed the questionnaire are laid out and make everything transparent and easy to understand.

In this study, we chose a survey. Surveys suit very well where the information about a substantial number of people has to be obtained within a limited period of time. By doing this, we managed to gather the thoughts, habits and experiences of students regarding the use of AI tools in a manner that was structured and could be analyzed easily. It also assisted us to identify patterns and trends concealed in their responses.

3.3.1 Creating the Questionnaire with Google Forms

A closed-ended questionnaire was developed by us using Google Forms. I selected Google Forms as it is an easy to use application, it is phone-compatible, and it lumps the data together on its own. Also, it delivers instant charts and summaries, thus at the beginning, it became much easier to sort and to make the information positive.

The initial portion of the questionnaire required specifics of the basics: semester, gender, age group. This information provided some background to their responses concerning the use of AI and an idea of the identity of the respondent.

In the second place, we were interested in the real AI tools that students use. The interview question about the apps they use most frequently provided us with a vivid understanding of what is in demand among BS students studying English or what kinds of platforms appear in their homework.

Third section explored the use of AI tools in assignments by the students. We inquired also about how frequently they use AI and what type of writing they utilize it on; whether it is brainstorming, grammar check, or organizing their ideas. We also enquired about the perception of the students on their writings whether they feel good or bad when using AI. Were the tools more likely to increase or decrease their confidence in the tools? Was AI assisting them to write it better or was it merely making it easy? Their responses provided an insight as to whether they view AI as useful or potentially holding them back.

Thereafter in section called Ethical Awareness, we concentrated on what the students were aware of regarding the responsible use of AI. We were interested to determine whether they knew what plagiarism was and what was unethical and what was ethical as far as academic conduct was concerned. Their reactions demonstrated that they are conscious of the regulations and implications involved with using AI.

Overall, the survey, designed with the help of Google Forms and organized well, simplified the task of data gathering and made it efficient. The problem of dividing the questionnaire into clear parts and combining the question forms assisted us in obtaining a complete image of the usage of AI, attitude to it, and the extent of knowledge regarding the responsible usage of AI. Such a strong foundation allowed actually digging into the results and making some conclusions which could be considered meaningful.

The questionnaire went out of order combining various kinds of questions: Likert scales (15) and multiple-choice questions and checkboxes, as well as agreement scales. The variety of question types allowed me to go deeper and obtain trusted and detailed information about likes and preferences of students in terms of AI application in writing.

3.3.2 Data Collection Procedure

Having the appropriate data is important in any research, and that implies that the data has to be gathered in the appropriate manner. In the case of this study, it began with the BS English students. We ensured that we had a definite course of action, and we never veered into any unethical areas and respected all privacy of everyone.

The first thing we did was to obtain official permission in the university department. Nothing could pass on without that green light. This measure swept away any red tape, as well as ensured that the study was within the bounds of the rules of the university. The following was direct with the students. They answered on the very reason why we were conducting the research and assured them that all their answers would remain confidential. The students were informed that their answers will not be distributed to third parties, and their personal information would not be compromised.

Then, we made it simple and digital so as to reach the students. Our survey was developed on Google Forms and distributed as WhatsApp links. It was simple, quick and it fitted in the day to day lives of the students. In addition, it made them access more students within a shorter time. No one was forced to take part. Only students who desired to participated in it would fill the form at their own pace. This strategy made the process fair and it did not interfere with the right of every one to make a choice. We were able to retrieve 30 good answers in the final analysis. We verified all of them, retrieved the information, and

prepared to get into the analytical process. These responses formed the crux of the research, in terms of assisting us in addressing the key research questions.

In a nutshell we were careful with every procedure of the project, including obtaining approval and presenting the project, to making the participation easy and keeping the data safe. This prudent practice predetermined the honest and correct results.

3.3.3 Data Analysis Procedure

We summarized and analyzed the data used in this study in the following way. It all had to be precise and consistable and thus we had a step-by-step process that was undertaken. Once we got the answers of 30 BS English students through a structured questionnaire process, we put those answers in tabular form, with Google form and Google sheet and analyzed them. Both descriptive statistics and thematic methods were involved and all of them were aimed at providing the key answers to the main research questions.

To begin with, we collected the answers of the entire sample size of 30 students using Google Forms. I transferred it to Google Sheets after that. The availability of all the information at a single point made the following steps truly easier and it was simple to maintain order. Then we proceeded to do the responses one by one. We scanned through the entries in search of any blanks or repeat entries, and removed them. In that manner, the data remained up to date and good.

In order to perform an actual analysis of the responses, we translated the answers in terms of the Likert-scale into numbers between 1 to 5. In such a manner, we would be able to quantify contentiousness or commonness. In case of multiple choices and check-box questions we used them as nominal variables. We also ensured that closely related statements

were phrased in a similar manner such that the analysis would be in favor of the board. All the questions of the questionnaire were sorted by us into four key categories as Demographics, AI Usage Patterns, Perceived Competence and Impact, and Ethical Awareness and Challenges. The presentation in such a group facilitated the process of discovering patterns and getting deeper into each issue.

Most of the hard work was done by Google forms which automatically calculates frequencies, percentages, and mean scores of each item. These figures provided a good impression of the overall response of students and the mean opinions with these figures. In order to make the matter absolutely clear, Google Forms generated bar charts, pie charts and summary graphs on each question. Such visuals were of great assistance in identifying the trend with ease and drawing comparisons between various responses.

We analyzed the responses in the perspective of major themes such as the use of AI by students, their writing abilities, awareness in relation to ethical concerns. This presented ease in analyzing patterns and links in each section of questionnaires. In case of difficulties we concentrated on the check-box questions. We were interested in learning what issues students have in reality in regards to AI tools. This move brought out the key challenges which lie on the way to effective and responsible use of AI.

We had to put the results in perspective and so related the results to previous studies and applicable theories. This was useful to demonstrate the level of uniformity of the findings and gave credence to the academic relevance of the study.

Ultimately, we examined the numbers and the images jointly trying to make some real conclusions. We concentrated on the ways of student use, what skills are considered to be

developed, what are their attitudes, ethical issues, the problems which they may encounter. Overall, this discussion provided a descriptive and in-depth examination of the process and experience of AI-assisted learning among students.

4. Data Analysis

The magnitude of the results among 30 BS students of the International Islamic University Islamabad, majoring in English was compared depending on the demographic, and four general parts of the questionnaire as per the research objectives of the proposed research. Descriptive statistic was calculated in frequencies, percentages, at least mean scores and special graphics were constructed with the assistance of Google forms.

4.1 Section I: Demographic Information

This part is the demographic profile of the students of International Islamic University Islamabad (IIUI), 30 BS English students who took part in the study. It has the data on their semester, gender, and age groups.

4.1.1 Semester of Study

Figure 1:

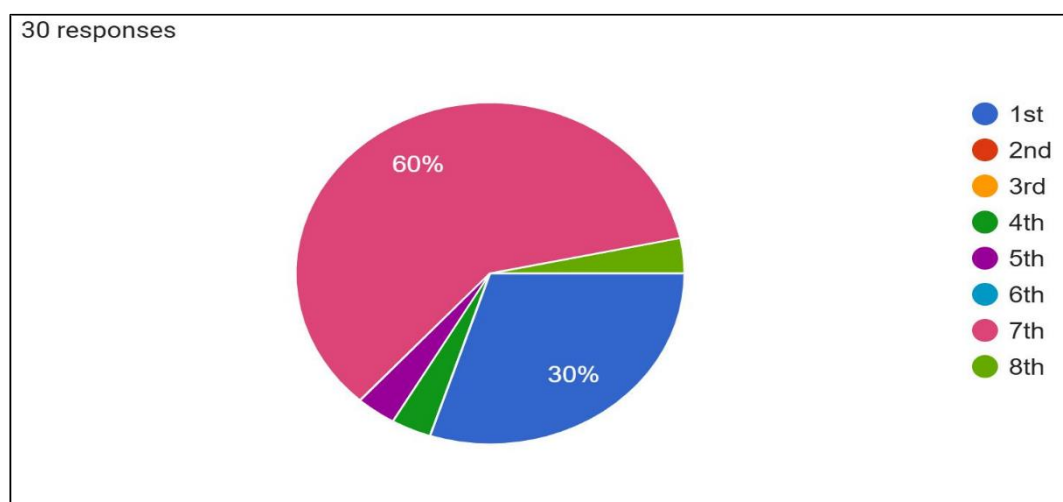


Figure 1: Semester of Study among BS English Students

This (shown in the Figure 1) has been primarily scheduled with the participants with 60% (n=18) occupied in the 7th semester, and 30% (n=9) occupied in the 1 st semester. The smaller percentages were of the 5 th semester (6.7, n=2), 4 th semester (3.3, n=1) and the 8 th semester (3.3 n=1). One can assume that most of the respondents are older BS English students, which means that they have a higher experience in doing academic writing tasks and, therefore, will be more willing to utilize AI-based software such as ChatGPT, Grammarly, and QuillBot. Topicality of the results due to the fact that the upper-semester students are the majority group as well increases the likelihood that the latter will be utilized in research papers, assignments, and presentations in which the AI writing assistance usage becomes the common practice. They are also better exposed to academics, which also fits Technology Acceptance Model (TAM) since the more complex the task is, the more Perceived Usefulness (PU) and Perceived ease of use (PEOU) of AI tools.

4.1.2 Gender

Figure 2:

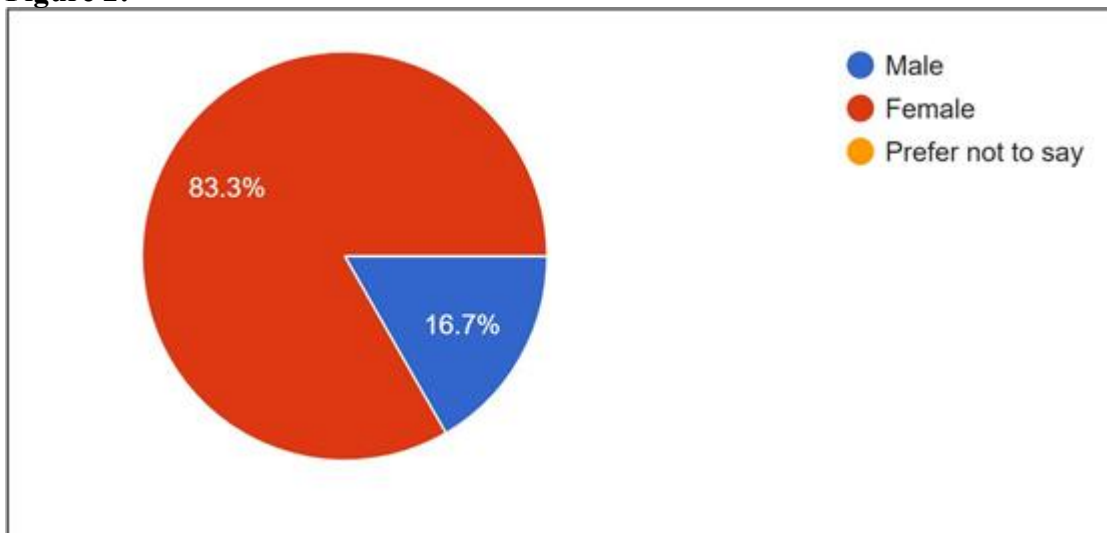


Figure 2: Gender of BS English Students

The gender distribution shows that the respondents female are more than the male ones by 83.3 (n=25) and 16.7 (n=5) respectively. It is such gender ratio that BS English course in Pakistani universities depicts, as the average number of females enrolling is higher.

4.1.3 Age Group

Figure 3:

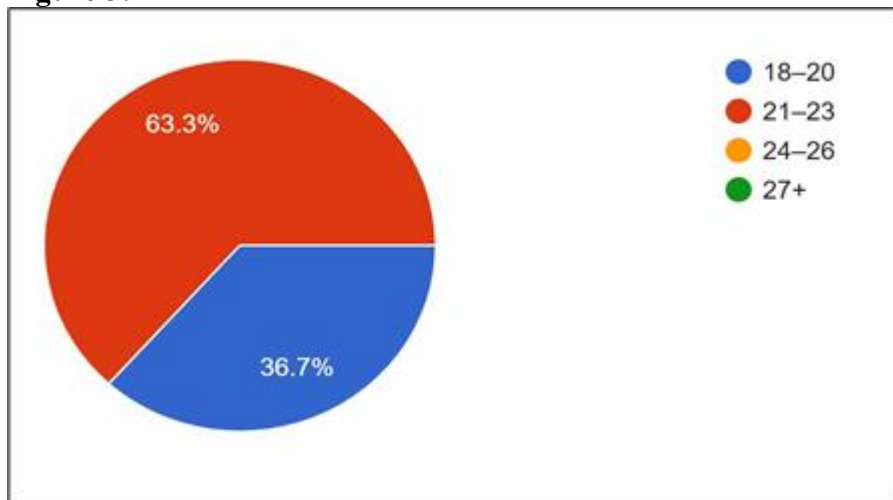


Figure 3: Age Group of BS English Students

The age distribution means that, a greater number of the respondents represented the 21 to 23 group that composed 80 percent (n=24), followed by 18 to 20 group that composed 20 percent (n=6). All the participants did not belong to the old range of people. This would mean that the sample size comprises of primarily young adult learners who are digitally savvy and would not be constrained by the application of modern technological tools. The fact that they have frequent access to online platforms predisposes them to be more willing to try AI-based writing assistant, as this aspect aligns with the assumption of the hypothesis of the TAM that is the younger clients tend to demonstrate higher behavioral intention to use new technologies. The Constructivist perspective can also be evidenced with respect to age homogeneity in the

form of ChatGPT and Grammarly where students at the age-based stage rely on the help of external assistance to further enhance academic skills.

4.2 Section II: Commonly Used AI Tools

This section describes the types of AI tools students use.

4.2.1 Types of AI Tools Used

Figure 4:

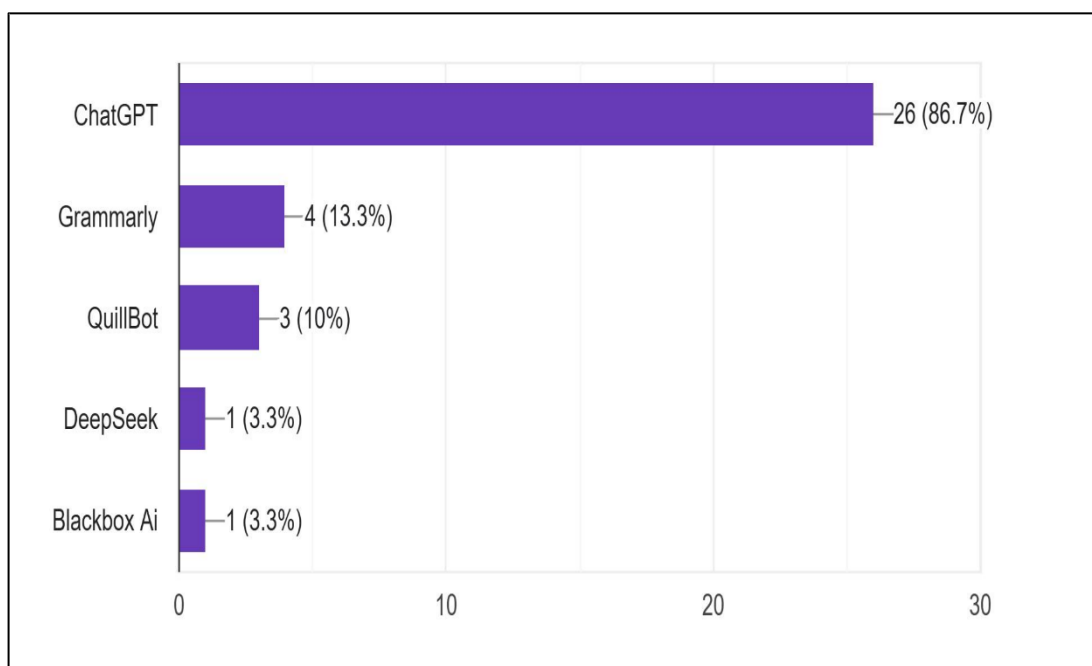


Figure 4: Types of AI Tools used by BS English students

As we can observe in the chart, most of the participants (80% or it is n=24) were using ChatGPT, followed by Grammarly (73.3 or it is n=22) and QuillBot (46.7 or it is n=14). The percentage of respondents who used other tools was also low (6.7% n=2). The tendency helps prove the fact that BS English students tend to use AI tools that offer a full-fledged system of support, including ChatGPT (idea generation and explanation) and Grammarly (grammar correction) and QuillBot (paraphrasing). Indicative of such options is the fact that

students rely on them to achieve better results in their writing, reduce the mistakes and manage the academic burden.

4.3 Section III: Patterns of AI Tool Usage

This section describes the types of AI tools students use, how frequently they use them, and the specific academic tasks for which these tools are employed.

4.3.1 Frequency of AI Tool Usage

Figure 5:

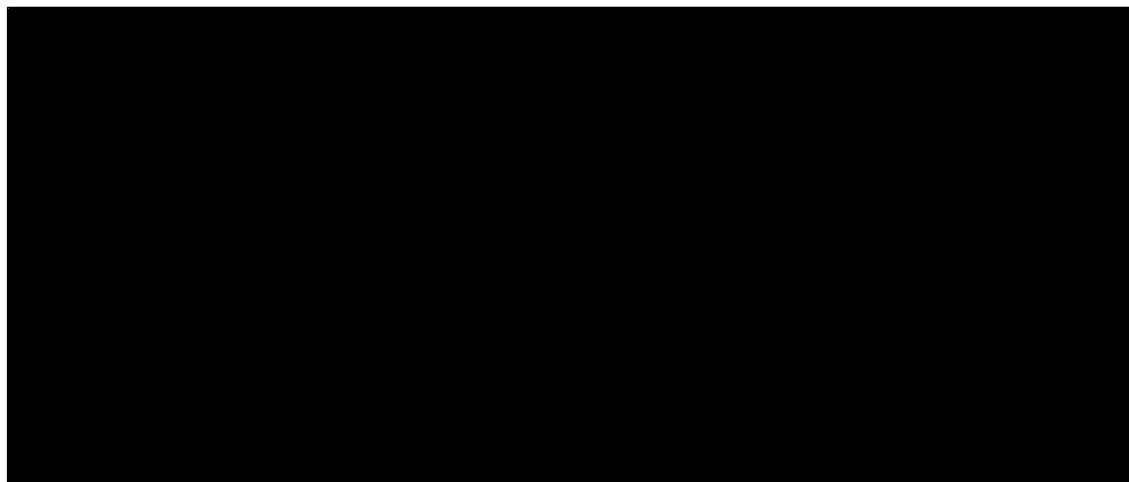


Figure 5: Usage patterns of AI tools among BS English Students

As Figure 5 presents, 50% of students (n=15) use AI tools 2-3 times per week and 33.3 (n=10) said they used it daily. The people who utilized AI at least once per week are not very numerous (13.3, n= 4), and only one person (3.3) tended to use such tools rarely. No student selected “never.” It means that AI tool usage is now seen as a component of the academic life of students with high behavioral intentions to use technology according to the postulates of TAM (Davis, 1989). Repeated use is also a feature that attracts dependability to the scaffold that has been enhanced with AI as per the Constructivist philosophy (Piaget, 1952; Vygotsky, 1978) in which students repeat reliance on an external aid in generating

competency.

4.3.2 Tasks Performed Using AI Tools

Figure 6:

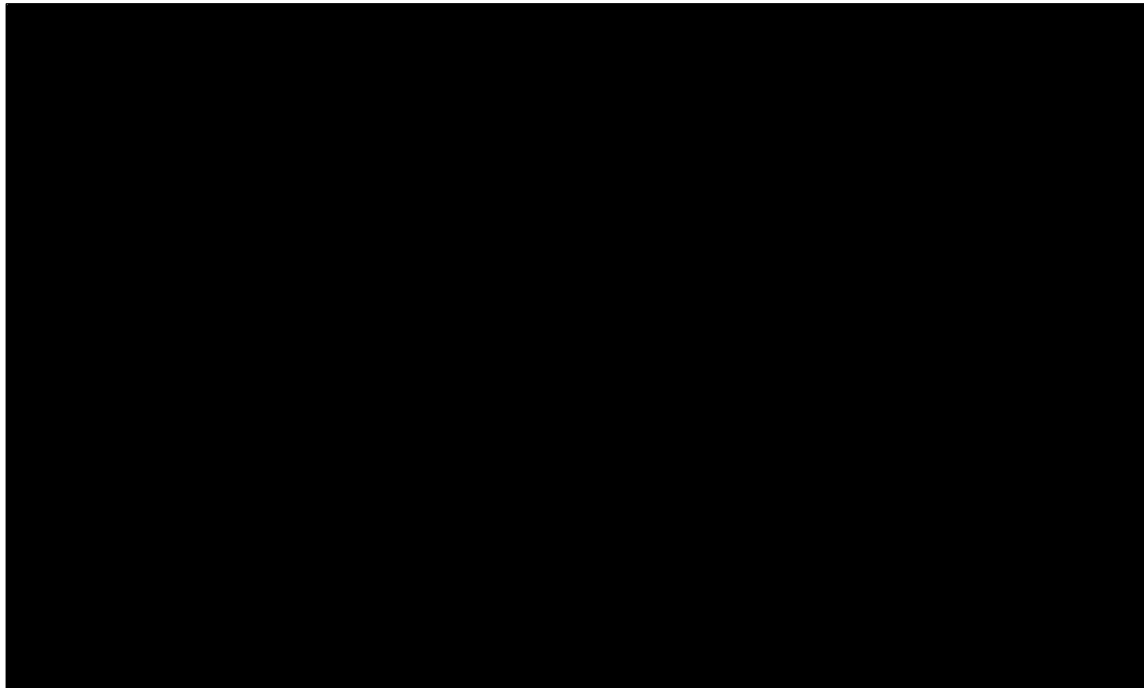


Figure 6: Tasks Performed by BS English Students using AI Tools

The answer of the respondents was that they did some activities where they involved the use of AI. The predominant one is 80 per cent (n=24) grammar and spelling correction then 70 per cent (n=21) paraphrasing ideas, and 56.7 per cent (n=17) organizing / structuring assignments. The proofreading and editing and referencing and citation were used by the 50 percent (n=15) and 23.3 percent (n=7) respectively. These patterns can be discussed as the fact that students use AI tools to help them in micro- and macro- (organization, coherence) writing outcomes.

4.4 Section IV: Impact on Writing Competence

This section reports students' perceptions of how AI tools have influenced their overall academic writing skills and specific areas of writing improvement.

4.4.1 Overall Improvement in Academic Writing Skills

Figure 7:

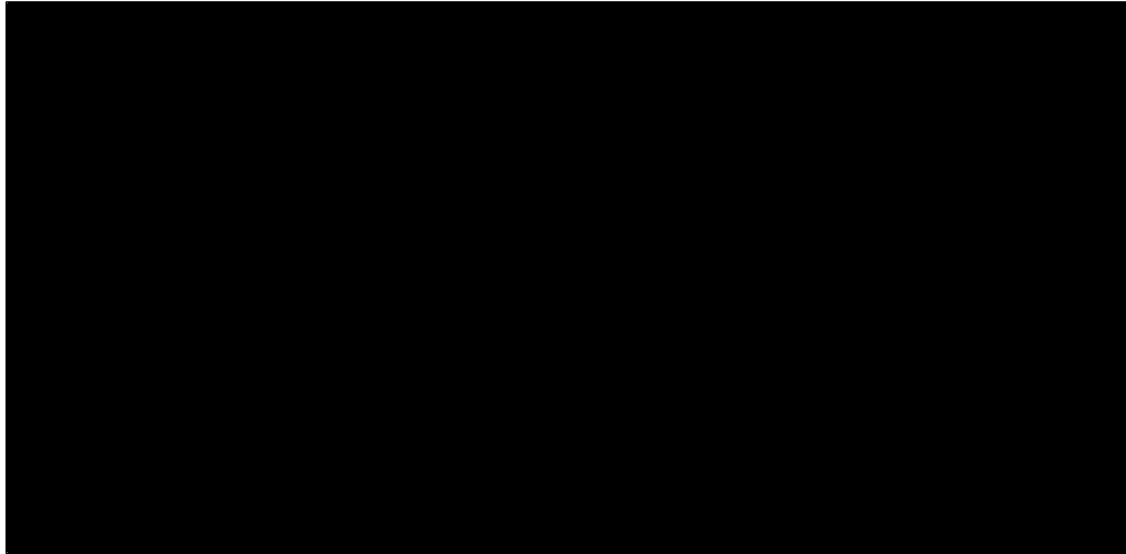


Figure 7: Frequency of Improvement in Academic Writing Skills among BS English Students

The responses indicate that the percentage of the respondents who rated improvements at the level 4 were 46.7 percent (n=14) and at level 4 (n=9) was 30 percent that shows high perceived improvement. And the meantime, 13.3 percent (n=4) had level 3 rating, and the one 6.7 percent (n=2) did the same to level 2 or 1. This discovery shows that most of the participants believe that AI technologies can help an individual make their writing academic activity much more efficient and skillful, particularly, in accuracy, clarity, and composition..

4.4.2 Specific Writing Skills Improved

Figure 8:

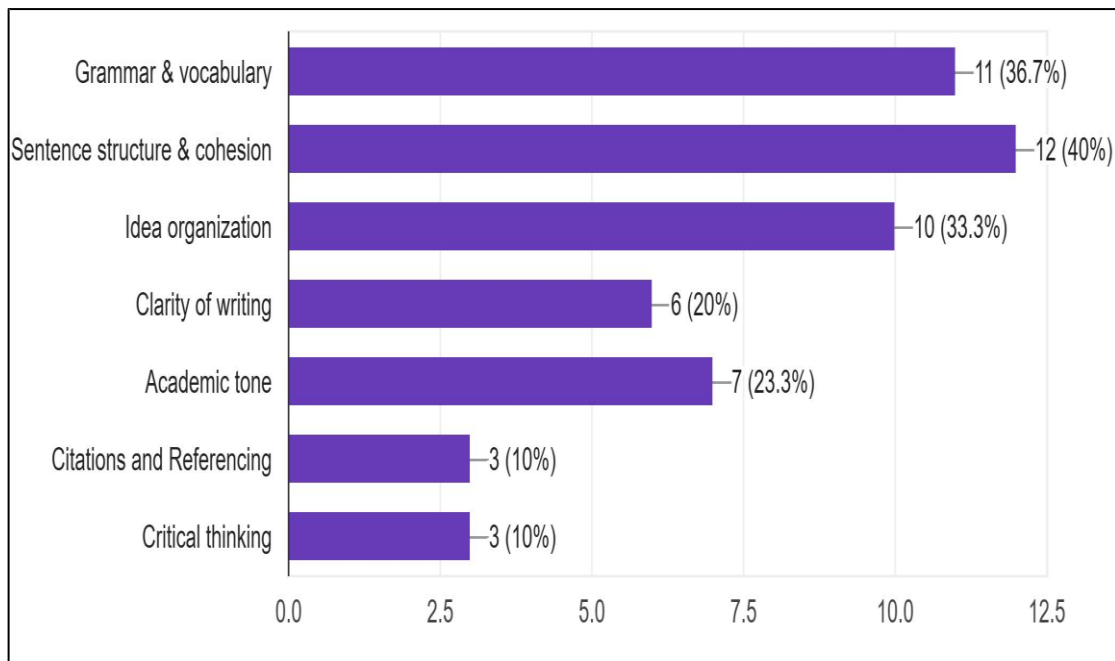


Figure 8: Specific Writing Skills Improved among BS English Students

Majority of them claimed that they were able to acquire grammar (80% n=24), vocabulary and sentence structure and cohesion (70% n=21). On the organization of ideas, a percentage of 63.3 (n=19) was noted that followed with the opinion of 60 percent (n=18) that was written clearly. Academic tone was also improved (43.3%,n=13) and citations/referencing is also improved (26.7, n=8).

4.4.3 Confidence in Producing Original Content

Figure 9:

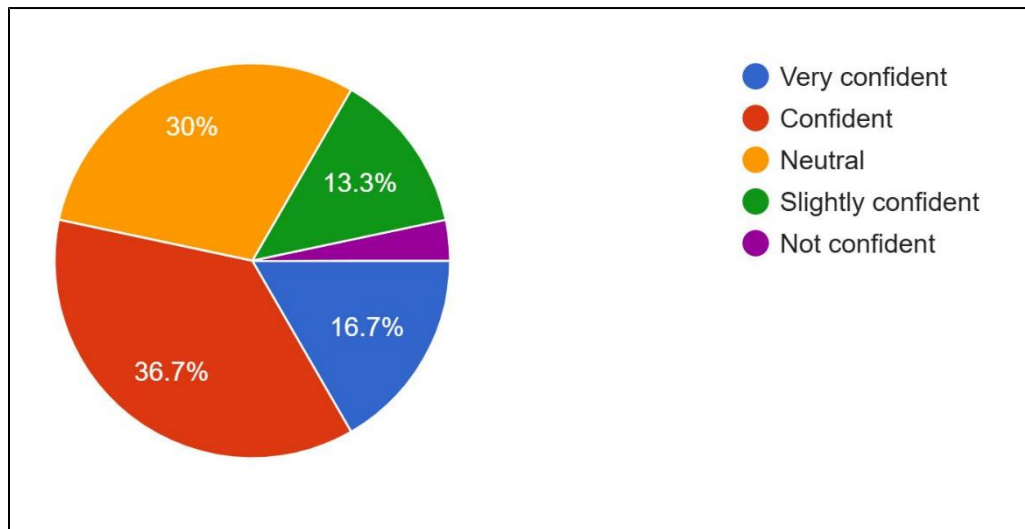


Figure 9: Confidence in Producing Original Content in BS English Students

The largest proportion (43.3 percent of the total number of participants= 13) of people chose Confident and 30 percent (= 9) chose Neutral and Very Confident. A low proportion (10, n=3) of them also had slight confidence and none of the students selected the not confident option. Such results show that even though students are relying on the use of AI tools, it does not necessarily imply that they do not know that they can be confident in their ability to preserve originality in their work. This follows responsible use of AI but also it is connected to a sphere where students may feel an exaggerated sense of autonomy.

4.5 Section V: Ethical Awareness

In this section, the students provide the responses concerning the use of AI tools in a moral and responsible manner, and the fear of over-reliance and content originality.

4.5.1 Responsible Use of AI Tools

Figure 10:

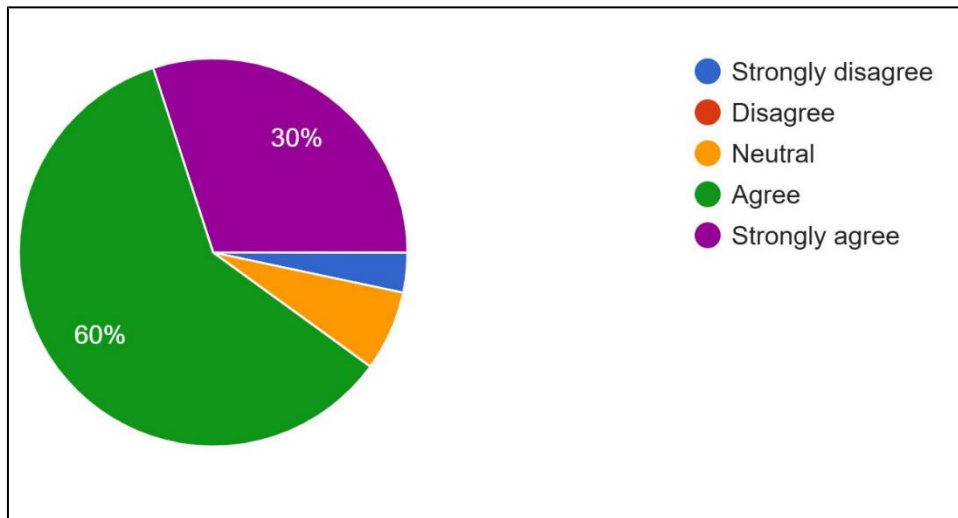


Figure 10: Responsible Use of AI Tools among BS English Students

The moral consciousness of most participants was also high since 53.3% (n=16) of the participants responded Agree, and 30% (n= 9) responded Strongly Agree. The proportion of the neutral ones was also low with only 10% (n=3) and the disagreement with only 6.7% (n=2). It means that the learners know about the guidelines requirements in the academic writing and the field of using AI.g.

4.5.2 Over-Reliance on AI and Learning Impact

Figure 11:

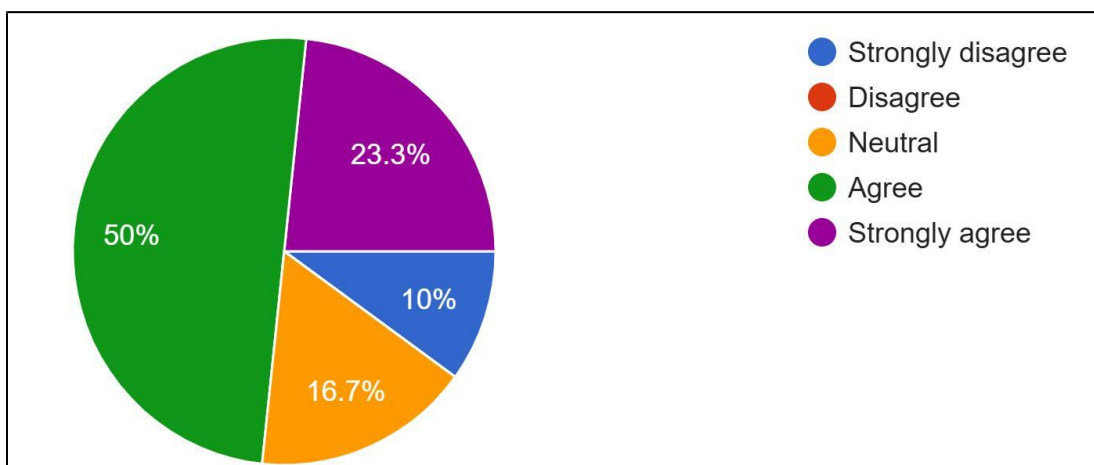


Figure 11: Over-reliance of BS English Students on AI Tools

Majority of them answered half (n=15) said that over-reliance can also be affecting learning with 36.7% said they strongly agreed (n=11). There were only 10 percent (n=3) who agreed or 3.3 percent (n=1) who did not. Such results can be explained by the concern of many people around the globe that excessive dependence may lead to losing the ability to think critically and create independent texts, which is also one of the leading motifs in the literature on AI ethics.

4.5.3 Effect of AI Tools on Originality of Content

Figure 12:

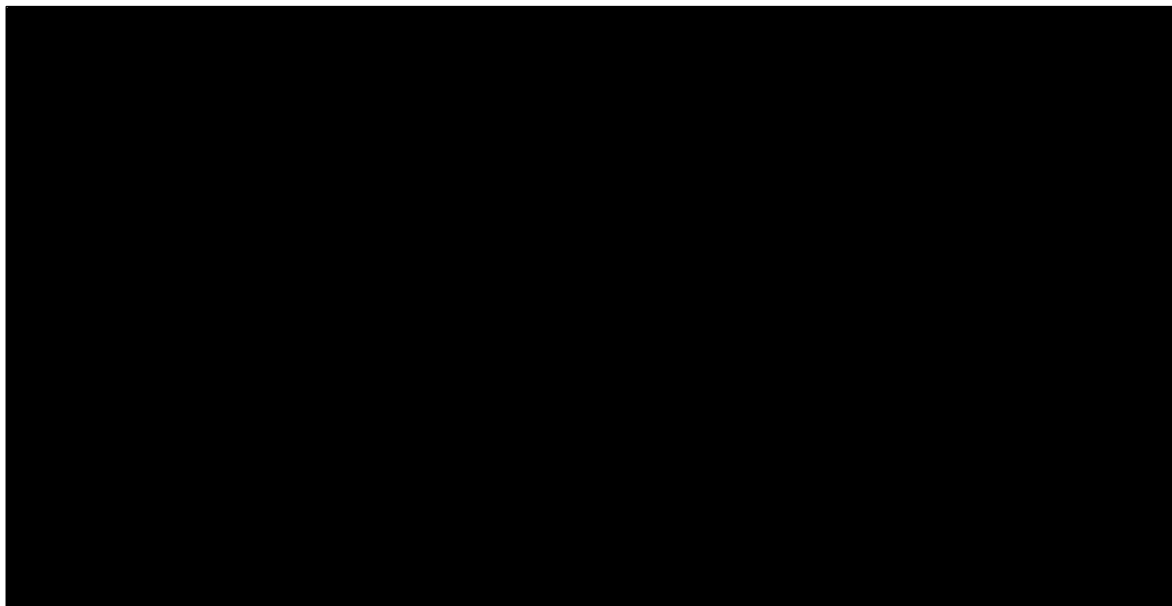


Figure 12: Effect of AI Tools on Originality of Student's Content

The answers showed that 40 percent (n=12) of the respondents had selected the level 3, 26.7 percent (n=8) level 4 and 16.7 percent (n=5) level 2. The fewer groups were selected 5 (10 per cent., n=3) and 1 (6.7 per cent., n=2). It implies the existence of mediocre concerns regarding originality where it is revealed that though AI contributes to enhancing the quality

of writing, students have not forgotten that it can be used to influence the authenticity.

4.5.4 Challenges Faced Using AI Tools

Figure 13:

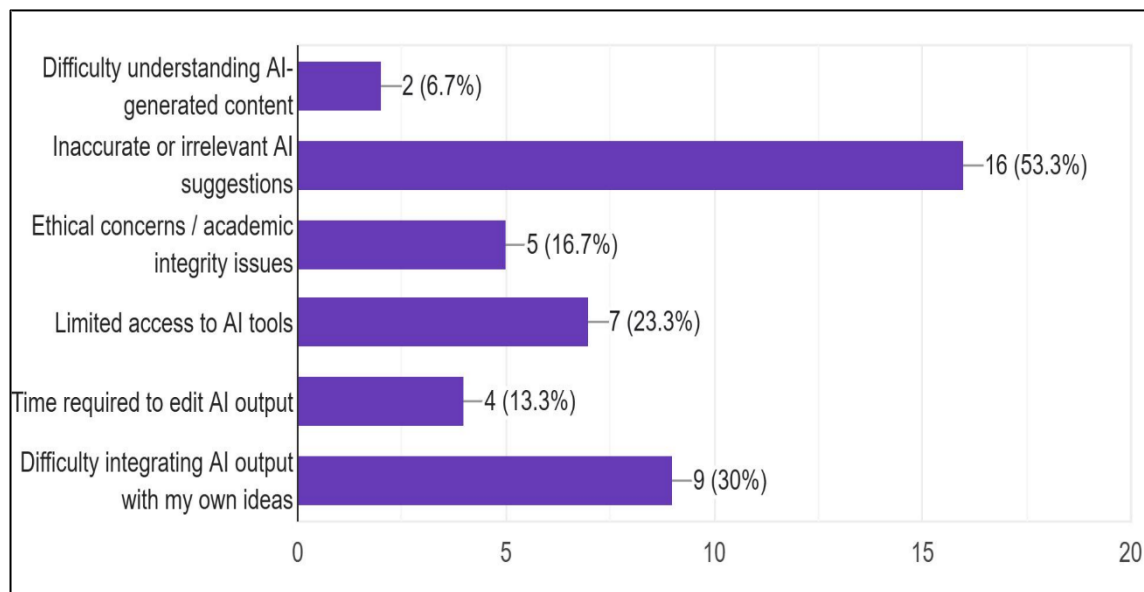


Figure 13: Challenges Faced by BS English Students using AI Tools

Time to be allocated to editing the AI output that was chosen by 63.3per cent was the greatest reported barrier (n=19). Another difficulty to answer (n=16) that was hard to respond to (53.3) was the inability to merge AI output and personal ideas. In line with this, 46.7percent (n=14) and 33.3percent (n=10) percent of the unethical proposals/suggestions were incorrect and irrelevant respectively. A smaller number of them indicated that they were confronted with AI material (23.3% n=7) and limited access (10% n=3). These challenges state that AI applications increase composition, yet it should not result in critical thinking.

5. Findings and Discussion

The article on the application of AI tools and writing competency and perceptions of BS English students, of Islamic International University, Islamabad offered some intriguing

details on the tendencies, consequences and morals of writing assigned papers with the assistance of AI. Quantitative analysis of the results was conducted on a sample of 30 people, through Google Form, frequency, percentages and charts to come up with the answers to the research questions.

5.1: Which AI tools are most frequently used by BS English students at IIUI for assignment writing?

The findings indicate that the students are socially disposed as far as the kind of AI device employed to write some assignments. ChatGPT was the most utilized with the highest division (n=24) of 80 percent students using it and Grammarly (n= 22) and QuillBot (n= 14) followed with 73.3 and 46.7 percent, respectively. The percentage of the use of other AI-assisted tools use was low (6.7% n=2). It is a sign of high reliance on generative AI and the language support applications to generate ideas, check the grammar, and paraphrase. The creation of content and structuring assignment activities are the most widespread models students use with the help of ChatGPT, and Grammarly and QuillBot are applied with the grammar and language readability and paraphrasing accuracy. All these tendencies suggest that students make the adoption of AI instruments selectively to reduce the number of cognitive load and to retain the ability to gain control over the writing process, which, in addition, will enhance the quality of assignment.

The results are in line with said Technology Acceptance Model (Davis, 1989) that holds that motivation on behavioral intention to adopt such tools is facilitated by high Perceived usefulness and ease of use. The Constructivist Learning Theory can also be

deployed (Piaget, 1952; Vygotsky, 1978) in which the students actively engage in using AI scaffold to build knowledge and receive feedback thereof instantly that improves vocabulary, sentence structure and content organisation. These conclusions are aligned to the past research studies. Alshraideh et al. (2024) have noted that the perception of usefulness is a highly influential element in the Pakistani universities that affect the use of AI. Chen and Liu (2023) determined that ChatGPT is more efficient when it comes to revision of EFL learners but Ridho et al. (2024) and Apriani et al. (2025) embraced the role that Grammarly and QuillBot played during the editing, paraphrasing, and grammar support process. ChatGPT, Grammarly, and QuillBot, thus, outcompete the AI-prompted process of academic writing among BS English learners.

These results suggest that AI applications are actively used, and at the same time, they act as good frameworks to support the process of independent writing, content creation, and language enhancement.

5.2: What are the common patterns of AI tool usage in completing academic assignments?

The data indicate that correction of the grammar (76.7% n=23), and generation of ideas (70% n=21) have been noted as the key activities the students do with the use of AI tools. The half of the students (n=15) reported paraphrasing, 43.3 (n=13) students reported content structuring and 36.7 (n=11) students reported editing or proofreading. The use of other activities such as creative writing or research assistance was reduced. The trends show

that students utilize AI tools in certain ways whereby they are centered on the use of the tools that can be more effective on assignment clarity, coherence, and structure. On numerous occasions, learners have been seen to combine multiple applications to complete different tasks e.g. ChatGPT to come up with ideas and Grammatically to repair grammatical mistakes. The strategy involving AI application is seen as intended and the students apply the capability of the tools in the most optimal way i.e. to complement their work, it implies that the dependency on AI is not as high as active learning.

Such trends are similar to TAM (Davis, 1989) whereby a sense of usefulness leads to frequent use of the tool, and the sense of easiness leads to an uptake of the tools by students in an efficient way. The other theory that is used to explain how AI tools may be used in constructivist learning (Piaget, 1952; Vygotsky, 1978) is that they can be denoted as scaffolds, therefore, the student can generate meaning and progress working on the assignments by himself. The applications can provide real time suggestions and remedies that can guide the students in their thinking processes in addition to consolidating the learning process. The earlier studies support such observations. According to Ridho, et al. (2024), mostly AI tools are used by undergraduate students in writing and revising homework, however, Apriani et al. (2025) found that the ChatGPT can be utilized to arrange the content, and Grammarly can be used to correct grammar and language. Based on these findings, it could be assumed that the trends of AI tools application in IIUI are utilitarian and theoretical principles of technology-mediated learning.

The results show that the use of AI tools by the students is analytical and purposeful where the intention is on enhancing the quality of the task yet one does not lose focus during

the learning process.

5. 3: How do AI tools affect students' writing competence and language skills?

Also, AI-assisted applications add to the skillfulness of writing to a significant degree as it is analyzed. Grand majority of the students had an upgrade in grammar (83.3% n=25), vocabulary (73.3, n=22), sentence construction/coherence (70, n=21) and content arrangement (60, n=18). Nearly a half of all students (46.7, n=14) stated that they were somehow impacted in originality, which presupposes that they were conscious of the potential overreliance on the artificial intelligence-generated content. On the one hand, AI tools are helpful in both mechanical and cognitive parts of the writing process according to such findings. ChatGPT will help in the ideas generation and formatting them, whereas Grammarly and Quill Bot will enhance the linguistic correctness and the capacity to paraphrase the text. Students have an opportunity to create smoother and more well-structured work with the assistance of AI scaffolds, improve their level of confidence and self-directed study.

These results are relatable to the TAM (Davis, 1989) because the usefulness of AI tools perceived leads to the enhancement of writing and long-term use. One of the explanations, which are applied in this study, is the Constructivist Learning Theory (Piaget, 1952; Vygotsky, 1978): students actively build and improve language knowledge using AI feedback and applying self-regulation and suggestion to the paper. The past researches have established these effects. Chen and Liu (2023) suggest that ChatGPT can provide immediate feedback on the item, in addition to enhancing its strategies of revision. Apriani et al. (2025)

and Rafiq and Alam (2023) have come to the conclusion that Grammarly and QuillBot influence grammar, vocabulary and overall writing competence. The findings imply that AI entertaining are used as learning aids to support the acquisition of skills and ensure the maintenance of student agency in writing.

As the analysis has shown, AI devices both regarding the language level and writing skill enable the students to become more correct, structured and understandable without ignoring the matters of ethicality and originality.

5. 4: What are students' perceptions and ethical awareness regarding the use of AI in assignment writing?

The information indicates that students positively rate AI tools with 80% (n=24) students having high perception of usefulness and 70% (n=21) students having favourable attitude towards using AI. However, 53.3 (n=16) expressed over-reliance and 40 (n=12) was ethical risk, e.g. plagiarism and less originality. Such way, the students demonstrate their interest towards the AI-assisted learning and comprehending the responsible use. Students confessed that AI saves time and is better in grammar and generating ideas, but the majority of them indicated the importance of AI results to be assessed critically to avoid plagiarism. The findings show that, with the application of the AI technology in learning, there are moral concerns coupled with plagiarism where the application of the technology is centered.

The positive attitude and perceived usefulness support TAM (Davis, 1989) since adoption is enhanced by these opinions, but the behavioral intention to use AI responsible

stems is restrained by ethical considerations. In reference to Constructivist Learning Theory (Piaget, 1952; Vygotsky, 1978), when students use AI-driven scaffolds and are able to include feedback into learning, constructivist theory suggests that they learn to think critically and regulate themselves, which means that they do not fully rely on the tool. These observations are in line with the past studies. Students on one hand highly rated ChatGPT with a positive score but on the other hand, they are aware of the traps of plagiarism. Ikram et al. (2025) and Ridho et al. (2024) also observed the same results in relation to Grammarly and QuillBot and pointed out the need of ethical interaction, along with the skill training. The students of IIUI are also appreciative and considerate of the benefits of the AI tools and they do not neglect certain aspects of their academic responsibility and the behaviour of ethics.

The comprehending of advantages and disadvantages of the AI tools among learners is considerable, and they adopt it to increase their competence in terms of writing competency and know about the ethical responsibility, plagiarism, and proper academic conduct.

The findings provided by the research paper might also be utilized to demonstrate that the BS students of English at IIUI actively employ AI tools, namely, ChatGPT, Grammarly, and QuillBot, to compose academic papers in this case. The tools are directed in strategic application in the production of ideas, correction of grammar, the paraphrasing and arrangement of the content to perform functions of practicality besides perceived high degree of integration into the learning set ups as well. The importance of the AI assistive tools in writing competence and language skills is significant as it is provided as a scaffolding that can be applied in Constructivist Learning Theory yet the perceived usefulness and

superficiality of use explain the reason behind the usage, which agrees with the Technology Acceptance Model. Another high degree of awareness of the ethical aspect is among the students following the balance of using AI assistance and preserving the originality. Overall, the study notes that besides improving academic achievements, AI tools also provide the opportunity to learn independently, use responsibly, and engage critically, which has far-reaching consequences due to the implementation of the AI tool in the writing of colleges and universities.

6. Conclusion and Recommendations

6.1 Conclusion

The paper studied the trends, competence, perception, and conscience of BS English learners in the International Islamic University, Islamabad (IIUI) regarding writing their assignments with the support of AI-assisted applications, that is, ChatGPT, Grammarly, and QuillBot. These tools are the most popular according to the findings because ChatGPT is found to be the most popular of them followed by Grammarly and QuillBot. The generation of ideas, grammar correction, paraphrasing, matching content into a structure were generated using these AI platforms through the application of technology that was used in a prudent manner by students to render academic writing.

The application of AI tools has positively impacted the performance of the students in writing in terms of competence and language performance. The standard of grammar, vocabulary, sentence structure and overall structure of assignments was significantly enhanced and students have indicated that they now feel confident and efficient whenever

doing assignments pertaining to writing. The concern of ethical with regard to the study has also been demonstrated by students awareness of the threat of over-reliance, plagiarism, and the absence of originality who demonstrated an attitude of responsibility in the use of AI. The results are supported by the technology acceptance model (Davis, 1989) according to which the adoption behavior of students is described as the perception of usefulness and the ease of use and Constructivist Learning Theory (Piaget, 1952; Vygotsky, 1978) according to which the AI tools became the support systems in active learning, acquisition of skills, and self-controllability. In addition, the conclusions can be compared with the conclusions of other studies conducted in the local and international context as they confirm that AI tools are helpful aids when writing academic texts and require close and prudent ethics to perform the task.

Overall, the paper has discovered that AI-related tools are prevalent in the field of academic performance amongst BS English students at IIUI. The devices facilitate the quality of writing, learning, and the correct development of knowledge, but each individual must continue practicing the use of critical thinking and moral responsibility when using AI devices.

6.2 Recommendations

All findings were based on the following recommendations.

Computational intelligence systems such as ChatGPT, Grammarly, and QuillBot should be introduced to classes where the main goal of writing is achieved and not only as some form of show. It is not a question of allowing the students to entrust their thinking to a

machine. Rather, such tools are supposed to assist in generating a thought, cleaning up a text, and organizing a disorderly manuscript. Educators should demonstrate to them how to use AI to improve their work, yet also make them remember that they also have their voice and judgment. These tools can actually improve the writing abilities when purposeful use is made, without making the students a copy paste machine.

The universities should organize workshops and trainings on the same to both the students and the teachers, and they should make it a regular practice. These must include the use of AI tools, which are environmentally responsible, i.e. keep your head above the plagiarism threshold, avoid over-reliance on AI as a crutch and so on. Good training also indicates the positions of AI limitation and assists students to develop good writing habits. In doing this, AI becomes useful in the process of the actual learning and skill and not just in the process of facilitation.

The universities should also provide well-defined guidelines in the use of AI writing tools. The students, as well as all the people around the world, must be made aware of what can be considered as acceptable and what could be regarded as going beyond limits in terms of using AI in academic work. It has to remain centered on integrity and creativity. Whenever schools establish these expectations initially, students know how to utilise AI in a responsible approach, and it reduces plagiarism and other unethical activities.

Teachers ought to alternate- switch an AI-aided writing instruction but at the same time, they must use traditional methods as well. It implies the commentary of teachers, comments of classmates, the trendy discussion in the classroom, and directed writing tasks. In

such a manner, students will enjoy the advantages of AI, but they will also engage in actual discussion and collaborate as well as receive individual feedback. Having technology and experiential instructions would make students better, and they would explore the content more.

Researchers should excavate the ways of the actual influence of the use of AI tools on the writing skills in the long term. It is possible to identify the results of frequent AI use in long-term research that can demonstrate the benefit or harm of this practice. Worth considering also is how things turn out in various universities or between various cultures, AI may not have the same impact on everyone. And as the new AI platforms continue to emerge ever so, we should experiment on what ones are really useful in improving students as writers.

Under these proposals, the universities and colleges may make their process of using AI-based learning more efficient, improve writing, and become responsible and ethically mindful towards an era of new technologies, which will soon produce responsible students who will be able to succeed in their studies and later in their career.

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