Accessing the Integration of Generative AI Tools in Media and Allied Disciplines: Awareness, Practices, and Implications

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ABSTRACT

The research study aims at exploring the level of awareness, understanding and practices of using generative Artificial Intelligence (AI) tools for academic purposes by the undergraduate students of media and its allied studies in Karachi. It also focuses on understanding the positive and negative impact of using these tools on students' productivity, efficiency and skill development from their own perspective. Following purposive sampling technique, the study engaged 100 undergraduate students from 6 institutions studying 7 different disciplines related to media and its allied fields using a structured survey questionnaire. The study found that the students were familiar with generative AI tools and the majority of them had used some of these tools. However, the study finds that students mostly use the generative AI tools like refined search engines for extracting information and preparing notes and not for higher cognitive purposes in general. The study also highlighted that the students found these tools useful for enhancing their work efficiency and productivity where as they were mostly neutral while sharing their perceptions about the negative impact of these tools on the development of their skills.

Keywords: Artificial Intelligence, Generative AI tools, Media and allied fields, Academic purposes, Skills Development, ChatGpt, Productivity, Efficiency

INTRODUCTION

The history of Artificial Intelligence (AI) begins with fantasies, myths and rumors about human intelligence being possessed by non-human entities and defeating human beings. The invention of the first digital computer in 1940s was a first step towards its realization (Roser, 2022). In 1956, the term "Artificial intelligence" was defined when a workshop namely, "Dartmouth Summer Research Project" was held in Hanover, New Hampshire, United States of America. Many researchers from different disciplines of science and from linguistics and philosophy attended the workshop. They discussed computing machines which have potential of reasoning, intelligence and creative process. At this workshop an American computer scientist "John McCarthy" proposed a name "Artificial Intelligence" for this new academic discipline (Nicolae, 2024). Though AI is not a new phenomenon but the advent of advanced algorithms and other techniques for generative AI, the world witnessed an AI boom in early 2020s (Dormehl, 2020). Generative Artificial intelligence (GenAI) i.e., the ability of AI for producing text, images, videos, sound etc. in response to a given prompt is revolutionizing many industries. In the last few years many generative AI tools with easy user interface have been introduced. These tools are being used by a wide range of industries including the field of education. Use of generative AI tools by teachers and students for academic purposes have opened up a new

research avenue for the researchers (Keengwe, 2023). Researchers are interested in exploring as to how this revolutionary technology is affecting the behavior and practices of teachers and students and how it is impacting on the development of various skills and attribute of students. Generative AI models create images, text, audio, data analysis, sound and other types of content using the patterns and relationships that exist in the current datasets of existing content. It is critical to understand that generative AI models depend on the current data sets only (Roser, 2022).

Invention and accessibility of Generative AI tools are impacting on a variety of industry sectors in a variety of ways. Now AI can be used in many creative ways instead of just using it to make predictions or classifying the data. The production capability of generative AI has helped people and companies to become more efficient and productive by using time effectively, reducing the cost, adding more creativity. These tools are being used by the people of all ages and backgrounds (Keengwe, 2023).

Based on its apparent advantages in terms of efficiency, productivity and creativity, generative AI tools are quickly penetrating in Educational Sector and both Faculty and Students are using them. In order to create appropriate policies and structures for the effective use of generative AI tools, it is important that we understand the nature of its use and the awareness and understanding hold by its users about its pros and cons. The greater implication may be for Media and Allied fields of study where students do not only generate content in the form of text but use many other forms such as images, music, video, graphs etc. (Dormehl, 2020).

Since the access of this technology was made available to the general public in last few years only, there has been relatively limited research on

the subject available as there is still plenty of room for research in various aspects of the use of generative AI tools in the field of education particularly focusing in a variety of different disciplines. Limited research studies are available focusing on specific disciplines such as medicine, engineering, media studies etc. Likewise, very few research studies done in Pakistani context were available. With the aim of bridging this gap found in the literature, this study aims to explore the awareness, understanding, practices and impact of using generative AI tools by the undergraduate students of Media and its allied studies such as Mass Communication, Media Studies, Media Sciences, Graphic Design, Media arts & Films, Communication Design, Communication and Design for academic purposes.

Research Objectives

- To understand the level of awareness, understanding and practices of using generative AI tools by the undergraduate students of media and its allied studies in Karachi for academic purposes.
- To find out the impact of using generative AI tools on the efficiency, productivity, skills and capabilities of the undergraduate students of media, and its allied studies from their perspective in Karachi.

Research Questions

RQ1. What is the awareness and understanding of the Karachi based undergraduate media studies students about generative AI tools?

RQ2. What are the current practices of the Karachi based undergraduate media studies students for using generative AI tools for academic purposes?

RQ3. To what extent the use of generative AI tools impact on the skills, capabilities productivity and work efficiency of the media studies students?

LITERATURE REVIEW

Although sufficient research work has not been done to explore the understanding and practices of undergraduate students of media and its allied studies for using generative AI tools and its impact on their skill development, there are limited studies available on the impact of generative AI tools on students from other fields, like: Imran and Lashari (2023) conducted a qualitative research study to know the perception of Pakistani university students studying sciences and humanities about the use of ChatGpt for academic purpose specially for English writing skills. The findings suggested that the majority of students believe that the use of ChatGpt hinders their abilities and skills for creative writing while some students shared that in their opinion, it could be a useful tool if used under proper supervision of faculty and with certain restriction or rules for using it.

Abid et al. (2019) did a cross-sectional descriptive study in two medical colleges of district Peshawar, Pakistan. The findings highlighted that the 61.7% students had no prior knowledge about the use of artificial intelligence in their education but they had a positive attitude for integrating artificial intelligence in their education. Albadarin et al. (2023)

undertook a proper literature review comprising 14 empirical studies focusing on the use of ChatGPT concluded that ChatGPT was identified as a helpful tool for students' learning due to its ability to provide quick assistance to them at any time. Due to its online availability for assisting students' learning in multiple ways, it was considered as a virtual intelligent assistant. The study also found that the use of ChatGPT not only facilitated the learning but was able to help students in enhancing their academic competencies leading to their success.

Lo (2023) discussed in the finding of their study that used "rapid review approach" to understand the potential of ChatGPT in different subject domains, its usage in education and concerns raised by other researchers during the early three months of it release (Dec 2022 to Feb 2023). The study found that users have varied level of satisfaction for using ChatGPT for learning purposes. For example, in the field of Economics, it was rated as 'outstanding' whereas Programmers found it satisfactory and Mathematics students were not satisfied from it. In general, they found that ChatGpt was identified as a virtual tutor similar to the virtual assistant (Albadarin et al., 2023). Like an in-person tutor, ChatGpt was identified as an online tutor who was ready to respond to questions and give suggestions and feedback. The study also explored some challenges of using ChatGpt such as sharing of fake/incorrect information by ChatGpt and bypassing plagiarism detectors. If users are not smart enough to deduct such issues, they may harm their academic performance.

Shoufan (2023) conducted a study with seniors' students in computer engineering using mix method i.e., first part was the thematic analysis of students' qualitative responses about the use of ChatGPT and then these

themes were used for designing a follow-up-survey. According to the results, students were quite satisfied with the performance of ChatGPT in assisting their learning. Students found the ChatGPT as a user-friendly tool which motivated them to learn too. They were particularly inspired by its human like nature i.e. having the capability to interact with them and respond to their queries with well-structured answers and succent explanations.

Shoufan (2023) also documented the concerns raised by the students about the accuracy of information provided by ChatGPT. They believed that ChatGPT acted like humans but did not possess human intelligence and worked on limited knowledge. Students expressed the need to improve ChatGpt for the accuracy and scope of information. The study also reported that students did not have harmonious views about the impact of ChatGpt on their learning, academic integrity and future job capabilities. They expressed both positive and negative impacts.

Chan and Hu (2023) conducted a survey which included close ended questions as well as open-ended questions to explore the perception of university students in Hong Kong about AI generative tools in higher education. The survey focused on exploring the familiarity of Generative AI tools specially ChatGpt among students and their willingness to use these tools for their academic purposes. The study also focused on identifying the potential benefits and challenges of using these tools while integrating them with learning.

The study results showed that students had a positive attitude in general toward AI generative tools. They acknowledged and appreciated the capacity of ChatGpt to provide personalized learning support as per the

needs of individual learning needs of students. They also appreciated the potential of ChatGpt to assist them in brainstorming ideas, developing drafts for their written work and analyzing the data for their research work. Besides sharing the promises of using ChatGpt, they also voiced their concern about the accuracy of information, ethical issues related to integrity and the impact on personal development, career prospects and societal values.

Kelly et al. (2023) conducted a study using mixed-method approach at a university in Australia to analyze perception of students coming from diverse linguistic and socio-cultural backgrounds about generative artificial intelligence, their experience and confidence for using it in various disciplines. According to the findings at the time of survey majority of students demonstrated weak knowledge, less experience and confidence in using these tools. However, a group of students demonstrated high confidence for using these tools in spite of having no experience. The researcher discussed that since these tools became available in late 2022 and early 2023, it is obvious that many students have not yet gotten any exposure. In future studies, students may demonstrate better awareness, more experience and enhanced confidence in using these tools.

Abbas et al. (2023) did a study by using a self-administered questionnaire and a survey using exploratory approach. The purpose of this study was to know the awareness and familiarity of university faculty and students about ChatGpt. It also explored the benefits and limitations of using it for research and educational activities and the level of willingness of students and faculty to use ChatGpt for their learning and research purposes. The

study concluded that the students were aware of ChatGpt to varying level of knowledge and understanding. They also had a positive attitude toward ChatGpt for their learning and research purposes. The sample also found ChatGpt as an easy-to-use tool. In short, the study concluded that integrating ChatGpt can improve research quality and educational outcomes and universities should consider properly introducing ChatGPT into their educational programs and research work.

Kumar and Raman (2023) conducted a study involving students from Business Management Programs with an aim to understand students' perception of using AI tool in Higher Education. Data was collected using online forms focusing on both quantitative and qualitative data. The study found that students have positive perceptions for the use of Generative AI for academic, research and learning purposes. However, the sample felt that this technology should not be used for admissions, examination and career placements.

Irfan et al. (2023) focused on two specific skills to understand the role of literacy about AI and ChatGpt-3 in improving them. Their focus was Journalistic writing capability and critical reasoning skills. The study engaged 50 Journalism students of a Tajik National University through a mix-method approach using surveys and interviews. The study found out that the use of ChatGpt-3 impacted positively o students' abilities for critical thinking, journalistic writing and analysis of the text. The study recommended for integrating the use of AI tools in the classroom in order to nurture their skills as we'll as prepare them for an AI influenced world of journalism.

Ali et al. (2023) conducted quantitative research with a focus to explore impacts of ChatGpt on learning English. The results showed that the use of ChatGpt in classroom or in teaching and learning process not only motivated students but also enhanced their writing skills. However, mostly respondents had a neutral viewpoint regarding the impact of using ChatGpt in the development of speaking and listening skills. The study suggested that ChatGpt-based teaching is inspirational and must be used as a learning tool instead of avoiding it because of the fear of its negative impacts which need further detailed exploration.

Wardat et al. (2023) did a qualitative study by using case-study approach and an instrumental case-study design to analyze the viewpoint of different stakeholders like students and educators on the use of artificial intelligence in teaching Mathematic, specifically after the launch of ChatGpt. The study found that the use of ChatGPT can help students in learning Mathematics by building on their basic knowledge and skills. However; it was also explored that the ability of ChatGpt to deal with deeper geometry concepts is limited and the tool should be used with caution.

Burkhard (2022) engaged 365 first-year students to understand students' perceptions of AI-powered writing tools. The study explored that while these tools may help students in enhancing their capabilities, but students have different attitudes for using it. Some students use these tools uncritically and accept the responses without using their own judgements. This approach may impact on their learning outcomes negatively as well as they may be alleged for plagiarism. Some students may not use these tools at all because of unfamiliarity or skepticism about the use of Ai based

tools. The study recommended to teach students explicitly for using AI tools in productive ways.

The key findings highlight that the students possess different attitudes towards the writing tools enabled by AI. Some students may be non-reflective and not critical which may lead to violation of academic integrity. Some students may demonstrate a cynical attitude towards it use as they may not know effective learning tools and strategies. It is important for the educators to know these attitudes and they may either encourage or alert students for using these tools properly as per their attitude.

THEORETICAL FRAMEWORK

This research is grounded in two key communication theories including Diffusion of Innovation Theory and Uses and Gratification Theory, both of which help explain how individuals interact with new technologies and media tools. The Diffusion of Innovation Theory, developed by Everett M. Rogers (1962), provides a framework for understanding how innovations—such as digital tools, technologies, or social practices—are communicated through certain channels over time within a social system. The theory classifies adopters into five categories: innovators, early adopters, early majority, late majority, and laggards (Rogers, 2003). This theory is particularly useful in analyzing how awareness and usage of innovations spread among specific groups.

Complementing this, the Uses and Gratification Theory, as explained by Katz, Blumler & Gurevitch (1974), shifts the focus to the audience, emphasizing that media users are active participants who seek out specific media and content to satisfy their personal needs and desires. These needs

may include information-seeking, social interaction, entertainment, or identity formation. This theory supports the study's aim by explaining the motivations behind individuals' engagement with digital platforms and tools. Together, these theories provide a comprehensive lens to examine both the adoption process of innovations and the audience's agency in choosing and using media content (Katz et al., 1974).

RESEARCH METHODOLOGY

The research approach selected for conducting this research study is Quantitative methodology. An online survey questionnaire was designed on google form and distributed through social media platforms and email. The survey questionnaire has some multiple choice as well as rating scale-based questions to get detailed response from students about their understanding, perception and practices of using AI generative tools. The Survey sample consisted of 100 undergraduate students from various institutions of Karachi studying Media and allied studies. Actual names of the Universities are not mentioned to maintain their anonymity. Through non-probability-convenience sampling technique, data was collected from these one hundred respondents from different universities/institutions of Karachi studying mass Communication, Media Sciences, Media Studies, Communication Design, Graphic Design, Communication and Design and Media Arts and Films.

Tools for Data Collection

To comprehensively examine the engagement of Media and allied discipline students with generative AI tools in academic settings, and its

impact on their skills, capabilities, productivity, and efficiency, a total of four sets of Likert scale statements were thoughtfully included in Section III and Section IV of the questionnaire.

In Section III, one Likert scale question was designed to examine the extent to which Media and allied discipline students use any type of generative AI tools for nine academic purposes. These purposes, extracted from previously conducted research findings, encompass higher cognitive uses of generative AI tools, such as analyzing data, creating new things, and synthesizing ideas, as well as basic purposes, such as preparing notes and enhancing knowledge and understanding by searching for answers to informational questions. This was intended to examine whether students use generative AI tools for higher intellectual purposes or merely as refined search engines. Moreover, another Likert scale question was added in Section III to identify the frequency of using different AI tools suitable for different purposes. A list of 12 top-rated generative AI tools was selected from authentic sources across the web.

Section IV of the survey explored respondents' perceptions about the impact of using generative AI tools on their work efficiency, productivity, and skill development. For this purpose, respondents were asked to rate two sets of statements under two questions. The first set of statements under Question 1 was related to positive impact, and the second set under Question 2 was related to negative impact. Respondents were asked to rate them according to their level of agreement. Both sets of statements were designed in light of the following research findings: Albadarin et al. (2023), Chan and Hu (2023), Imran and Lashari (2023), and Shoufan (2023).

Data Analysis

For data collection, descriptive techniques were used, and frequency, percentile and mean were calculated for the analysis of collected data. The data was analyzed using MS Excel. There were three types of questions in the survey. Two of the survey questions asked the respondents to select an option form the given options. Data of such questions was analyzed simply by calculating the percentages of students who picked one particular option. Among two Likert scales, one was used to know the frequency of an action, and the other was to agree or disagree with a particular action. In the Likert scale where the level of agreement was asked, the highest number was assigned to the most positive option, while in the one concerning the frequency of an action, the opposite was done. The mean of each rated statement was identified for analysis using the numbers assigned to each rating.

Data is represented through tables. Tables were preferred over graph because it was more convenient to present the data. Data was analyzed using simple excel software by either calculating the percentage (%) of responses under various categories or determining the mean of various data categories.

FINDINGS

The survey was conducted among 100 undergraduate students of media and its allied fields of studies in different institutions/universities of Karachi, selected through non-probability sampling techniques - Convenience. Table 1 shows the results of the survey.

Section I: Demographic Characteristics of the Respondents

Table: 1. Demographics

	Frequency
Gender	
Male	48
Female	52
Total	100
Respondents' Program of Study	
Mass Communication	41
Media Sciences	19
Media Studies	3
Communication Design	5
Communication and Design	18
B. Design (Media Arts & Films)	3
B. Design (Graphic) **Total**	11 100
Year of Study	
1st Year	12
2nd Year Total Early years	28 40
3rd Year	12
4th Year **Total Late Years**	48 60

Section II: General Awareness and Use of generative AI Tools

In this section; three statements were given to the respondents and they were asked to select the appropriate option to share their general awareness and practices for using generative AI Tools. The answers collected from the first statement are displayed in Table 2.

Table: 2. Familiarity with Generative AI tools

	5	4	3	2	1	
Statement 1 I am quite familiar with generative AI tools	**SA**	**A**	**N**	**D**	**SD**	**Mean**
	26	57	16	1	0	**4.1**

In the Second Statement of Section II, respondents were asked to identify the number of generative AI tools whose usage they know. Table 4 exhibits the data collected for this question.

Table: 3. Knowledge about the use of various Generative AI Tools

Statement 2: I know the usage of following number of generative AI tools	
Options	**Total Respondents Frequency**
Nil	6
1 to 2 generative AI tools	35
3 to 4 generative AI tools	25
5 to 6 generative AI tools	18
7 to 8 generative AI tools	9
9 to more generative AI tools	7

Total in numbers	**100**

The Third Statement of Section II asked the respondents to share the number of generative AI tools which they had actually used. The results are shown in Table 4.

Table: 4. Number of Generative AI tools used

Statement 3: I have an experience of using the following number of generative AI tools	
Options	**Total Respondents frequency**
Nil	11
1 to 2 generative AI tools	41
3 to 4 generative AI tools	24
5 to 6 generative AI tools	13
7 to 8 generative AI tools	6
9 to more generative AI tools	5

Section III: Use of Generative AI Tools by Students for Academic Purposes

This section of the survey aimed at exploring the practices of using generative AI tools for different academic purposes. The section also tried

to identify which generative AI tools are used by the respondents for different academic purposes. The participants were asked to respond to 2 questions using the given rating scale. The results are shown in Table 5.

Table: 5. Frequency of using AI generative tolls for various academic purposes

Question1: To what extent, you use any type of generative AI tool for the following academic purposes. Select one response as per your current practices for each statement						
Statements	**1**	**2**	**3**	**4**	**5**	**Mean**
	Never	**Rarely**	**Sometimes**	**Often**	**Always**	
Preparing my notes	17	28	27	19	9	2.8
Completing my assignments by searching full answers and copying them in my papers	29	28	22	15	6	2.4
Just enhancing my knowledge & understanding by searching answers of information questions	11	34	15	26	14	3.0
Exploring diverse ideas related to a concept or theme to work on	9	32	18	28	13	3.0

Using as a tool to work on assignments specifically related to the media, design and communication tasks	21	30	23	16	10	2.6
Analyzing data and generating reports/graphs	38	30	18	9	5	2.1
Producing Music /Composing Music	66	21	6	5	2	1.6
Editing Photos and videos	42	30	12	7	9	2.1
Translating language	31	31	17	14	7	2.4

Table: 6. Frequency of using listed AI generative tools

Question 2: To what extent you use following generative AI tools for your academic work						
	1	2	3	4	5	
List of Generative AI Tools	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**	**Mean**
ChatGPT	8	13	26	24	29	**3.5**
Gemini (formerly Google Bard)	52	16	16	9	7	**2.0**
DALL-E	65	14	14	5	2	**1.7**
VEED. IO	72	12	10	4	2	**1.5**
Synthesia	70	15	12	1	2	**1.5**
Midjourney	62	20	7	9	2	**1.7**

SlidesGo	58	12	19	9	2	**1.9**
Grammarly	29	22	20	6	23	**2.7**
Designs.ai	55	14	18	7	6	**2.0**
Amper AI	77	11	7	4	1	**1.4**
Soundraw	75	12	8	4	1	**1.4**
Gamma	76	7	8	7	2	**1.5**

Section IV-Impact of generative AI tools

This section of the survey explored respondents' perception about the impact of using generative AI tools on their work efficiency, productivity and skill development. The results of this section are shown in Table 7 and table 8.

Table: 7. Positive Impact of using generative AI tools

To what extent you agree that the use of generative AI tools have helped you to enhance your productivity and efficiency in following ways:						
Statements	5 **SA**	4 **A**	3 **N**	2 **D**	1 **SD**	**Mean**
Generative AI tools help me in completing my work in lesser time.	30	35	19	11	5	**3.7**
Generative AI tools have enhanced my content drafting skills	19	39	24	9	9	**3.5**

Generative AI tools have helped me to ask better questions with clarity of purpose	21	43	17	9	10	**3.6**
Generative AI tools have helped me in enhancing the quality of my work by providing immediate feedback and suggestions	30	35	17	7	11	**3.7**
Generative AI tools stimulate my thinking by suggesting out of the box ideas	25	33	26	6	10	**3.6**

Table: 8. Negative impact of generative AI tools on skill development

To what extent you agree that the excessive use of generative AI tools hinders the development of following skills /capabilities.						
Statements	5 **SA**	4 **A**	3 **N**	2 **D**	1 **SD**	**Mean**
Generative AI tools have weakened my skills to discuss ideas with other fellow students for academic purposes	9	21	29	24	17	**2.8**
Generative AI tools have reduced my personal abilities to solve problems as I ask AI to do it for me	10	26	26	27	11	**3.0**

Generative AI tools have hampered my skills for expressing my thoughts in writing as I ask AI tools to do it for me.	7	30	28	21	14	**3.0**
Generative AI tools have made me lazy for using my creative capabilities as I rely on AI.	14	23	31	19	13	**3.1**
Generative AI tools have reduced my ability to think critically and analyze information.	16	14	26	25	19	**2.8**
Generative AI tools have lessened my skills for relevant literature search using various resources and comparing information.	17	21	26	20	16	**3.0**

DISCUSSION

RQ1: What is the awareness and understanding of the Karachi based undergraduate students of media and its allied studies about generative AI tools?

The research study intends to explore the awareness, understanding, practices and impact of using generative AI tools by the undergraduate students of Media and its allied studies for academic purposes and on their skills. Generative AI is relatively a new phenomenon for teaching and learning. The study was an attempt to see how Generative AI is influencing the learning process of the students of media and its allied studies in terms

of its use and impact. The study was guided by the Theory of Diffusion of Innovation and the theory of 'Uses and Gratification'.

Overall findings suggest that the entire surveyed population agreed about their familiarity with generative AI and its tools A mean of 4.0 and above on a scale of 1-5 (1 represents strongly disagree and 5 strongly agree) was obtained for the overall familiarity. (See table 2). The survey also explored their awareness about the use of various generative AI tools in general and their actual experience of using them. 60% of the population mentioned that they were aware of 1 to 4 tools and 34% population highlighted that they knew about 5 or more tools. (See table: 3) As far as the practice of using generative AI tools is concerned, 65% mentioned that they had used from 1 to 4 generative AI tools and 24% mentioned that they had used 5 or more tools. (See table 4) The findings highlight that in general the undergraduate students from Media and allied studies know about generative AI tools but their knowledge and use of various tools differ among them. The findings corelated with the structured method of innovation diffusion as defined by the theory of Diffusion of Innovation (DOI). Majority of the students are familiar with generative AI and have crossed the level of knowledge. They seem to be in the process of forming an attitude of using it. Very few responded that they were not using any tool, majority is using 1-4 tools and rest are using more than 4 tool. These findings align well with literature review findings which were mainly conducted using ChatGpt as a reference tool such as Abbas et al. (2023), Burkhard (2022), Kelly et al. (2023).

RQ 2: What are the current practices of the Karachi based undergraduate students of media and its allied studies for using generative AI tools for academic purposes?

The research study also focused on identifying use of different generative AI tools for various purposes. Respondents were asked to identify what is the level of their use of generative AI tools for various academic purposes. Across the total respondents, the highest mean value of 3.0 (max: 5) for using these tools to enhance knowledge & understanding by searching answers of information questions and exploring ideas for various concepts show that at present the respondents are mostly using these tools like refined search engines. The lowest mean values for using generative AI tools for higher intellectual purposes such as analyzing data, creating new things, synthesizing ideas etc. show that the respondents are either not very well aware of the potential of these tools or perhaps their academic experience does not require them to get engaged in these functions. (See table 5)

In the study, a list of 12 different generative AI tools was given and students were asked to share the level of use of each tool according to the frequency of using them for their academic work. As per the data reported, the top two highest mean values obtained for the use of different generative AI tools included 'ChatGpt' and 'Grammarly' for academic purposes i.e., 3.5 and 2.7 respectively (On a scale of 1-5). (See table 6). This also aligns well with the responses provided in earlier question in which searching information, exploring ideas for assignment were identified the most common purposes. ChatGpt is one of the most commonly used tools for these purposes. The findings also highlight that

the students use the generative AI tools other than ChatGpt rarely and many of them had not used them at all.

The above findings are well aligned with the literature available. During the literature review it was noted that most of the studies done have focused on ChatGpt. One of the key reasons of researching ChatGpt is its frequent use by the students for information search and writing purposes. The sample of this study has also highlighted these two purposes as major purposes for which they use generative AI tools. The excessive use of ChatGpt among all the other tools corelates with the theory of diffusion of innovation (DOI) (Rogers, 2003). As per DOI one of the critical factors that influences the diffusion of innovation is as to how the innovation is communicated from one individual to another (Sackstein et al., 2023). It is our common observation that generative AI tools got attention because of ChatGpt. In 2023, most of the discussions, news and studies around generative AI were with reference to ChatGpt. Specially among student community ChatGpt was highly welcome for its capabilities of generating properly curated responses. Also, the technology attribute as defined by Theory Hub, apply to these findings. One of the technological attributes that defines the diffusion of innovation is 'Relative Advantage' i.e., to what extent users see the benefits of using technology over current practices. ChatGPT has become the most popular AI generative tool because of its immediate advantages which students see in relation of their most of the work which involve research, writing, correcting grammar etc. According to the theory of 'Use and Gratification' , media users are not a passive consumer, they are active users and choose different media for satisfying their specific personal needs and for achieving their personal

goals (Sichach, 2023). It seems that students use ChatGpt to fulfill their cognitive needs which requires them to undertake research and thoughtful writing and they find ChatGpt as a compatible tool to assist them in fulfilling these needs.

RQ3: How does the use of generative AI tools impact on the skills, capabilities productivity and work efficiency of the students of Media and its allied studies?

The last section of the research focused in exploring the perception of students about the positive and negative impact of generative AI tools. The respondents agreed that generative AI tools enhance their productivity and efficiency of their work in various ways.

The overall data also show that the students' responses for the negative impact were neutral. Students were asked to identify it the use of Generative AI tools has impacted negatively on their discussion skills, problem solving skills, writing skills, creative skills, analytical skills and research skills. The mean value for all these responses falls under neutral category. (See table 8) This may be because the use of generative AI tools has recently started and students have not noticed the difference in their abilities as a result of the negative impact of generative AI tools. The findings related to positive impacts are supported by literature review as various studies identified the help of ChatGpt in writing and quick assistance as two positive aspects of generative AI tools specially ChatGpt. Shoufan (2023) has also reported the similar positive impacts

Majority of the students agreed with the listed positive impact of using generative AI tools with a mean of 3.5 and above for all the listed points (Sable 7). The highest agreement was for the positive impact of AI tools

in reducing the time for completing the work and for getting immediate feedback. The students' responses show that the use of generative AI tools help them to enhance their speed of work as they get better refined responses from these tools and do not spend time in using their own skills for the same. Students also highlighted the role of AI tools as tutor or assistance by providing immediate feedback as a positive aspect of it. These findings related with the general literature available for the similar studies.

CONCLUSION

The findings of the study relate well with the existing literature as well as with the theories of 'Diffusion of Innovation' (Ref) and 'Gratification and Uses theory' (Katz et al., 1974) which formed the theoretical framework of this study. The study concluded that the undergraduate students studying media and allied programs are familiar with generative AI tools and majority of them have used some of the tools. The study also concluded that mostly generative AI tools were being used like refined search engines and not frequently used for higher cognitive purposes. This was evident with the highest use of these tools reported for the purpose of enhancing knowledge and understanding by searching answers of information questions, exploring ideas for various concepts and developing notes. In general, use of generative AI tools for analyzing data, generating reports, creating new music, editing videos etc. were the least reported categories.

ChatGpt and Grammarly are the most commonly used tools in general by the students with some variation for using specific tools-

The study also concluded that students believe that the use of generative AI tools is useful as it enhances the productivity and efficiency of their work by completing it in lesser time as well by improving their skills such as content writing and asking better questions. The study also reached to the conclusion that students have not yet formed any specific perception about the negative impact of using generative AI tools as most of the respondents were neutral while rating their responses for the negative impact of generative AI tools.

Recommendations

- Higher Education Institutions need to embrace this technology with proper awareness and training for students in order to help them to use it for more creative and intellectual purposes instead of using it as a tool for cheating or avoiding rigor.
- Higher Education institutions may offer special courses to assist students in using AI creatively and intellectually such as courses on prompt engineering.
- Discipline specific studies need to be conducted by researchers to understand the use of AI generative tools for diverse academic purposes to better understand various trends and patterns across disciplines. This understanding will lead to better policy making.
- Higher Education Institutions need to focus on developing proper policies for the academic use of AI generative tools to guide students and to ensure that these tools are neither misused nor unnecessarily banned.

Limitations

The scope of the study was limited as it focused only on the students of media and its allied fields and was limited to Karachi only. It can further be expanded to other parts of Pakistan. Due to time constraint, the study relied on survey only. In-depth interviews and focus group discussions would have enriched the findings further. The impact of using AI generative tools was explored form students' perspective only. Engaging faculty and industry experts may have added value to the data. Moreover, sampling was done using 'Convenience sampling' keeping limited resource and time in mind. This created a disproportion among the respondents of different universities and degrees. Future studies can be done with quota or cluster sampling to get more authentic and comparable results.

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