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Article

Employing artificial intelligence technology in developing practical content for media specialization—A case study of Palestine Technical University, Kadoorie

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Abstract: This study investigates the utilization of artificial intelligence (AI) technology to enhance practical content development within the media specialization program at Palestine Technical University, Kadoorie. The primary objective is to examine the extent to which media specialty lecturers employ AI technology in developing practical content. A mixed-methods approach is employed, qualitative data are gathered through in-depth interviews with faculty members to elucidate their perceptions and experiences regarding the integration of AI technology in practical content development. The study aims to provide valuable insights into the benefits and challenges of AI integration in practical content development for media specialization programs The study reveals diverse views on AI integration in media education at Palestine Technical University, Kadoorie. Faculty recognize AI's benefits like personalized learning and productivity but also express concerns about over-reliance and ethics. Consensus exists on cautious AI implementation to maximize benefits and address drawbacks. Obstacles to AI adoption include cost, skills gaps, and ethical considerations, highlighting the complexity of integration. The study emphasizes a balanced approach, offering insights for enhancing practical content development in media specialization programs at Palestine Technical University, Kadoorie.

Keywords: artificial intelligence technology; practical content for media specialization; Palestine Technical University, Kadoorie

1. Introduction

In recent years, AI integration has revolutionized processes across various sectors, promising efficiency and adaptability. In education, AI offers potential for enriching teaching and learning experiences, especially in fields like media specialization (Al Jwaniat et al., 2023; Habes et al., 2021). This studyinvestigates AI tools' utilization and effectiveness in teaching practical media content at Palestine Technical University, Kadoorie. This study aims to investigate the utilization and effectiveness of AI tools in teaching practical media content at Palestine Technical University, Kadoorie. It addresses understanding experiences with AI tools, evaluating benefits for students, identifying advantages and challenges, and assessing improvements in student learning outcomes (Habes et al., 2024). This study explores AI's applications in specialized domains, filling a gap in literature, particularly within Palestinian academic contexts. It sheds light on the growing trend of AI integration in university curricula and its implications for academia and media organizations, offering guidance for navigating this evolving landscape. The study aims to assess the usage and effectiveness of AI tools in teaching practical media content at Palestine Technical

University, Kadoorie. It seeks to understand experiences with AI tools, evaluate their benefits for students, identify associated advantages and challenges, and assess improvements in student learning outcomes.

2. Artificial intelligence: Definition and rise

The term artificial intelligence has become a comprehensive concept for applications that perform complex tasks that previously required human intervention (Almesafri and Habes, 2023; Habes et al., 2023). This term is often used interchangeably with its related subfields, such as machine learning (ML) and deep learning. The field of artificial intelligence aims to solve cognitive problems related to human intelligence, such as learning, creativity, and image recognition. Institutions and individuals use it by collecting large amounts of data from various sources such as smart sensors, human content, and system records to build self-learning systems that extract meanings from this data and use it to solve problems in a manner similar to humans. (Al-Azab and Al-Nashar, 2022, pp. 13–30). The idea of artificial intelligence began in 1950 with the paper "Computing Machinery and Intelligence" by Alan Turing, where he studied the possibility of machines' ability to think, introducing the term artificial intelligence theoretically (Al Jwaniat et al., 2023; Tahat et al., 2023). During the 1980s, David Rumelhart and John Hopfield published a research on deep learning technology, demonstrating that computers can learn from experiments. (Abdel-Razek, 2024, p. 188) Between 1990 and the early 2000s, scientists achieved many milestones in the field of artificial intelligence, such as defeating the world champion in chess. From there, the fields and technology of artificial intelligence have developed to what we see today. (Abdel-Razek, 2024, p. 415).

2.1. Artificial intelligence in media

AI is revolutionizing media and digital journalism, aiming to enhance journalistic capabilities and compete with social media. This evolution compels journalism professionals to adopt modern technologies, recognizing AI's pivotal role in the media process. "In the era of multiple media...the responsibility of journalists has increased," necessitating quick, accurate data handling (Badawi, 2023, pp. 39–45). However, technology introduces disruptions, notably the spread of fake news, potentially causing "technological chaos in the media field" and impacting decision-making (Al-Jundi, 2020, p. 248). This necessitates educational reforms in media studies to incorporate AI understanding at all educational levels. AI technologies, expanding work areas in journalism, offer new opportunities for interactive news dissemination, emphasizing the need for ethical guidelines in AI's media application (Hansen et al., 2017).

2.2. Fields and benefits of artificial intelligence

AI technologies expand journalism's capabilities, offering new opportunities for engagement in news dissemination. This necessitates "maintaining ethical responsibility in informing readers about the reality of using artificial intelligence tools in various media work areas" (Hansen et al., 2017, p. 12).

3. Artificial intelligence and education

There's a rising trend among university lecturers, spanning across educational levels, towards the increased integration of artificial intelligence (AI) technologies in various domains, extending from household voice assistants to grammar correction tools, article generation, and topic selection tools (Meera and Katta, 2019). Despite challenges and occasional misuse risks, there's a concurrent drive to leverage AI technologies to fulfill educational objectives efficiently and expansively, enhancing learning resources and catering to individual needs accurately and at scale. AI facilitates access to extensive educational resources tailored to specific subjects and educational levels, aiding in lesson explanations through diverse tools like drawing aids, maps, presentations, article synthesis, and lesson summaries. This proliferation of educational applications fosters innovative teaching methodologies aligned with educators' pedagogical objectives. Additionally, students are increasingly drawn to innovative AI-powered educational content delivery methods, fostering autonomous exploration and studyinto AI technologies relevant to practical media courses, thereby promoting self-directed learning. (Hassan, 2022).

4. Theories related to artificial intelligence in media teaching

This section delves into the various theoretical perspectives relevant to the integration of artificial intelligence in practical media teaching. It encompasses a comprehensive review of theories surrounding AI applications in educational settings, highlighting key (Bdoor and Habes, 2024; Habes et al., 2024).

4.1. Main theory: The theory of innovation diffusion

The study relies on the theoretical framework of the Diffusion of Innovations theory, which aims to explain human behavior towards accepting or adopting new ideas and technologies. This theory emerged in the late 1950s as a product of the Information Flow theory, with its roots tracing back to a group of researchers in the social realm during their experiments to persuade farmers to adopt new ideas in agricultural methods. Among these was the theory of information adoption and its connection to innovations for the purpose of development (Elbasir et al., 2021). The innovation theory defines innovation as a new method or idea for life and work patterns that will be introduced into the social system and may gradually receive response and adoption over time. This is associated with a set of conditions and variables related to the nature of the targeted society. (Al-Mashaqba, 2011, p. 106).

The proponent of the theory, Everett Rogers, classifies the diffusion of innovations based on several elements (Hajab, 2010, p. 322). **Figure 1** distinctly illustrates the sequential five-step adoption process experienced by each individual, with each step naturally leading to the subsequent one.

The study benefits from this theory to examine the extent of awareness among the study sample of artificial intelligence technologies in the field of media specialization. The level of interest among academic staff members at Palestine Technical University-Kadoorie in this innovation, evaluating the individual experiences of those included in the study in the research aspect, and their employment in developing practical content for media specialization. Additionally, it explores their

attitudes towards adopting artificial intelligence technologies in the teaching field of the specialization in its practical aspect (Habes et al., 2024; Safori et al., 2024).

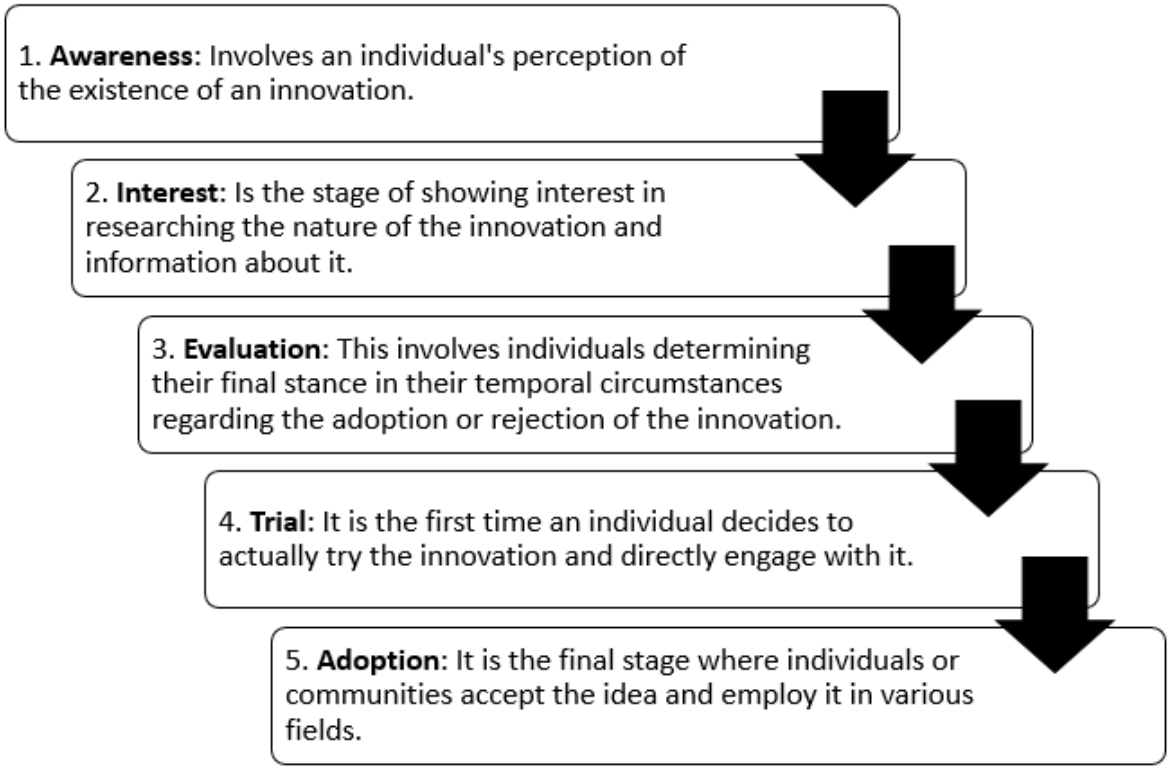

Figure 1. The five-step of the adoption process.

4.2. Secondary theories: Integrating models of technology adoption in media education

This study is primarily anchored in the Diffusion of Innovations theory, which provides a framework for understanding how new technologies, such as AI, are adopted and diffused within educational environments. While this theory offers valuable insights into the adoption process, it does not fully address the nuanced factors influencing individual and organizational acceptance of AI. Therefore, the theoretical framework is extended to include the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT). These models contribute a more granular perspective, emphasizing factors such as perceived usefulness, perceived ease of use, and facilitating conditions, which are crucial for understanding the adoption of AI in media education.

The inclusion of TAM and UTAUT allows for a deeper exploration of the variables that influence faculty and students' acceptance of AI technologies. For instance, TAM's focus on perceived usefulness and ease of use helps elucidate why some educators may feel empowered by AI's capabilities to enhance teaching, while others may be apprehensive due to perceived complexities or potential disruptions to traditional pedagogical methods. UTAUT further extends this understanding by incorporating social influence and facilitating conditions, highlighting the role of institutional support, professional development, and peer influence in shaping attitudes towards AI.

By integrating these theoretical perspectives, the study offers a comprehensive framework that not only examines the process of AI adoption but also contextualizes the diverse factors that mediate this integration within media education. This multifaceted approach provides a more robust foundation for analyzing the findings and situating them within the broader discourse on AI in education, media studies, and technology adoption.

5. Methodology

The methodology section is crucial in guiding the investigation into AI technology adoption in media teaching. It selects data collection and analysis strategies to ensure studyquality and validity. Focusing on exploring academic staff perceptions at Palestine Technical University-Kadoorie, this section serves as a roadmap for systematically gathering and interpreting their responses (Alghizzawi et al., 2024).

In-depth interviews were conducted with selected faculty members to complement the survey data and provide deeper insights into the motivations, challenges, and ethical considerations surrounding AI integration. The interviews were transcribed and subjected to qualitative content analysis using peer coding techniques. Peer coding involved multiple researchers independently coding the data and then discussing discrepancies to ensure consistency in theme identification. The coding process focused on identifying recurring themes and patterns that reflect faculty perspectives on AI use in media education. To ensure the reliability of the qualitative analysis, intercoder reliability was assessed using the coding and analysis tools provided by MAXQDA 2021.

The study aims to address the primary question: "How do faculty members in the media departments at Palestine Technical University-Kadoorie utilize artificial intelligence technology to enhance practical content development for media majors?" This question branches into four thematic areas:

1) Integrating AI Tools in Media Content Teaching: Faculty at Palestine Technical University-Kadoorie discuss their experiences and specific AI tools used in teaching practical media content, exploring their benefits for students' skill acquisition. They reflect on advantages and challenges of AI integration, noting observed improvements in learning outcomes. Those not using AI explain reasons, and all offer perspectives on supporting AI use in this context (Habes et al., 2024; Tahat et al., 2024).
2) Developing Teaching Methods for Media Content: In this segment, Faculty reflect on how teaching methods evolved with AI integration in practical media content education. They discuss specific ways of integrating AI methodologies and ensuring its integration. Insights are shared on how AI methodologies enhance teaching media skills, alongside identifying AI programs used with their distinguishing features.
3) Significance of AI Tools in Media Content Teaching: Faculty discuss the importance of using AI tools in teaching practical media content and explore how these tools better prepare students for media careers. They identify specific skills acquired through AI tool use and share expectations for future AI tool integration.

Participants also pinpoint suitable courses for AI use and discuss the qualitative addition AI brings to media education.

4) Case Studies and Examples of AI Tools in Media Content Teaching: Faculty share specific case studies or examples of successful AI tool usage in teaching practical media content. They discuss objectives behind AI tool integration and whether they were achieved. Participants reflect on student responses to AI tool usage and draw lessons for future AI tool use in teaching practical media content based on obtained results.

This study, categorized as descriptive, examines the use of artificial intelligence technology in developing practical media content at Palestine Technical University-Kadoorie across its three branches. The studyemploys two methodologies:

1) Survey Studies: This analytical method aims to understand social behavior and dynamics by collecting personal data or conducting interviews. Researchers will survey media technology lecturers at Palestine Technical University-Kadoorie across its branches to monitor, analyze, and interpret the phenomenon within its current context. (Omar, 2022, p. 147).
2) Reciprocal Relations Study Method: This approach examines the relationship between identified facts to understand the causes behind phenomena and suggest positive changes. It aids in interpreting study results and analyzing relationships between variables. Researchers will apply this method to interpret the outcomes of employing artificial intelligence technology in practical media education. (Hussein, 2026, p. 116). The study uses the interview tool, which is a scientific studytool used to collect data related to incidents and events by documenting them by the researcher. Interview tool is considered one of the most accurate scientific studytools and can be recorded and filmed. The study sample consists of eight lecturers holding masters and doctoral degrees in media who primarily teach practical courses in the media technology departments at Palestine Technical University-Kadoorie from its three branches: Tulkarm, Ramallah, and Al-Aroub.

In the research, the arbitration of the tool used to collect data, which comprised interviews, was conducted meticulously to ensure the reliability and validity of the findings. Four arbitrators were involved in this process, carefully examining the interviews conducted with lecturers to ascertain their accuracy and consistency. The arbitrators rigorously assessed the questions posed in the interviews, scrutinizing their relevance and depth in eliciting insightful responses from the participants. Through a systematic approach, the arbitrators upheld the integrity of the data collection process, ensuring that the interviews effectively captured the nuances of lecturers' perspectives on integrating AI methodologies into practical media content teaching.

6. Data analysis and findings

The qualitative data analysis employed a thematic approach, allowing for a nuanced exploration of the diverse perspectives held by faculty members regarding AI integration in media education. The analysis identified several key themes: (1) Perceived Benefits of AI Integration, which include enhanced student engagement, personalized learning experiences, and increased productivity in classroom settings;

(2) Challenges and Ethical Concerns, encompassing issues such as data privacy, potential biases in AI algorithms, and the risk of over-reliance on technology; and (3) Divergent Faculty Attitudes and Pedagogical Adaptations, reflecting varying levels of acceptance, resistance, and the strategies employed to integrate AI tools into teaching practices.

The theme of perceived benefits highlights a general consensus among faculty on AI's potential to revolutionize media education by offering students tailored learning experiences and equipping them with industry-relevant skills. However, this enthusiasm is tempered by significant concerns, particularly regarding the ethical use of AI. Respondents frequently cited anxieties about student over-reliance on AI for tasks such as content creation and data analysis, which could undermine critical thinking and traditional media skills. These concerns underscore the need for a balanced approach that encourages the ethical and responsible use of AI in educational contexts.

Further analysis revealed contradictions within faculty perspectives, particularly between those who advocate for extensive AI integration to mirror industry trends and those who caution against the pedagogical and ethical pitfalls. These contrasting views point to a broader debate on how best to prepare students for a future media landscape increasingly dominated by AI technologies. The findings suggest that effective AI integration in media education requires not only technical skill development but also an emphasis on ethical awareness and critical thinking, ensuring students can navigate the complexities of AI-driven media environments.

6.1. Qualitative content analysis of in-depth interviews

Main question: Do you use artificial intelligence technology in teaching practical courses or not?

Responses illustrate varied engagement with AI technology, from consistent utilization to occasional adoption.

1) Consistent Utilization 62.5% of respondents consistently integrate AI technology in teaching, highlighting recognition of AI's benefits in enhancing learning experiences and course delivery optimization.
2) Occasional Adoption 37.5% of respondents sometimes use AI technology in teaching practical courses, employing AI tools for specific tasks or occasions rather than consistent integration.

Overall, while most interviewees utilize AI technology in teaching practical courses, a significant portion adopts a cautious or intermittent approach. This variance may be influenced by factors like familiarity with AI tools, pedagogical preferences, and perceived relevance to course objectives.

Table 1. Summary of AI integration in teaching practices.

Integration Level	Percentage	Key Characteristics
Consistent Utilization	62.5%	Regular use of AI tools, significant benefits noted
Occasional Adoption	37.5%	Limited use for specific tasks or occasions
Minimal Integration	0%	Very limited use, if any

Table 1 summarizes the proportion of respondents who use AI tools consistently, occasionally, or minimally. It highlights the overall trend in AI adoption among faculty members.

6.2. QA of in-depth interviews in term related to utilizing artificial intelligence tools in media content practical teaching

Question 1: Could you share your experience and the specific AI tools you use in teaching practical media content at Palestine Technical University-Kadoorie?

Responses reveal varied engagement with AI tools in teaching practical courses. Some instructors embrace AI's potential to enhance teaching and learning experiences, while others prioritize traditional methods.

1) Early Adoption: 62.5% lecturers recently started using AI tools, spanning from about a year ago to the present. While two others fall into this category, exploring AI tools in response to modern media demands.
2) Limited Integration: 37.5% lecturers employ AI tools cautiously, limiting their use to specific tasks to maintain students' individuality. And only one lecturer indicates minimal integration of AI tools in practical media courses, particularly related to text generation and question answering.

Question 2: How do these AI tools benefit media students in learning practical media skills?

Responses show diverse views on AI tools' role in media education, focusing on learning enhancement and skill development.

1) Positive Impact: 62.5% of lecturers note AI's benefits in improving learning, efficiency, and media skills.
2) Caution and Balance: 37.5% advise careful AI use, with some emphasizing experimentation to gauge effectiveness.

While many appreciate AI's advantages, caution remains, reflecting the nuanced debate on AI's integration into media studies.

Question 3: What are the key advantages and challenges of integrating AI tools in practical media education?

Responses offer a nuanced view on AI tools' integration in media education. About 75% of lecturers highlight benefits like personalized learning, improved resource access, enhanced analytical skills, and task efficiency, stressing AI's role in fostering creativity and innovation. However, 25% acknowledge hurdles such as technology reliance, AI biases, privacy concerns, and intellectual property risks. These challenges highlight the complexities of AI integration, emphasizing the need for careful deliberation and strategic planning.

Faculty members also express concerns about the potential for AI to diminish human creativity and interaction, particularly in courses that rely on personal expression and traditional skills. Accessibility issues, such as the high cost of AI tools and the need for technical expertise, further complicate implementation efforts. These limitations underscore the importance of balancing AI's capabilities with traditional teaching methodologies, ensuring that core educational values and skills are preserved.

Table 2. Benefits and Challenges of AI Integration.

Aspect	Benefits (Percentage)	Challenges (Percentage)
Improved Learning Experience	62.5%	Data Privacy Concerns (25%)
Enhanced Efficiency	75%	Algorithmic Bias (25%)
Personalized Learning	62.5%	Over-reliance on Technology (25%)
Increased Student Engagement	50%	Diminished Human Creativity (25%)

Table 2 presents a summary of the benefits and challenges identified by faculty members. It provides a clear overview of the positive impacts and the issues associated with AI tools in media education.

Question 4: Have you noticed any improvement in student learning outcomes since implementing these AI tools?

Responses on AI tools' impact in media education reveal mixed outcomes. About 37.5% report notable improvements in content creation, professionalism, and student grades, especially in e-learning, showing AI's potential in both theory and practice. Conversely, another 37.5% see modest gains, worried about over-reliance on technology potentially stifling traditional skills development. Additionally, 25% are undecided about AI's benefits, pointing to the need for careful, ongoing assessment and caution against too much dependence on AI, underscoring the importance of balancing AI integration with traditional educational methods.

Question 5: If AI has not been employed in teaching practical media content, what are the reasons?

Responses highlight key reasons for the limited AI integration in practical media education, with 62.5% of respondents pointing to various barriers. These include cost, lack of teacher expertise, ethical concerns, and misalignment with educational goals. Concerns extend to diminishing human creativity and interaction, alongside technical hurdles and the potential negative impact on student skills. Financial limitations and practical testing challenges further complicate AI's integration, demonstrating the multifaceted nature of these obstacles.

Conversely, 37.5% of respondents emphasize the existence of challenges and Mitigation Strategies and to address these challenges, faculty suggest a cautious, balanced approach to AI integration that prioritizes maintaining foundational skills while exploring AI's potential. This includes targeted training for instructors to build their AI expertise, developing clear ethical guidelines for AI use, and creating gradual integration plans that blend AI with traditional methods. By implementing such strategies, the aim is to leverage AI's benefits while mitigating its drawbacks, ensuring a holistic and responsible approach to media education.

Question 6: Do you support the use of AI in teaching practical media content?

Responses present a spectrum of perspectives on AI utilization, with varying degrees of support. Half of the respondents (50%) advocate for AI integration, highlighting benefits such as increased productivity, enhanced quality, creativity, and industry preparedness, while emphasizing the importance of ethical implementation. Another 37.5% express conditional support, citing concerns about ethical standards, readiness, and the necessity for thorough testing before full adoption. They endorse AI use but with caution and readiness considerations in mind. Conversely, 12.5%

exhibit skepticism, emphasizing the need for balance and the preservation of core skills. Overall, the responses range from enthusiastic endorsement to cautious support and skepticism, emphasizing the importance of evaluation, ethics, and preparedness in integrating AI into media education.

6.3. QA of in-depth interviews in terms related to developing teaching methodologies for media content practical teaching regarding artificial intelligence

Question 1: How has your teaching methodology evolved with the integration of AI methodologies in teaching practical media content?

Responses reflect a spectrum of perspectives on the evolution of teaching methodologies with the integration of AI in practical media content education. The majority (62.5%) underscore a gradual evolution, stressing adaptability and flexibility in response to media technology advancements. They view AI tools as complementary to traditional methods, aiding tasks like content creation and skill development. Conversely, 37.5% adopt a cautious stance, advocating for a balanced approach to preserve essential learning processes amidst AI's expanding roles. Overall, the responses highlight a nuanced approach to AI integration, emphasizing gradual adaptation alongside the retention of fundamental pedagogical principles.

Question 2: How do you integrate AI methodologies in teaching practical media content?

Responses provide insights into diverse approaches to integrating AI methodologies.

1) Utilization and Integration: 62.5% highlight active efforts to incorporate various AI tools into the curriculum, aiming to optimize teaching processes and enhance student engagement.
2) Skepticism and Caution: 37.5% express skepticism and advocate for understanding ethical implications before widespread AI use.

Overall, responses reflect a range of perspectives, emphasizing informed decision-making and thoughtful implementation strategies.

Question 3: How do you ensure AI integration in media education teaching methods?

The responses offer insights into ensuring AI integration in teaching methodologies, reflecting diverse perspectives.

1) Strategic Planning and Training (50%) Lecturers stress strategic planning, training, and data analytics for effective AI integration. They prioritize careful preparation to optimize teaching practices.
2) Foundational Skills and Ethical Considerations (37.5%) Others focus on building foundational skills and upholding ethical standards. They aim to equip students while ensuring responsible AI use.
3) Practical Implementation (12.5%) Some discuss practical adaptation strategies, advocating for flexibility and modification of activities to leverage AI tools effectively.

Overall, the responses highlight a comprehensive approach to AI integration, covering strategic planning, skill development, ethical considerations, and practical implementation.

Question 4: How do AI methodologies enhance teaching practical media skills?

Responses highlight AI methodologies' effectiveness in teaching media skills, emphasizing diverse benefits:

1) Efficiency and Productivity (50%): Lecturers stress AI's efficiency, saving time and effort for both lecturers and students, streamlining learning processes, and enhancing outcomes.
2) Customization and Personalization (25%): Others focus on tailoring learning experiences to students' needs using AI-driven insights, enhancing engagement and addressing unique learning requirements.
3) Precision and Improvement (25%): A smaller group discusses AI's role in enhancing work quality by minimizing errors, expediting learning, and refining skills through continuous reinforcement.

Overall, responses underscore AI methodologies' multifaceted advantages in teaching media skills, optimizing learning experiences, and elevating media education quality.

Question 5: Which AI programs do you use in teaching practical content, and what sets them apart?

Lecturers discuss AI tools in teaching media content, showcasing their varied functionalities:

1) Multimedia Editing and Design Tools (62.5%): Highlighted are programs like Adobe Premiere Pro, InShot, Adobe Photoshop, and Canva, offering advanced features for video editing, graphic design, and image manipulation, aiding efficient content production.
2) Audio Editing and Recognition Software (25%): Tools such as Adobe Audition, Hindenburg Journalist, Google Speech-to-Text, and Otter.ai assist in tasks like audio enhancement, transcription, and text-to-speech conversion, enhancing audio-based projects.
3) Data Analysis and Content Generation Platforms (12.5%): Mentioned platforms like Google Analytics, Hootsuite, MuseNet, and Jukebox facilitate audience analysis, music composition, and media production, enabling students to explore content creation and audience engagement.

In summary, lecturers present a range of AI programs for practical media content education, empowering students in multimedia creation, audio processing, and data-driven storytelling.

Figure 2 illustrates the AI tools used in practical media courses. The figure shows the percentage of faculty using each tool, with Adobe Photoshop and Adobe Premiere Pro being the most commonly employed, followed by other tools like Google Speech-to-Text and Canva.

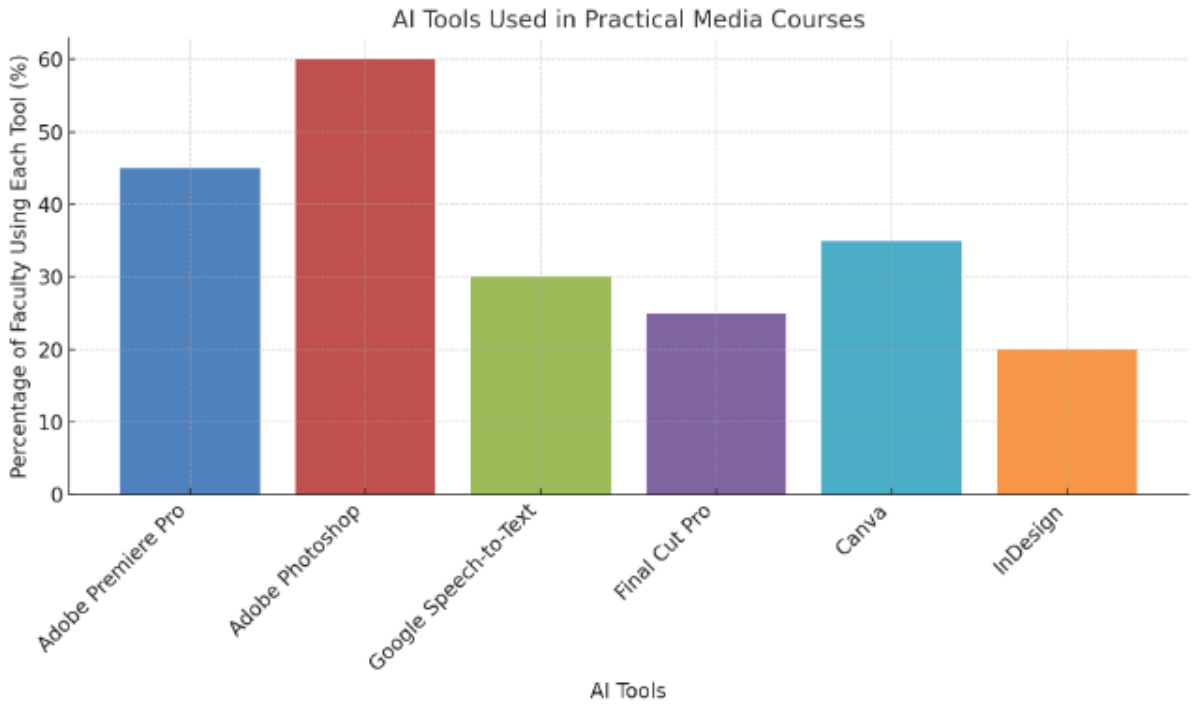

Figure 2. AI tools used in practical media courses.

6.4. QA of in-depth interviews in terms related to importance of using artificial intelligence tools in media content practical teaching

Question 1: Why is the use of AI tools important in teaching practical media content?

Lecturers stress the importance of integrating AI tools into teaching media, emphasizing various implications. One aspect highlighted is the need to stay updated with tech advances to prepare students for the workforce and encourage AI exploration. Additionally, AI enhances learning experiences, fostering interactive environments and analytical skills. It also boosts efficiency, streamlining tasks and improving content quality. Lecturers caution against overlooking AI integration, emphasizing the importance of anticipating future trends. Overall, AI tool integration is crucial in preparing students for media's evolving landscape.

Question 2: How do AI tools better prepare students for media careers?

Lecturers highlight AI tools' role in skill development and adaptation, stressing the importance of acquiring both basic and AI-related skills for productivity and competitiveness. Some address ethical challenges and pedagogical enhancements, emphasizing AI's ability to customize learning experiences while upholding ethical standards. Others discuss AI's impact on future trends and innovation in media production, underscoring its role in reducing costs and maintaining market relevance. Overall, lecturers emphasize AI tools' diverse benefits in equipping students for various roles in the media industry, from skill enhancement to ethical considerations and innovation readiness.

Question 3: What specific skills or competencies do students acquire through the use of AI tools in teaching practical media content?

Lecturers provide a nuanced perspective. They emphasize a range of skills including efficiency, critical thinking, technical proficiency, and adaptability. Some lecturers highlight AI's role in enhancing productivity and efficiency. Others discuss the development of critical thinking, content creation, technical proficiency, and study skills. While a few underscore students' acquisition of modern studio skills, technical proficiency, and readiness for media practices. However, one lecturer acknowledges uncertainties surrounding AI's impact on skill development, emphasizing the ongoing evolution of AI integration in media education. Overall, lecturers recognize the diverse skill development opportunities offered by AI tools while acknowledging the evolving nature of AI integration in media education.

Question 4: What are your expectations for the integration of AI tools in teaching practical media content in the future?

Here perspectives vary, some foresee automation and efficiency gains through AI but stress the need for human oversight. Others advocate for a human-centric approach, emphasizing the importance of students developing complementary skills alongside AI advancements. There is recognition of AI's potential to foster skill development across various competencies, along with the importance of ethical considerations and guided usage. Calls for clear strategies and cautious implementation are echoed, alongside general confidence in AI's integration without specifying detailed expectations. Overall, there is anticipation of a nuanced evolution in AI integration, with emphasis on balanced approaches, skill development, ethical considerations, and strategic planning to maximize AI's benefits while preserving human expertise and values.

Question 5: What are suitable courses for AI use, and what qualitative addition does AI usage bring?

In response to on suitable courses for AI integration and its qualitative enhancements, insights from lecturers span various categories. Specific courses such as Content Writing, Editing, Graphic Design, and Audiovisual Production are highlighted, emphasizing AI's role in streamlining tasks and enhancing productivity. Its qualitative addition in filmmaking, report preparation, and media material creation is noted, anticipating its increasing role in content quality improvement and self-learning. Ethical and professional AI use is stressed, advocating for comprehensive integration alongside lecturer training. The varied quality of AI use across courses, its potential in editing, translation, and image creation, and the need for further tool development in practical courses like sound design and film editing are acknowledged. Overall, AI's transformative potential in enhancing learning experiences, content quality, and skill development across media courses is highlighted, with an emphasis on ethical considerations and effective lecturer training.

6.5. QA of in-depth interviews in terms related to case study and examples of using artificial intelligence tools in media content practical teaching

Question 1: Could you share a specific case study or example of how you successfully use AI tools in teaching practical media content?

Each lecturer has his\her own style regarding using AI tools in teaching practical media courses:

1) In digital media courses, Raed Zawahra employs AI tools, particularly in video and audio montage classes. Students utilize AI tools to expedite assignments and enhance quality, creating content like recorded voiceovers and filmed clips.
2) Yousef Shakarna emphasizes AI's efficacy in multimedia material handling, especially in video editing. Students find AI instrumental in generating ideas and reconstructing them into visually appealing content, optimizing time efficiency and enriching learning experiences with collaborative AI usage.
3) Abdullah Masleh recounts a notable incident in the "Sound technology" course, where a student submitted reports focused on artificial intelligence unbeknownst to the instructor. Recognizing the student's adept AI tool use, Masleh integrated a lesson on AI discovery, fostering diverse student experiences and skill development.
4) Mohammed Omariya illustrates AI's role in elevating content quality in video editing courses. Leveraging AI technology, students overcome audio issues and enhance visual materials, surpassing traditional boundaries and fostering creativity.
5) Ahmad Tannouh exemplifies AI's integration in teaching practical media content, citing its use in verifying image credibility and transcribing interviews. The incorporation of AI streamlines news editing processes and enhances journalistic material formulation, enriching both instructor and student experiences.
6) Wala' Battat stresses lecturers' awareness and understanding of AI tools' importance to effectively integrate them into media education. He emphasizes the need for ethical considerations and clear standards in AI usage, advocating for thoughtful implementation to augment student learning without undermining creative autonomy.
7) Rafat Al Haj Ali acknowledges AI's utility in text creation and image manipulation but highlights the need for advancements in video and audio production tools. Despite existing limitations, he underscores AI's potential to enhance teaching materials and streamline content creation processes.
8) Amjad Khalil shares a practical example from the introductory radio programs course, where an AI tool called "In Lab "facilitated text-to-speech conversion for radio program preparation. Despite challenges in accessing specific voices, AI tools offer innovative solutions, enriching teaching experiences and fostering student engagement.

These case studies underscore AI's versatile application in media education, from enhancing content quality to streamlining production processes. However, they also highlight the importance of lecturers' awareness, ethical considerations, and ongoing technological advancements to harness AI's full potential effectively.

Question 2: What were the objectives behind integrating AI tools in this case, and were they achieved?

The lecturers outline various objectives for integrating AI tools into teaching media content, illustrating the complex process of incorporating technology into education. Raed Zawahra aims to empower students to discover suitable tools amidst AI's evolution, facilitating navigation through study and exploration. Yousef Shakarna focuses on deepening students' understanding of video editing and encouraging research, cautioning against overreliance on AI. Abdullah Masleh

encourages experimentation with AI tools while emphasizing the importance of balance. Mohammed Omariya aims to stimulate innovation and equip students for market demands through AI integration. Ahmad Tannouh focuses on meeting market requirements by ensuring graduates are proficient with AI tools. Wala' Battat addresses integration challenges, while Rafat Al Haj Ali emphasizes informing students about technological advancements. Amjad Khalil aims to develop customized programs for students using AI tools. These objectives underscore the multifaceted nature of incorporating technology into education.

Question 3: How did students respond to the use of AI tools in this study or example?

1) Positive Response: Several observations noted varied positive responses among students, with increased interest, motivation, and enthusiasm towards AI tools. Some students displayed significant improvement in engagement and interaction with the subject matter.
2) Mixed Response: While some students responded positively, others showed mixed reactions. Varying levels of interest were evident, with some displaying significant enthusiasm while others had more reserved reactions. Additionally, two categories of responses were noted, with some students showing enthusiasm and others displaying lower engagement due to limited digital media experience.
3) Cautious Response: Expressions of caution or skepticism regarding students' response to AI tools were evident. Attempts at application were not universally successful, indicating a cautious response among students. A cautious approach towards AI tool implementation was emphasized, awaiting study results before further action. Practical challenges faced by students underscored the need for study and practice to address them, indicating potential reservations among students.

Overall, while some students responded positively, others exhibited mixed or cautious responses, illustrating the diverse range of experiences and perspectives in adopting new technologies in media education.

Question 4: Based on the results of this study or example, what lessons have been drawn for the future use of AI tools in teaching practical media content?

Lessons for Future AI Tools Integration in Teaching Media Content:

1) Integration and Training: Emphasize AI tools integration through workshops and ongoing education to familiarize both instructors and students, enhancing learning.
2) Enhanced Learning Experience: Highlight AI's potential in enriching learning by customizing environments and automating tasks to improve engagement and quality.
3) Curriculum Adaptation: Align curricula with AI advancements to prepare students for evolving job market demands.
4) Professionalism and Ethics: Stress professional and ethical AI use, urging academics to convey these principles effectively to students.
5) Practical Implementation: Advocate for a cautious approach considering contextual challenges before widespread AI adoption.
6) Creative Applications: Discuss AI's future role in voice production, enriching content creation and showcasing student talents.

7) These insights emphasize proactive integration, professionalism, and creativity in leveraging AI for teaching media content effectively.

7. Implications for media education practices, curriculum design, and future research

1) Implications for Media Education Practices:

The findings from this study reveal critical insights into the integration of AI tools in media education. The diverse engagement levels of faculty with AI technologies highlight both the potential benefits and challenges associated with their use. As such, media education practices must evolve to address these dynamics. Educators should consider adopting a balanced approach that incorporates AI tools while preserving fundamental pedagogical principles. The benefits identified, such as enhanced student engagement and personalized learning experiences, suggest that AI can significantly contribute to improving instructional methods and learning outcomes. However, addressing the ethical concerns and challenges related to data privacy and algorithmic biases is essential to prevent over-reliance on technology and ensure responsible AI use in educational settings.

1) Implications for Curriculum Design:

The study underscores the need for curriculum redesign to effectively integrate AI tools into media education. Curriculum developers should incorporate modules that not only teach technical proficiency with AI tools but also emphasize the ethical implications and critical thinking required to navigate AI-driven media environments. The identified benefits, such as improved productivity and creativity, should be leveraged to enhance course content and learning activities. Additionally, the challenges highlighted in the findings, such as concerns about diminishing human creativity and technical barriers, should inform the development of a curriculum that balances AI integration with traditional media skills. Ensuring that students acquire both technical and ethical competencies will better prepare them for the evolving demands of the media industry.

1) Implications for Future Research:

The study's findings point to several areas for future research. Further investigation is needed to explore the long-term impact of AI integration on media education and student outcomes. study should focus on developing frameworks for effective AI implementation that address both the technical and ethical aspects identified in this study. Additionally, longitudinal studies could provide deeper insights into how AI tools influence teaching methodologies and student learning over time. Exploring comparative studies between institutions with varying levels of AI adoption could offer valuable perspectives on best practices and challenges. Future research should also examine the role of AI in enhancing or potentially undermining traditional media skills, providing a comprehensive understanding of AI's impact on media education.

8. Discussion and conclusion

This study aimed to explore how faculty members in the media departments at Palestine Technical University-Kadoorie utilize artificial intelligence (AI) technology

to enhance practical content development for media majors. The findings reveal a complex landscape of AI integration in media education, highlighting both the potential benefits and significant challenges that faculty members face.

The results demonstrate that faculty members actively employ AI tools such as Adobe Premiere Pro, Google Speech-to-Text, and other AI-based editing and content creation platforms to enhance practical media education. These technologies have been recognized for their capacity to streamline teaching processes, foster personalized learning experiences, and improve students' technical proficiency and creativity in media production. Faculty members utilize AI to simulate real-world media industry scenarios, thereby aligning their teaching with evolving professional standards.

However, the adoption of AI is not without its challenges. The study highlights several barriers, including the high costs associated with advanced AI tools, the need for ongoing faculty training to keep pace with technological developments, and a skills gap among students unfamiliar with these technologies. Additionally, ethical concerns such as data privacy, algorithmic bias, and the risk of over-reliance on AI tools pose significant hurdles, reflecting broader societal debates on AI's role in education and media production.

8.1. Scientific and societal relevance of the findings

The scientific relevance of this study lies in its contribution to the growing body of literature on AI integration in higher education, specifically within the context of media studies. By combining quantitative and qualitative insights, this study provides a nuanced understanding of how AI is reshaping media education and highlights the critical need for faculty to develop both technological and ethical competencies.

Societally, the findings underscore the urgent need for educational institutions to adapt their curricula to better prepare students for an AI-driven media landscape. There is a pressing need for balanced AI implementation strategies that enhance students' learning outcomes while fostering ethical awareness and critical thinking. The study's findings can inform policy makers, curriculum developers, and educators in designing AI training programs that address these dual objectives.

8.2. Limitations of the study

Despite its contributions, the study has several limitations that should be acknowledged. First, while the qualitative data provides valuable insights into faculty perspectives, the sample size is limited, which may affect the generalizability of the findings. Future study should include a broader range of institutions and participants to capture a more diverse set of views. Second, the study primarily focuses on faculty experiences, with less emphasis on student perspectives. Including students' viewpoints in future studies would provide a more comprehensive picture of AI's impact on media education. Lastly, while the study utilized peer coding to ensure reliability, intercoder reliability was only assessed among a small number of coders using MAXQDA 2021, and further exploration of coding consistency is recommended.

8.3. Conclusion

In conclusion, this study reveals that while AI offers significant opportunities for enhancing practical media education, its integration requires a careful, multifaceted approach that addresses technological, pedagogical, and ethical dimensions. Faculty members play a crucial role in guiding students towards responsible and effective use of AI tools, equipping them not only with technical skills but also with a critical understanding of the ethical challenges these technologies pose. By fostering a balanced approach to AI in media education, institutions can better prepare students for the rapidly evolving media landscape, ensuring that they are not only proficient in using advanced technologies but also conscious of their broader societal implications.

9. Practical recommendations and framework for implementing AI in media education

9.1. Ethical guidelines for AI integration in media education

The issue raises an important point about the need for a more thorough exploration of ethical considerations in AI use within media education. Based on the findings, which highlight concerns over over-reliance on technology, data privacy, and ethical use of AI tools, expanding the discussion to include a dedicated section on ethical guidelines is both relevant and necessary.

The data analysis revealed that respondents frequently mentioned the potential ethical pitfalls of AI, particularly around issues such as the integrity of AI-generated content, bias in AI algorithms, and the importance of maintaining human oversight. These insights underscore the need for educators to establish clear ethical standards to guide AI use in educational settings.

In response, a dedicated section on ethical guidelines for AI in education will be incorporated into the manuscript. This section will outline key principles, including:

1) Transparency and Accountability: AI tools used in media education should be transparent in their functioning and outcomes. Educators must ensure students understand the limitations and potential biases inherent in AI technologies, fostering a culture of accountability in AI use.
2) Data Privacy and Security: Given the increased concern over data handling, guidelines will emphasize the importance of safeguarding personal information when using AI tools. This includes adhering to data protection laws and ensuring that students are trained to manage data responsibly.
3) Avoidance of Over-Reliance: Emphasizing the importance of critical thinking and human oversight in the use of AI will be highlighted. The guidelines will promote a balanced approach where AI is used as a supportive tool rather than a replacement for human judgment.
4) Inclusivity and Fairness: To counteract biases in AI, educators will be encouraged to use AI tools that are inclusive and representative of diverse perspectives. This involves selecting AI systems that have undergone rigorous testing for fairness and are designed to mitigate bias.
5) Ethical AI Literacy: A core recommendation is the integration of AI ethics into the curriculum, where students learn not only how to use AI tools but also to

critically assess the ethical implications of their use in media creation and content management.

Incorporating these ethical guidelines into the educational framework will provide students with a clearer understanding of responsible AI use and prepare them for ethical challenges in the industry. This dedicated section will enhance the manuscript by providing actionable recommendations that address the ethical concerns raised by the study participants, aligning with the broader goal of responsible AI integration in media education.

9.2. Steps for implementing AI in media education

Based on the study findings, this section outlines a structured framework to guide educational institutions in implementing AI tools in media education. The recommendations aim to maximize AI's benefits while addressing the challenges identified, including ethical concerns, cost, and the need for ongoing lecturer development.

9.2.1. Establish an AI integration strategy: define clear objectives

Institutions should establish specific goals for AI integration, focusing on how AI tools can enhance learning outcomes, foster creativity, and better prepare students for industry demands. Objectives should include balancing AI's role with traditional skills, ensuring technology complements rather than replaces core media competencies.

Conduct Needs Assessment: Before implementation, conduct an assessment to identify the most relevant AI tools for the curriculum, considering factors like course content, student needs, and available resources. This ensures that AI integration aligns with the institution's pedagogical goals and addresses the practical skills required by the media industry.

9.2.2. Develop an AI-ready curriculum: curriculum adaptation

Update curricula to incorporate AI tools relevant to media production, editing, and content creation. Include practical modules that teach students how to use AI tools responsibly, emphasizing critical thinking, ethical considerations, and creative problem-solving.

Case Studies and Practical Examples: Integrate case studies demonstrating AI applications in media, highlighting both successful uses and potential pitfalls. This approach fosters a deeper understanding of AI's impact, guiding students on navigating complex real-world scenarios.

9.2.3. Enhance lecturer skills through continuous training

Professional Development Programs: Offer ongoing training for lecturers to build their AI expertise. Programs should focus on both technical skills and ethical considerations, equipping educators with the knowledge to guide students effectively.

Collaborative Learning: Encourage collaboration among faculty members to share best practices and experiences in AI tool usage. Peer-learning sessions can provide valuable insights into overcoming common challenges, enhancing the collective capability of the teaching staff.

9.2.4. Implement ethical guidelines and best practices

Establish Ethical Frameworks: Develop clear ethical guidelines for AI use in teaching, addressing concerns such as data privacy, intellectual property, and AI biases. Educators should be trained to incorporate these guidelines into their teaching practices, ensuring responsible AI use.

Promote Critical AI Literacy: Educate students on the limitations and ethical implications of AI, encouraging them to critically assess AI-generated content. This includes understanding biases, ethical dilemmas, and the importance of human oversight in media production.

9.2.5. Create accessible AI learning resources: Resource allocation

Invest in accessible AI tools that fit within the institution's budget constraints. Provide open-access AI software and platforms whenever possible, ensuring equitable access for all students.

Technical Support and Resources: Establish a support system that includes technical assistance for both students and lecturers. This can include workshops, online tutorials, and dedicated support staff to troubleshoot AI-related challenges.

9.2.6. Foster industry partnerships: Collaboration with media industry

Build partnerships with media companies to stay updated on the latest AI tools and trends. Collaborations can also offer students practical exposure through internships and projects that involve AI in real-world media settings.

Guest Lectures and Workshops: Invite industry professionals to conduct guest lectures or workshops on AI applications in media. This provides students with insights into how AI is being used in the industry, bridging the gap between academic learning and practical application.

9.2.7. Evaluate and adapt: feedback mechanisms

Implement regular feedback loops with students and lecturers to assess the effectiveness of AI integration. Collect qualitative and quantitative data to identify areas for improvement and adapt the approach as needed.

Continuous Improvement: Regularly review and update the AI integration strategy to keep pace with technological advancements and evolving educational needs. Flexibility in adapting the framework ensures that AI integration remains relevant and beneficial.

Implementing AI in media education requires a comprehensive and thoughtful approach. By establishing a clear strategy, updating curricula, investing in lecturer development, and maintaining ethical standards, institutions can effectively navigate the complexities of AI integration. This balanced framework aims to leverage AI's potential while preparing students for an evolving media landscape, ensuring that they are equipped with both technical skills and critical awareness.

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