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Perception of AI Use in Pakistan among Communication & Media Faculty: An Exploratory Study

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Abstract

The paper examined how Communication and Media (CMS) faculty in Pakistan perceived AI usage for teaching practices. It focused on the current utilization patterns, potential benefits, and challenges related to AI usage among CMS faculty members. It also explored the primary factors, based on the Unified Theory of Acceptance and Use of Technology (2), to understand the circumstances under which Pakistani Communication & Media faculty members adopted AI technology in their teaching practices. This study was based on qualitative interviews. The interviews explored the faculty's perceptions of AI in terms of Performance Expectancy and Effort Expectancy, their level of awareness about it, and their current Behavioral Intention as well as AI usage patterns. Faculty expressed positive views towards AI and is to learn more. However, their current AI usage is primarily limited to administrative tasks due to a significant lack of support from their universities. Further research should focus on how to incorporate AI tools into the teaching process.

Keywords: AI usage, teaching practices of Pakistani CMS faculty, AI adoption, UTAUT2

Introduction

The rapid growth of artificial intelligence (AI) has changed every scope of life (Raj & Kos, 2023). This includes education as well, as it transforms the entire teaching and learning experience. AI usage among Communication and Media Studies (CMS) faculty members is a research opportunity to explore how teachers perceive and use novel technologies in their job-related tasks, courses, and classrooms.

Through qualitative interviews, we examined faculty awareness of AI technologies and the 'facilitating conditions' that might have helped CMS faculty members to integrate AI into their teaching practices. Our research provided insights into educators' current perceptions of AI usage in their teaching practices. It helped to see how far the university's input was necessary to influence AI adoption among teachers. This study revealed that university faculty members may use AI for other purposes, i.e., administrative tasks. Our research also contributed towards realizing the challenges the teachers faced as the academic environment evolved.

Firstly, our study is important because of its timing of measurement. The studies previously done in technology acceptance were usually done after the technology had been diffused, accepted, or rejected. This paper studied AI acceptance when it is in its initial stage and results are yet to be seen in the near future. Some recent research explored AI acceptance using UTAUT but we specifically explored AI acceptance in academic settings in the Global South. Secondly, the usual take in UTAUT literature had been quantitative. Yet, a qualitative explanation is always needed to further understand it in depth. Our research filled this gap by conducting interviews about AI acceptance among educationists of higher education.

This paper explored CMS faculty members' perceptions of AI usage for teaching purposes. We focused on how they currently use it, its potential benefits, and the challenges they faced during the process. For this research, we utilized the Unified Theory of Acceptance and Use of Technology (UTAUT), which consists of 'acceptance determinants. These factors influence the process of AI adoption among its users. UTAUT helped in understanding how the audience adopts new technology.

Literature Review

AI refers to Artificial Intelligence. It's a technology that has gained massive popularity for producing new information by examining huge databases available on the web (Bossens, Feng, & Ong, 2024) . Artificial Intelligence has gained immense fame for having the ability to perform a task beyond human capacity. As a result, the usage of AI technology has revolutionized every scope of industries, Similarly, AI has transformed the teaching practices in higher education (Katsamakas, Pavlov, & Saklad, 2024). AI approaches are being employed in universities to strengthen higher education outcomes. These outcomes include routine jobs, admin tasks, and research conduction, both by university students and teachers.

Researchers calls AI a promising and cutting-edge technology for pedagogy, it presents many benefits and opportunities for educational, administrative as well as research purposes (Saaida, 2023). AI can provide individual learning, online and blended learning environments, and other applications in pedagogic practices (Zhang & Aslan, 2021) .

Besides the benefits, there are many challenges AI poses for its users. As (Chen, 2024) Explained, that for any technology to actually be beneficial to the public, the audience has to accept the technology first. On the same lines, AI can produce the perceived benefits only when the users embrace and utilize the AI tools effectively.

Various researchers have explored the relation of Artificial Intelligence and advancements in teaching practices in different countries. The element of User Acceptance remains the key factor in letting the technology diffuse to produce its fruitful impacts (Kumar, 2024) . Recent studies underscore that the willingness of educators and students to engage with AI-driven tools plays a pivotal role in shaping the outcomes of its implementation (Koka, 2024). Building on this, the present research seeks to evaluate the current state of user acceptance of AI within the context of higher education in Pakistan.

With this research, we are trying to break down the impacts of AI in terms of its benefits and challenges. For this purpose, we have analyzed the perception of AI among the CMS faculty members of various universities in Pakistan. To address this specific population and technology acceptance, we identified the key factors responsible for shaping AI acceptance among its users. To investigate how Pakistani Communication and Media Studies faculty members perceive AI usage for teaching practices.

Objectives

O1: To examine faculty perspectives on the opportunities presented by integrating AI into their professional roles.

O2: To investigate faculty perceptions of the challenges associated with integrating AI into their job functions.

O3: To evaluate the awareness of the Communication and Media Studies faculty about AI tools for educational purposes.

Unified Theory of Acceptance and Use of Technology; UTAUT:

Initially, various theories and models have been devised to explore and understand how people respond to new products in the market. This was the research trend till the end of the 20th century (Benaissa & Kobayashi, 2022). Different 'acceptance determinants' were considered to play their role in how a new product will be accepted (Venkatesh, Morris, Davis, & Davis, 2003) For instance, job fit, ease of use, and perceived usefulness can alter the adoption status of a new invention (Noh & Malek, 2021) .

As digitalization spreads and covers all the scopes, there arises a need to explore in detail specifically how the audience reacts towards a new technology. This is different from previous literature on the acceptance of new products as it focused on the technology-related aspects specifically. For this purpose, three media scholars performed a thorough meta-analysis and extensive research of all the theories and models available to date, extracted all the relevant determinates, and named the model UTAUT (Topsümer, Durmuş, & Yılmaz, 2023).

The previous theories considered and analyzed for the development of UTAUT are the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model, the Theory of Planned Behavior (TPB), the Model of PC Utilization (MPCU), Diffusion of Innovation Theory (DOI), and Social Cognitive Theory (SCT) (wedlock, 2019)These theories were focused on one part of the process and not focused on technology acceptance in particular. The previous theories were not rejected or nullified by UTAUT. Rather, it endorses and merges the previous models and extracts all the applicable factors to the technology acceptance. As the authors called it, UTAUT provides a 'unified view' towards the factors that shape user acceptance as well as the moderating variables (Rasid, Saad, & Johari, 2024) With constant validation from research, UTAUT has become the dominant way of investigating the acceptance and adoption of new technology among its audience.

This unified view (UTAUT) is proposed by Venkatesh et al. (2003), They compared all the available theories and models studying the acceptance of new technologies among the audience. To merge the

available factor studies that contribute towards understanding how a new technology diffuses among the audience, they compared and strategically analyzed the key determinants available from previous literature as well as performed new research (Igbaria & Tan, 1998). The new set of key determinants valid today formulate the new theory called the Unified Theory of Acceptance and Use of Technology (Momani, 2020). To date, this new theory is valid and widely used for research purposes encompassing all the fields of e-commerce, e-government, and e-learning. The authors have also revised it recently and proposed a refined version named UTAUT2. According to (Luo, Tong, Fang, & Qu, 2019) UTAUT is the superior model that incorporates all the contributing and moderating factors in determining technology influence.

Though there hasn't been any specific theoretical model to evaluate technology acceptance in the field of education, we are following the generic model used by scholars to study AI acceptance by university-level teachers. Our research is about the advent of AI and its adoption and acceptance by Pakistani university faculty members in their teaching practices. That's why we are using UTAUT as the basic theoretical groundwork. By bringing the lens of UTAUT in this research, the research questions that arise for this research are:

RQ 1 How do CMS faculty members perceive the opportunities presented by AI usage in enhancing their teaching practices?

RQ 2 What benefits do faculty members perceive in integrating AI technologies into their teaching practices?

RQ 3 What are the challenges faculty members associated with integrating AI technologies into their teaching practices?

RQ 4 To what extent do faculty members feel prepared to incorporate AI tools in their curriculum?

Key Elements of UTAUT and their Contextual Meaning for our Research

According to UTAUT, the theorists have operationalized the term 'acceptance' in two constructs. One is behavior intention and the second is usage. The intention and usage combined builds up the acceptance. There are further four factors that shape the behavior intention and usage of any technology. Performance expectancy, effort expectancy, social influence, and facilitating conditions. Below we have analyzed the meanings of terminology from (Venkatesh, Morris, Davis, & Davis, 2003).

Following, we have summarized these terms in the context of our research, as these became a part of our interview guide.

Performance Expectancy: It refers to the belief of an individual regarding the impact of technology on his/ her performance. In our research, PE means the degree to which university teachers believe that the use of AI tools will improve their performance in teaching activities during teaching courses of the CMS department.

Effort Expectancy: It's the extent to an individual's certainty that using AI will require less effort. In our research, EE refers to the amount of effort CMS instructors perceive to be put in while integrating AI tools in their courses.

Social Influence: The level to which an individual seeks pressure from the people around them like colleagues, seniors, friends, and family to adapt to technology. In our research, SI means how far CMS faculty members come under pressure from the people around them including their peers and equals to use AI while teaching the students.

Facilitating Conditions: In general, it means the degree of resources' availability that may ease a technology diffusion. In our research, FC refers to all the factors including training and other resources provided to a CMS teacher for using AI for teaching. Though organizational factors may contribute to shaping individual behavior but study of AI acceptance at the organizational level is out of the scope of this research, as we are only focusing on studying individual perceptions and levels of acceptance.

Above above-listed four factors are the most highlighted in the literature. However, in 2012, Venkatesh revised the existing UTAUT model, included more factors, and proposed UTAUT2 (Venkatesh et al., 2012). These revised and newly added factors are still valid. Since then, authors have validated the existence of three more factors responsible for AI acceptance (Almenara, Palacios-Rodríguez, Loaiza-Aguirre, & Rivas-Manzano, 2024). These include:

Hedonic Motivation (HM): This new construct refers to the pleasure experienced from using a technology. In our research, HM includes the satisfaction gained by the outcome of an AI tool by or generally using an AI tool by CMS faculty members.

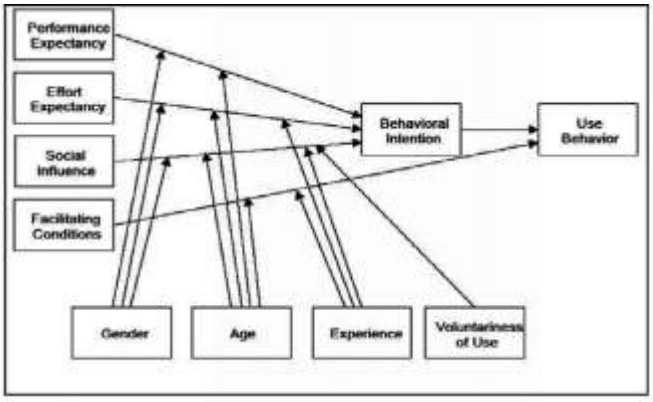
Attitude Toward Use (ATT): This second new concept focuses on the intention to utilize a technology. For our research, by digging into ATT, we have explored the intention of CMS faculty members to use AI for their teaching.

Behavioral Intention (BI): While the above concept explores the attitude, BI points towards the extent to which an individual intends to use AI. Behavior intention is dependent on the first three factors i.e. PE, EE, SI (Wedlock B. , 2016) Behavior intention is the basis of Usage Behavior, another important construct in UTAUT. BI, along with FC, shapes the Usage Behavior. In our research, BI directs toward the usage of AI in their professional teaching activities. In literature, BI is studied as both a dependent and independent concept. Our qualitative approach will explore how far intention contributes to the actual usage patterns (Wedlock & Trahan, 2019).

Moderating factors

Gender, age, and experience contribute to shaping AI acceptance. Besides these three, another important factor influencing the acceptance and adoption of AI is whether teachers are voluntarily adopting it or are being forced to do so, which is also a part of social influence. Our results revealed results for our sample population about moderating factors in depth.

Fig 1.1: Visual Presentation of UTAUT



Findings of Previous Researches

We have reviewed the literature in depth and found some recurring themes associated with AI adoption by educationists. The trends are summarized below.

General perception; *benefits and trust level*: According to researcher, a major portion of educationists relate generative AI e.g. ChatGPT with administrative benefits including benefits of better learning, improved student engagement, and good accessibility as an academic tool (Sevnarayan & Potter, 2024). But apart from the apparent perception, there is a generic fluctuation of trust in practically integrating AI in teaching practices. This point is important because the teacher's performance regarding AI tools depends greatly on how far a teacher trusts the tool. The greater the trust, the better the performance. This fact is endorsed by Micabalo and his frineds as they concluded that University students and faculty use AI tools in a personal capacity e.g. for enhancing knowledge, but they don't trust the usage of such tools in teaching processes (Micabalo, et al.)

Digital skills: Teachers may trust AI technology, but at the same time, may lack the skills and motivation to learn and implement it. For this reason, they must be taken into confidence while decision-making about AI implementation in educational activities, and they must be provided adequate training and support for the implementation (Nummelin, 2024). This is particularly true for Pakistan, beside other factors, digital literacy i.e. the capabilities for using computer-assisted technology also plays a key role in deciding how far AI can be accepted by university teachers (Hazaimeh & Al-Ansi, 2024). Furthermore, our research helps to fill the existing gap in the literature by offering a deeper understanding of Digital skills.

Trust and other factors including perceived privacy level are listed as 'other external factors' while analyzing UTAUT2 (Menon & Shilpa, 2023). They say that the UTAUT model is further open to new factors to be included as society is constantly evolving and the list of key determinants by the authors of UTAUT isn't exhaustive yet (Almenara, Palacios-Rodríguez, Loaiza-Aguirre, & Rivas-Manzano, 2024).

Prior Experience: Venkatesh and his friends suggested that there is a probability that the pre-usage beliefs about AI can be different from the post-usage attitude depending on how satisfying or disconfirming their experience was. This shift in belief is one of our key findings, as we have discussed it further in the analysis (Venkatesh, Thong, Chan, Hu, & Brown, 2011). According to Acosta-Enriquez and his colleagues, hedonic motivation and performance expectancy are the most contributing factors to instructor's attitudes toward AI. Our research also emphasized that prior experience with technology is an important moderating factor (Acosta-Enriquez, et al., 2024).

Way forward: In literature, three major suggestions are given to avail complete benefits of AI in education:

1. Organizational active **provision of resources and encouraging behavior from fellows** play a key role in shaping AI acceptance for teaching practices (Gaber, et al., 2023)
2. Another study from Pakistan finds that behavior intention and **external resources such as government efforts** play a key role in shaping AI acceptance among educationists (Shah, Khan, Khan, Khan, & Xuehe, 2020)
3. AI should be integrated into the educational process in such a way that it **streamlines and complements the current workflow** and doesn't contradict it (Fitria, 2021)

Method:

The perception of AI usage required studying in detail the beliefs of Pakistani CMS faculty members. For this purpose, a qualitative approach was used for data collection and analysis. Semi-structured interviews involving elements from the UTAUT2 model regarding performance expectancy, effort expectancy, social influence, behavioral intention, hedonic motivation, and other facilitating conditions were conducted with the selected candidates. Convenient sampling was used to carefully select interviewees from the CMS department. Their interviews were transcribed and analyzed to match the key determinants of the UTAUT2 model. Emergent themes other than the elements of the UTAUT2 model were also noted. This process ensured that the results were reliable and directly addressed the research goals.

Analysis and Findings

1. Acceptance: The respondents from our sample population highlighted that they are very positive about the incorporation of AI in their professional routines. They already perceive that AI has revolutionized their lives by improving their performance. One of CMS Faculty member stated:

"… using AI tools enables the completion of tasks more efficiently and in a shorter time."

We quantified the answers for evaluating performance expectancy in context of AI usage and received in response to the question about their first thought about how AI. Following is the chart showing their responses:

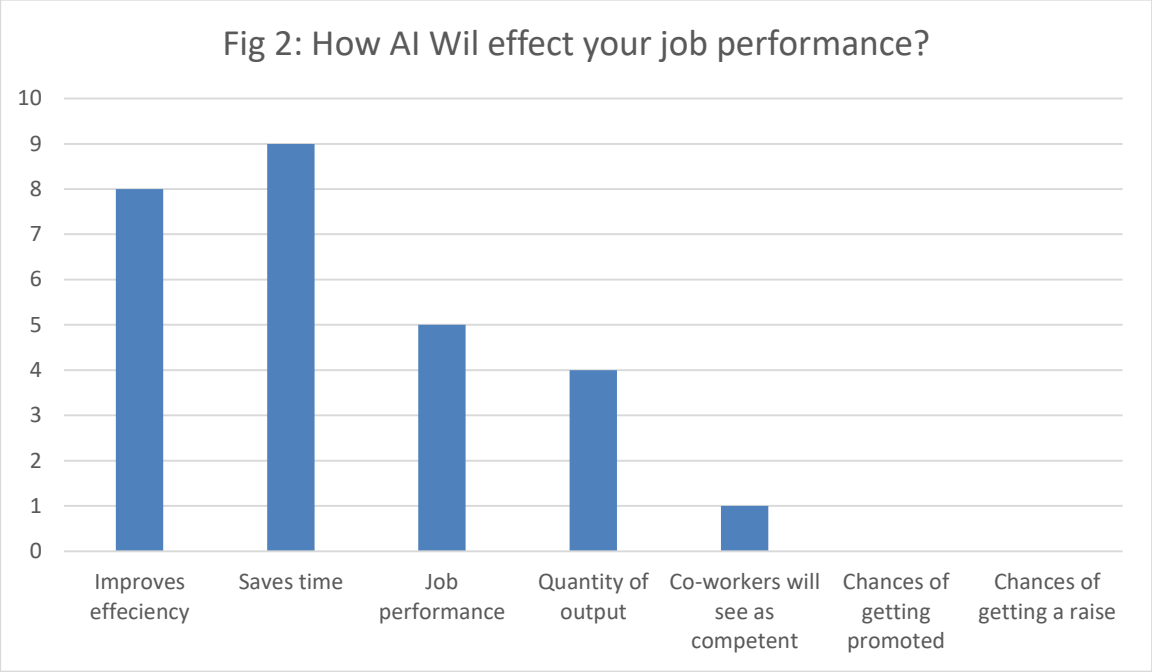


Figure 2 illustrates that it is notable that the majority of interviewees think positively of AI for improving job performance, none of them expects monetary acknowledgment of utilizing AI at their workplace.

2. **ChatGPT and other tools:** The interviews of selected CMS faculty members revealed that, though they are gradually accepting AI for teaching, the current level of acceptance among the majority remains limited to Generative AI, which too is mainly ChatGPT. Seven out of nine respondents prioritized ChatGPT for their teaching-related tasks. One of them remarked,

'ChatGPT is my go-to tool for both personal and professional tasks.'

Another interviewee said:

'I usually use ChatGPT and Google Gemini, but ChatGPT is my top choice because of its versatility.'

Bibi and Atta have explored the fact that Pakistani students use ChatGPT for language assistance (Bibi & Atta, 2024). Similarly, Mhlanga and Hifazat, Khoso, and Shah found that ChatGPT is being adopted in academia by university faculty members (Mhlanga, 2023; Shah M. , 2024). Our research endorses these findings and adds that, at the time of research, the common belief among Pakistani CMS faculty about the usefulness of AI is mostly limited to ChatGPT. Though two other respondents mentioned NVivo, Turnitin, Grammarly, and Gemini, the frequency with which

ChatGPT was mentioned as an AI tool leads us to conclude that ChatGPT remains the dominant AI tool in their perceptions of AI's utility in teaching and research.

3. **Openness to learn more:** While the above analysis highlights the current state of AI adoption, another aspect is that Pakistani CMS faculty members are open to learn more about AI tools to integrate them into their teaching practices. In response to a question about their plans to learn about AI, one interviewee said,

   "AI expertise can lead to greater acceptance in the field, as it demonstrates adaptability, efficiency, and a forward-thinking approach, that's why I want to learn more about how AI can make my teaching better".

   This demonstrates that Pakistani CMS faculty members recognize the potential of AI in education. That's why they are willing to make efforts to incorporate new technology effectively. As researcher identified, this willingness to learn aligns with behavioral intention (BI); a key element of UTAUT2. Based on the interviews, we can confidently conclude that Pakistani CMS faculty members strongly intend to explore AI further and fully explore its potential in education (Venkatesh, Thong, Chan, Hu, & Brown, 2011).

4. **Lack of organizational support:** Surprisingly, a common theme emerged across all responses: lack of organizational support at the university level. Universities are not supporting their faculty members with AI training. They are also not providing any resources to help incorporate AI into the teaching process. The faculty members have learned about AI tools on their own, from their colleagues, or self-explored online sources. As one of the respondents said,

   "To be honest, I haven't received formal AI training. Most of my exposure has come through reading, attending webinars, and learning from colleagues"

There is a subtle hint of disappointment among the faculty members for the lack of provision. Another respondent commented:

'… but no formal trainings have been arranged on this specific topic by my specific university."

This finding aligns with the findings of Nikolic (Nikolic, 2024) who concluded that institutional support is crucial for the successful incorporation of AI in education.

When asked how they learned to use AI, many interviewees said that they had no formal training. Instead, they learned about AI through experimenting with different tools, watching YouTube videos, and LinkedIn posts, and discussing it with colleagues and acquaintances. Many of them had to learn under pressure from their peers i.e. family and friends. They also are a part of creating social influence for others by recommending others to learn about AI. As one of them said,

"… I always tend to say that AI isn't against our decency and strengths, rather it's our value that we update ourselves."

This means that despite the lack of formal training and organizational support, CMS faculty members are self-learning AI tools. They are also motivating others to learn about AI usage in higher education. They are ready to upgrade themselves according to modern times and do not see AI as a threat.

5. **Shift in perception:** Another important theme that emerged out of our qualitative research is the significant shift in perception about AI after our respondents actually used the technology, compared to their initial views before using it. One interviewee said:

"…. Before personally using it, I was quite skeptical about it and associated a negative connotation. But, as I started using it, specifically when I am stuck at some point, AI made my life way easier"

Another CMS faculty member said:

"… Surprisingly, tools like ChatGPT have drastically reduced the time spent on tedious tasks"

3 out of 9 respondents commented on how doubtful they were about the ethical use of AI for their professional activities. This situation was related to before they experienced AI tools. After using AI, they think the automated tools have made their professional life easier. We have further discussed in the next heading how their usage is limited to administrative tasks only. For creative purposes, they still don't rely much on AI.

6. **Purpose of AI usage:** Though our research highlights a strong willingness among Pakistani CMS faculty members to learn more about AI, the responses of interviewees indicate that their usage is mostly linked with administrative tasks only. They use AI for documentation and routine office tasks. We quantified the responses received. The following chart represents the key purposes CMS faculty members use AI tools:

Fig 3:Purposes of AI usage

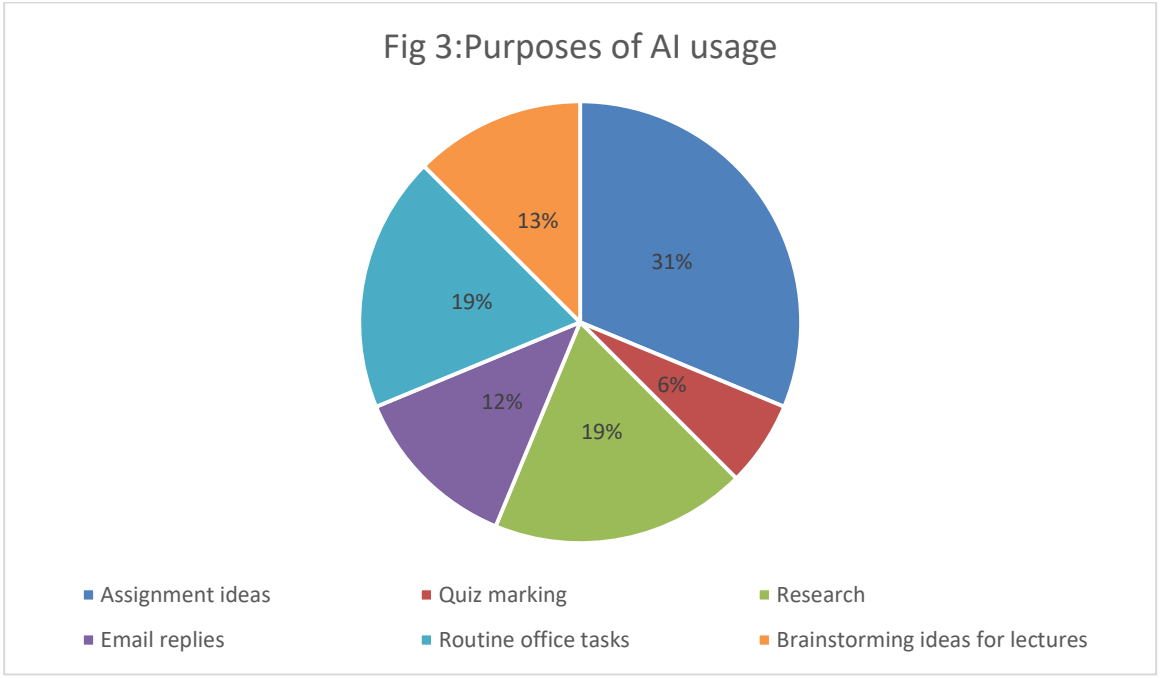


Figure 3 illustrates the most prevalent usage of AI tools is routine office jobs. When asked by our respondents, they defined routine office jobs as replies to letters, applications, stationary issuance, and other schedule and inventory-related problems. One of our respondents said:

"These tools automate repetitive and time-consuming tasks, such as data analysis, allowing me to focus on more complex and strategic work."

Another one said:

"... it will probably make me more efficient with table work and I can spend more time actually doing things that are more important"

While our main research question explored whether faculty members use AI for teaching purposes, the findings reveal otherwise. Instead, they rely on AI for managerial duties to save time on routine responsibilities, which probably allows them to focus more on improving teaching quality.

Discussion

Our research provided valuable insights into the acceptance determinants of UTAUT in the context of AI usage among Pakistani CMS faculty members. The selected sample respondents believe that using AI tools will drastically improve their performance at their jobs. This finding is parallel with the concept of Performance Expectancy (PE) of UTAUT. PE is directly linked with the belief of employees that using specific technology will improve their job performance (Emon, Hassan, Nahid, & Rattanawiboonsom, 2023) . The second determinant of UTAUT: Effort Expectancy (EE) is validated in this research as interviews revealed that faculty members find learning about AI tools easy. However, there are individuals of age group 50 plus who are learning AI tools but perceive it as 'fatigue'. They do demonstrate PE and some extent of EE, but age is proven here to be a significant controlling factor in reducing their adaption to technology. There is a subtle presence of Hedonic Motivation (HM) as we saw a shift in perception when faculty actually practiced certain AI tools. This happened because they enjoyed and gained satisfaction after seeing the result of the job done by AI tools. We also observed some degree of Social Influence (SI) where people experienced peer pressure from their acquaintances to learn new technology. But they are also contributing to build up this Social Influence (SI) when they motivate their colleagues and students to learn about AI. Regarding Facilitating Conditions (FC), all the respondents had a unified view that they weren't provided any organizational support. According to (Nikolic, 2024) institutional support shapes technology acceptance positively, and the absence of formal training limits AI integration in routine jobs. The finding about openness to learn more about AI validates Attitude towards Use (ATT). Concluding from the validation of PE, EE, and SI, we state that CMS faculty members have the Behavior Intention (BI) to use AI tools. Considering Facilitating Conditions (FC) and willingness to learn AI voluntarily, the Usage Behavior (UB) is limited to administrative and routine office tasks. There is still room to analyze and research what faculty members intend to incorporate AI during the teaching process.

We couldn't find any relation between experience and AI adaptation, except more experience means more age. Both age and experience appear to be overlapping moderating factors. This is probably because AI is a new technology and the number of years of experience doesn't include any exposure to machine learning or other AI technology.

An important secondary observation we made during our data collection is, that many of the female faculty members approached were reluctant to give interviews. Though we managed to find a good balance of male and female respondents, the initial hesitancy of female respondents points towards the need for more research on gender perspective.

Conclusion

This study examined how Communication and Media Studies (CMS) faculty in Pakistani universities perceive and accept Artificial Intelligence (AI). We focused on their current AI usage practices, perceived advantages, and challenges. The Unified Theory of Acceptance and Use of Technology (UTAUT2) provided the theoretical basis for this research. We conducted qualitative interviews to explore faculty awareness of AI. Findings showed a positive general attitude towards AI. Faculty believed AI could improve their work, aligning with UTAUT's Performance Expectancy. However, AI use was mainly limited for administrative tasks, like documentation, but not for teaching. Faculty expressed a strong desire to learn more about AI, especially tools like ChatGPT. A major hurdle here is the lack of university support and training. This contrasted with the faculty's self-learning through online resources and colleagues.

Despite the positive intention to use AI, limited resources and absence of training restricted actual use of AI in teaching. This suggests faculty understand AI's potential but lack support for classroom integration. Our study recommends universities provide AI training, resources, and support for effective teaching integration to enhance the quality of teaching. Future research should explore gender differences in AI adoption and AI's long-term impact on teaching and learning. A limitation is the focus on CMS faculty in Pakistan. More research across disciplines and regions is needed for broader conclusions.

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