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Evaluating Student Perceptions of AI Tools in Multimedia Editing and Their Impact on Creativity and Productivity

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Abstract: *The application of Artificial Intelligence (AI) tools in multimedia editing has revolutionized the creative process, and students can now finalize their work with more effectiveness and precision. In this research, the application and impact of AI-based multimedia editing tools among students are quantified based on their experience, issues, and perceived effect. The participants of this research are Diploma in Information Technology first-year students who take the Introduction to Multimedia course Year 1, Semester 2 which consist of batch IT23C and IT24A. The course exposes students to multimedia features and makes them exhibit methods of planning and executing multimedia projects. Throughout the course, students were exposed to AI-powered multimedia editing software like Renderforest, Canva AI, and Fotor AI that help automate design tasks, create new content, and optimize media files. This study adapts the Technology Acceptance Model (TAM) to measure students' usage, usefulness of AI tools, ethical concerns and behavioural intentions. Results show that although AI tools greatly enhance editing speed and creativity, students feel they rely on automation, are ethically concerned, and experience a sharp learning curve for advanced features. This paper also examines students' attitudes towards the role of AI in skill acquisition and its potential contribution to the creative sector in the future. The research contributes to the emerging debate on AI in education, offering implications for educators, developers, and policymakers on how best to leverage AI-facilitated learning environments.*

Keywords: AI Tools; Multimedia Editing; Student Experience; Education Technology; Artificial Intelligence Adoption

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1. Introduction

The rapid development of Artificial Intelligence (AI) has changed various industries, significantly impacting education and creative sectors. At the heart of this change are AI-powered tools for multimedia editing that promise substantial advances in automation, accuracy, and workflow efficiency in creative work (Iqbal et al., 2024a). These tools automate graphic design and content creation functions, improving the quality of multimedia elements. This, in turn, has offered access to higher-quality editing tools to a larger audience of students and many others. On one hand, the advancement of AI technologies is reinforcing their impact in the domain of multimedia education, providing new opportunities, challenges, particularly in skills and creativity development, and on the other hand creates ethical challenges.

Today, one must be able to work in the medium of multimedia which this is a prerequisite skill for nearly any student of any specialized computing field. In the past, developing and completing multimedia projects required a good understanding of complex technical skills as well as advanced editing tools like Adobe Photoshop, Premiere Pro, or After Effects. The launch of Renderforest, Canva AI and Fotor AI advanced editing tools significantly eased the ability for students to create quality multimedia projects (Bender, 2023a). So the new technologies can automate video montages, intelligently enhance images, and AI generate contents that will expedite the processes involved in the production and editing of multimedia resources.

The impact of this expansion of Artificial Intelligence (AI) in the field of multimedia editing on student learning is the subject of increasingly multidisciplinary research. This study explores the impact of AI-assisted multimedia editing tools on learners, including their learning experience, skill development, and creative growth. This study highlights first-year students of a Diploma in Information Technology undertaking an Introduction to Multimedia course which is domain knowledge that equips students will overall principles in multimedia and the skill required to layout and manage multimedia projects. Over the course of the term students interacted with AI-powered editing applications that streamlined their workflows and enhanced the overall quality of their creative artifacts. But notwithstanding the significant benefits brought about by AI tools, there are also plenty of serious concerns about over-reliance on automation, ethics and challenges in learning more advanced features.

A study explored the experiences of 22 participants using AI-enhanced multimedia editing applications. The research was intended to assess students' attitudes toward the role of such tools in their skill development, productivity, and creative independence. In addition, the investigation explored the challenges, ethical issues, general satisfaction, and opportunity for future use of AI technologies. The finding shows a predominately positive perception of AI, with students acknowledging its capability to enhance productivity and efficiency. However, continuing worries about ethical ramifications, dependence on automation, and capacity to adjust to sophisticated features underscore the need for a balanced view. A balance between technology Ascent and ethical responsibility was imperative for the successful integration of AI in multimedia paradigms.

AI technologies are developing very quickly, we can see big impact on teaching and industry. Deriving value from the analysis of student engagement with AI tools, it can guide educators in constructing curricula that not only use AI optimally but also foster critical thinking and imagination (Holmes et al., 2023). Moreover, the findings of this study can help software developers and policymakers to improve AI-supported learning environments in ways that will maximise educational outcomes whilst also addressing those challenges.

The implications of such research go beyond academic boundaries, contributing to an evolving dialogue about the role of artificial intelligence in education and the arts. It is important to evaluate the impact of AI-based tools on students and the paradigm of digital material production and consumption, as the usage of AI in multimedia editing grows rapidly. This study seeks to investigate the opportunities and challenges associated with the use of AI technologies, offering practical insights that can inform the behaviors of educators, students, and industry practitioners in relation to the rapidly advancing topical area of multimedia education.

This paper organized as follows. Firstly, we provide an informative state and overview of the Artificial Intelligence (AI) in education, while we give special attention to its application in multimedia courses. This part stresses the need for evaluating the way learners use AI tools. Next, we introduce the research methodology, indicating the quantitative approach adopted, the population under study (first-year Diploma in Information Technology students) and the data collection instruments used. Then, the results are analysed through key themes, such as user experience, skill level, creativity, ethical implications, and the challenges of AI. Finally, we discuss the integration of AI-driven multimedia editing tools, and the challenges it carries as well to provide recommendations for future research, implications and applications.

2. An Overview of AI in Multimedia Education

AI has fundamentally transformed how multimedia course students learn new skills and express their creativity. Tools like Adobe Sensei, Deep Dream or Canva AI allow students to automate redundant and repetitive computing tasks so they can focus more on artistic and conceptual ideas in their multimedia products (Zhao et al., 2024). AI-powered tools have transformed the world of multimedia editing by reducing the technical difficulties involved and offering smart automation capabilities that greatly improve efficiency (Bender, 2023b). These advancements have enabled students not only to complete projects more efficiently but have also increased their excitement and confidence in multimedia courses.

But, critics say, though AI makes multimedia editing more manageable, it can also erode students' technical fluency. As Banerjee (2024) highlights, an excessive dependence on AI-powered automation may hinder the acquisition of basic hands-on skills and create a state of reliance on pre-built AI configuration instead of building upon foundational principles of multimedia design. Additionally, the emergence of AI-generated content is a major concern for academic integrity, given that students could produce visuals with very little involvement in the process, calling into question traditional ideas of creative authorship (Chen et al., 2021). Nonetheless, AI-powered multimedia tools unquestionably improve students' learning efficiency due to the automation of redundant processes, greatly minimizing the time needed to edit manually (Iqbal et al., 2024b).

As Xu (2024) described them, AI-driven tools are responsible for seamlessly blurring the edges between media by automating complicated processes, resulting in greater accessibility and reduced cognitive load on the part of users. These new approaches let students focus more on content, not technical details, increasing engagement and efficiency in multimedia courses. Nevertheless, Fitria (2021) argues that even if AI facilitates usability, automation at the expense of students' understanding of core principles of multimedia design could dissolve their learning. Such reliance on AI-driven results as opposed to learning how to edit by hand could lead to the eradication of fundamental skills.

In a like manner, Mulaudzi and Hamilton (2024) found that during specific learning situations, students' perceived ease of use of AI tools was a considerable determinant of their acceptance of these tools that ultimately influenced their readiness to integrate AI into their learning workflows. Despite these benefits, Zhang et al. (2024) remind us that not all students can readily adapt to AI interfaces, highlighting the need for structured AI literacy and intended design for this AI systems adoption.

It has a big learning curve that is very different for each user depending on how familiar they are with AI multimedia tools. According to Xu (2024), AI-powered learning programs provide

individualised teaching so that learners can learn at a tempo that suits them. Elements including AI-powered tutorials and instant feedback make learning about multimedia skills easy, leading to a more effective learning experience. This was further substantiated that AI-enabled learning environments promoted students' understanding of various multimedia ideas more rapidly than conventional pedagogy (Ellikkal and Rajamohan 2024).

But the simplicity of learning comes with significant limitations. As warned by Fitria (2021), over-reliance on AI may not allow students to completely absorb the theoretical foundations of multimedia. Zhang et al. (2024) addressed this concern, noting that although AI-generated short videos are beneficial to students with lower pre-test scores, they may lack adequate challenges for advanced students. In doing so, educational institutions need to aim for the right mix of human and AI-based learning to balance and maximize this trend.

AI multimedia tools must be usable and effective in improving workflows as Mulaudzi and Hamilton (2024) stress that student satisfaction is largely based on these factors. It has substantially increased student engagement with the ability of AI to automate tedious tasks, tailor learning experiences, and even foster creativity. Ellikkal, and Rajamohan (2024) also evidenced this, proving that platforms powered by A.I. result in better academic performance and more motivation in multimedia courses.

Nevertheless, Zhang et al. (2024) suggest that interactive AI-designed experiences foster superior learning results — yet some students raise concerns of reduced creative agency. Indeed, AI's automation could lead to less hands-on practice and potentially inhibit our exercising independent design judgment. This highlights the importance of AI tools implementing adjustable settings, allowing users to even out the optimal combination of machine assistance and manual input, thus maintaining a healthy level of creativity within structured efficiency.

3. Study Framework

This study used a quantitative research method with questionnaire survey which refers to identify the AI software application that being used for multimedia editing among first year Diploma in Information Technology students. An experimental workflow is embraced, where learners are asked to take on certain activities where they utilize AI tools to generate multiple media components (text, images, videos, animation, sounds). Their editing outputs are systematically reviewed, and their experiences recorded via a structured questionnaire. The students are exposed through practical training sessions and also reading material in terms of guided learning that makes them accustomed to the tool.

With Technology Acceptance Model (TAM) serves as a fundamental model to assess the acceptance of AI tools (Zhang and Zhao, 2020), it will be used in this study. Thus, the two major constructs of the model will be used in order to assess students' familiarity with the AI tools, its usability, learning curve and overall satisfaction with the tools. Moreover, TAM will be used to study the user attitudes and behavioral intentions. If students learn that AI tools can be intuitive and useful, this aligns with positively framing the use of AI tools. Such high levels of perceived ease of use (PEOU) and perceived usefulness (PU) engender positive perceptions that can lead to an increased intention to incorporate AI tools in their day-to-day workflows.

This model not only measures perceived ease of use (PEOU), and perceived usefulness (PU), but it also outlines key barriers to the adoption of AI in multimedia editing, as well as the

relevant ethical considerations. The Technology Acceptance Model (TAM) proposes that perceived usefulness (PU) and perceived ease of use (PEOU) are the primary determinants of user adoption of new technology and, by extension, new software, and among existing software on students' desktops (Davis, 1989); if students think AI software is too complicated to figure out, they will be less likely to incorporate it into their workflows, and the desire for a high PEOU emerges from that logic. Additionally, issues of data privacy and security might prevent students from wholeheartedly adopting AI tools, underscoring the need for strong ethical guidelines and clear data policies that allay these fears.

This analysis employs a quantitative approach to asses the variables with the potential to impact adoption using a structured questionnaire that was designed to encapsulate students' perceptions, experiences, and challenges related to AI-based multimedia editing software. The survey explores six key dimensions: (1) comfort with AI multimedia editing tools; (2) perceptions of AI as an enabler of self-sufficient skill and creativity; (3) perceived barriers to AI adoption; (4) ethical implications of AI tools; (5) overall satisfaction; and (6) future intentions. The study aims to provide empirical insights into the contributors of AI Adoption among the students by fitting constructs with the six dimensions of TAM (Technology Acceptance Model); Perceived Ease of Use (PEOU) and Perceived Usefulness (PU). Such findings will guide strategies to enhance the integration of AI in education and mitigate potential barriers.

4. Outcomes and Insights

This section describes the findings of the study, derived from survey responses provided by 22 Diploma in Information Technology students enrolled in the Introduction to Multimedia course. The analysis evaluates students' familiarity with AI tools for multimedia editing and their perceptions regarding the impact of these tools on skill development, productivity, and creative autonomy. Furthermore, the study investigates challenges encountered, ethical considerations, overall satisfaction levels, and the likelihood of future adoption of AI tools. By synthesizing these insights, the research aims to provide a comprehensive understanding of the role and reception of AI in multimedia education.

The findings reveal that 72.7% of students rated their experience with multimedia editing before using AI tools as average, indicating moderate prior exposure. In terms of usage frequency, 40.9% reported using AI tools weekly, while 22.7% used them monthly or seasonally, suggesting that AI tools are integrated into workflows but not yet a daily practice for most students. Furthermore, 50% of students have been using AI tools for 1-3 months, indicating that many are still in the early stages of adoption. Only 22.7% have used AI tools for more than six months, highlighting the relatively recent introduction of these tools into their workflows.

Table 1: Proficiency in Multimedia Editing Tasks

	Image	Video	Audio	Animation	3D Modelling	Presentation
Mean	2.45	2.77	2.27	2.18	1.59	2.86
Std. Deviation	1.057	1.307	1.279	1.332	1.054	1.082

Students' self-reported proficiency levels in various multimedia editing tasks were assessed using a five-point Likert scale (1 = Not Proficient, 5 = Highly Proficient). As shown in Table 1, multimedia presentation editing had the highest mean proficiency score (M = 2.86, SD = 1.082), followed by video editing (M = 2.77, SD = 1.307). In contrast, 3D modelling exhibited

the lowest proficiency level (M = 1.59, SD = 1.054), indicating limited experience in this domain. Moderate proficiency was observed in image editing (M = 2.45, SD = 1.057) and audio editing (M = 2.27, SD = 1.279), suggesting foundational but varied competency levels. The high standard deviations for animation (SD = 1.332) and video editing (SD = 1.307) reflect diverse skill levels among students, implying that while AI tools assist with basic tasks, advanced skills like animation and 3D modelling require further training.

The analysis of multimedia formats reveals that images/graphics are the most frequently used (36%), followed by text-based multimedia (24%) and video editing (20%). In contrast, audio editing (14%) and animation (6%) are less commonly utilized, likely due to limited exposure or skill gaps. Regarding learning preferences, online resources such as YouTube and Udemy are the most preferred methods (35.4%), reflecting students' reliance on digital platforms for skill enhancement. Formal education (25%) and self-experimentation (16.7%) also play significant roles, while peer learning (14.6%) and official documentation (8.3%) are less commonly used, indicating a preference for interactive or visual learning over traditional text-based instruction.

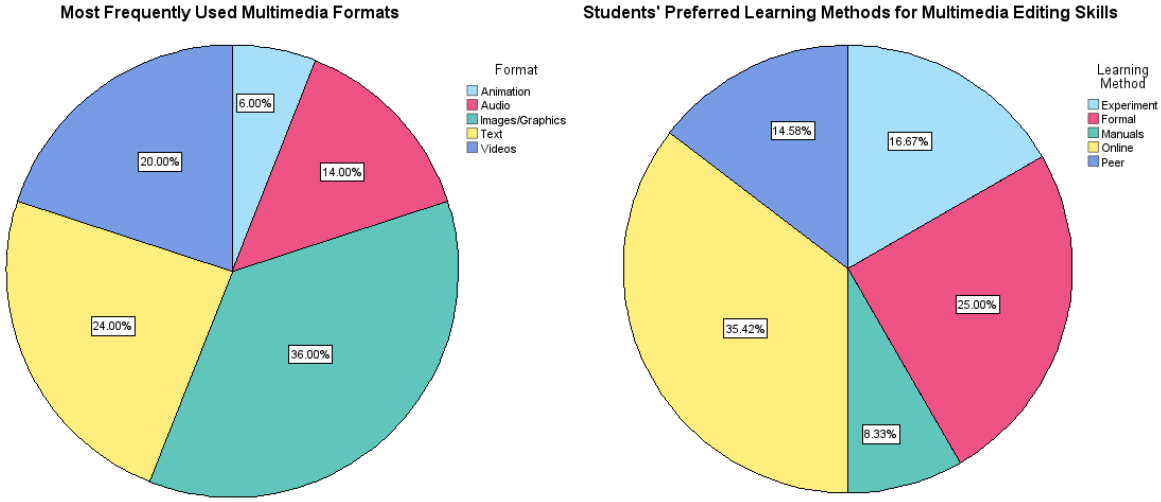

Figure 1: The usage of MM format and Students' Preferred Learning Method

The study also found that academic projects are the most common type of multimedia work among students, accounting for 47.5% of cases. Personal projects, such as social media content creation, make up 27.5% of cases, while collaborative projects, such as group or community work, account for 22.5%. In contrast, professional projects for freelancing or clients are the least common (2.5%), likely due to students being in the learning phase and not yet engaged in industry-level work.

Table 2: Correlation Analysis of Students' Perceptions of AI Tools in Multimedia Editing

		AI_ EaseOfUse	AI_Quality	AI_Productivity	AI_LimitCreativity	AI_Reliance
AI_EaseOfUse	Pearson Correlation	1	.433*	.430*	-.357	.217
	Sig. (2-tailed)		.044	.046	.102	.332
AI_Quality	Pearson Correlation	.433*	1	.549**	-.410	.042
	Sig. (2-tailed)	.044		.008	.058	.851
AI_Productivity	Pearson Correlation	.430*	.549**	1	-.187	.275
	Sig. (2-tailed)	.046	.008		.404	.215
AI_LimitCreativity	Pearson Correlation	-.357	-.410	-.187	1	.144
	Sig. (2-tailed)	.102	.058	.404		.522
AI_Reliance	Pearson Correlation	.217	.042	.275	.144	1
	Sig. (2-tailed)	.332	.851	.215	.522	

**. Correlation is significant at the 0.05 level (2-tailed).*

***. Correlation is significant at the 0.01 level (2-tailed).*

Table 2 examines students' perceptions of AI tools, focusing on ease of use, impact on quality and productivity, reliance on AI, and potential limitations on creativity. The results indicate a moderate positive correlation between the perception that AI tools make multimedia editing easier and the belief that these tools enhance the quality of projects ($r = .433$, $p < 0.05$) and increase productivity ($r = .430$, $p < 0.05$). A strong positive correlation exists between AI tools improving quality and increasing productivity ($r = .549$, $p < 0.01$), suggesting that students who associate AI with higher-quality outputs also experience enhanced efficiency. However, there is a negative but non-significant correlation between AI tools making editing easier and limiting creativity ($r = -0.357$, $p = 0.102$), as well as between AI improving quality and limiting creativity ($r = -0.410$, $p = 0.058$). These findings suggest a potential concern that increased reliance on AI might constrain creative autonomy, though further exploration is needed.

In contrast, the findings reveal a negative but non-significant correlation between AI tools making multimedia editing easier and limiting creativity ($r = -0.357$, $p = 0.102$), as well as between AI improving quality and limiting creativity ($r = -0.410$, $p = 0.058$). Although not statistically significant, these relationships suggest a possible concern that increased AI reliance might constrain creative autonomy. Additionally, AI reliance does not exhibit significant correlations with any other variables, implying that students' dependency on AI tools does not strongly influence their perceptions of ease of use, quality, or productivity. Overall, the results highlight that while AI tools contribute to perceived efficiency and quality improvements, concerns regarding their impact on creative freedom remain an area for further exploration.

Table 3: Rotated Component Matrix for AI Tools Adoption and Challenges

	Component										
	1	2	3	4	5	6	7	8	9	10	11
Concern_Ethical	.155	.037	-.031	.262	-.142	-.845	-.083	-.128	-.171	.056	.115
Concern_Privacy	.021	.073	.954	-.162	-.033	.157	.046	-.028	-.068	-.029	-.073
Concern_JobDisplacement	.059	.882	.019	.089	.038	.026	-.009	-.064	-.023	.008	-.063
Issue_Mastery	-.081	-.086	-.144	.096	.853	-.080	-.190	-.280	.300	-.003	.048
Issue_Compatibility	.113	.217	.592	.498	-.024	.002	-.038	.154	.097	-.067	.410
Issue_CreativeControl	-.047	-.489	.381	.256	-.564	.005	.076	-.030	-.014	.297	-.226
Issue_UserFriendliness	.789	.123	.163	-.006	.018	-.019	-.153	-.046	.158	.142	.031
Issue_Dependency	.642	.134	.124	-.180	-.247	.040	.550	-.038	.174	.055	.090
Ethics_Dilemma	.192	-.024	.262	.100	-.123	.758	.211	-.131	-.096	.176	.221
Ethics_HumanReplacement	-.130	.102	-.211	.800	.259	-.154	-.091	.009	-.169	-.055	-.199
Ethics_SkillLoss	-.086	.088	.580	.511	.054	-.289	.086	-.092	.187	.207	-.210
AI_Easier	.109	.375	-.151	-.529	.034	-.069	.327	.041	.434	-.327	-.106
AI_Quality	.168	.666	-.187	-.051	-.109	-.597	.136	-.083	.002	-.004	-.077
AI_Productivity	.249	.652	.103	.075	.130	-.219	.243	-.155	.350	-.094	-.083
AI_LimitCreativity	.041	-.222	.852	.154	-.183	.193	.055	.150	-.161	.022	-.051
AI_Reliance	.048	.102	.097	-.056	-.180	.206	.897	-.078	-.048	.105	.078
Learning_Impact	.782	.069	.121	.186	-.137	-.048	.166	.183	.287	-.072	.219
Learn_New_Techniques	-.082	-.217	.286	.113	.006	-.019	-.154	.820	-.159	.165	-.018
Learning_Curve	.046	-.162	-.011	-.166	-.828	-.147	.119	-.311	.172	-.080	-.079
Confidence	.496	.225	.110	.393	-.091	-.037	-.301	-.517	.087	.175	.012
Project_Speed	.394	.491	.030	-.089	.175	.212	-.226	-.267	.288	.273	-.005
Challenge_Understanding	-.143	-.238	-.237	-.039	.013	.078	-.317	.509	-.066	.007	.615
Challenge_Integration	.248	-.049	-.064	-.181	.241	.041	.211	-.134	.126	.230	.803
Challenge_Overreliance	.168	-.011	.027	.049	.015	.046	.052	.173	.208	.897	.151
Challenge_Cost	.112	.468	.087	-.102	.183	.174	-.535	.357	.329	.226	.188
Challenge_Customization	.303	.231	-.238	-.162	.009	.419	-.073	.507	.382	.136	-.019
Needs	.464	-.121	.324	.757	-.116	-.028	.087	.021	.069	.009	-.011
Performance	.262	.102	-.111	-.045	.028	.107	-.081	-.136	.828	.245	.099
Satisfaction	.691	-.132	-.157	-.329	.416	-.175	.123	.073	.038	.054	.054
FutureUse	.507	.389	.041	-.193	.500	.213	-.341	.002	-.082	.239	.150
Compare_TraditionalMethods	.876	.112	-.090	.220	-.042	.070	.072	-.161	-.134	-.017	-.092
Perception_ImprovedQuality	.682	.442	-.337	-.098	.023	.019	.028	-.077	.207	.270	.107
Recommendation	.380	.375	-.367	-.040	.332	.158	.258	-.211	-.226	.407	-.057

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 14 iterations.

Descriptive statistics reveal significant concerns about ethical issues (Mean = 3.86, SD = 0.834) and job displacement (Mean = 3.91, SD = 0.811), reflecting apprehension about AI's socio-economic impact. Privacy concerns (Mean = 3.77, SD = 0.813) are also notable, indicating worries about data security. In contrast, compatibility issues (Mean = 2.09, SD = 0.811) and ethical dilemmas (Mean = 1.95, SD = 0.653) are less prominent, suggesting these are not major concerns. High variability in responses for creative control (SD = 1.101) and user-friendliness (SD = 1.129) indicates diverse opinions on these topics.

Regarding the perceived benefits of AI, students generally agree that AI tools facilitate tasks (AI_EaseOfUse, Mean = 4.14, SD = 0.710) and enhance productivity (Mean = 4.14, SD = 0.560). However, concerns persist about AI's impact on creativity (Mean = 3.27, SD = 1.279) and increased reliance on AI (Mean = 3.09, SD = 1.151). Confidence in using AI tools is relatively high (Mean = 4.09, SD = 0.684), and AI adoption is strongly linked to faster project completion (Mean = 4.41, SD = 0.666). Despite these benefits, challenges in acquiring new AI-related skills are evident, as indicated by the low mean score for learning new techniques (Mean = 0.95, SD = 0.213). Overall, satisfaction with AI tools is moderately high (Mean = 3.77, SD = 0.869), and there is a strong inclination toward future use (Mean = 3.86, SD = 0.834). A comparison with traditional methods (Mean = 3.82, SD = 0.907) suggests that AI is perceived as an improvement.

The Principal Component Analysis (PCA) extracted 11 components, cumulatively explaining 88.62% of the variance, highlighting distinct dimensions in students' perceptions of AI tools for multimedia editing. The rotated component matrix in Table 3 provides deeper insights into how various factors cluster together, shedding light on key areas of AI adoption, user experiences, ethical concerns, and technical challenges.

The first component is primarily associated with usability perception, with strong loadings for User Friendliness (0.789) and Learning Impact (0.782). This suggests that students who find AI tools user-friendly also recognize their contribution to learning. Furthermore, Confidence (0.496) and Satisfaction (0.691) are moderately associated, reinforcing the idea that usability positively influences students' confidence and overall satisfaction with AI tools. The inclusion of Compare_TraditionalMethods (0.876) indicates that students perceive AI as offering advantages over conventional approaches.

The second component focuses on ethical and socio-economic concerns, particularly Concern for Job Displacement (0.882) and AI Quality (0.666). While students acknowledge AI's potential for enhancing quality, they also express concerns about its implications for employment. Additionally, Future Use (0.389) and Challenge Cost (0.468) suggest that financial considerations may play a role in students' willingness to adopt AI tools in the long term.

The third component captures concerns regarding AI limitations and privacy, with strong loadings for AI_LimitCreativity (0.852) and Concern for Privacy (0.954). This association implies that students who worry about AI restricting creativity are also highly concerned about data security. Issue Compatibility (0.592) further reinforces skepticism surrounding AI adoption, as difficulties integrating AI tools into existing workflows could contribute to reluctance in their usage.

The fourth component reflects mixed perceptions about AI's ethical role and workflow impact. Ethics Human Replacement (0.800) suggests apprehension regarding AI replacing human

expertise, while Needs (0.757) indicates that AI adoption is driven by necessity rather than preference. Interestingly, AI Easier (-0.529) negatively loads onto this component, implying that those who recognize AI's ethical risks may not necessarily find it easier to use.

The fifth component relates to technical learning difficulties, particularly Issue Mastery (0.853) and Learning Curve (-0.828). The negative association suggests that students struggling with AI mastery perceive the learning curve as more challenging. Additionally, Satisfaction (0.416) is moderately related, implying that ease of learning affects overall satisfaction levels.

The sixth component captures ethical dilemmas and trust in AI, with high loadings for Ethics Dilemma (0.758) and a negative correlation with AI Quality (-0.597). This suggests that ethical concerns may reduce trust in AI's ability to enhance quality. The inclusion of Challenge Customization (0.419) indicates that ethical concerns may extend to AI's ability to meet user preferences.

The seventh component highlights AI reliance concerns, with AI Reliance (0.897) and Issue Dependency (0.550) loading strongly. This suggests that students recognize the risk of excessive dependence on AI tools. Additionally, Challenge Cost (-0.535) suggests that financial constraints may play a role in influencing AI reliance.

The eighth component focuses on how students acquire AI-related skills, with Learn New Techniques (0.820) emerging as the dominant factor. Challenge Understanding (0.509) and Challenge Customization (0.507) also load onto this component, indicating that students who struggle with AI functionalities may find customization more challenging.

The ninth component captures AI's influence on performance, with Performance (0.828) and Project Speed (0.288) loading positively. This suggests that students who recognize AI's efficiency benefits also experience faster project completion times.

The tenth component addresses technical challenges and overreliance, with Challenge Overreliance (0.897) and Challenge Integration (0.803) indicating that excessive dependence on AI may lead to difficulties in seamlessly integrating AI tools into workflows.

Finally, the eleventh component links Challenge Integration (0.803) with Recommendation (0.407), implying that students who face integration difficulties may be less likely to recommend AI tools for broader use.

Several key variables strongly influence AI perception. Concern for Job Displacement (0.882) and Privacy (0.982) are significant factors shaping attitudes toward AI adoption, while Performance (0.886), Future Use (0.946), and Satisfaction (0.858) reinforce AI's perceived usefulness. The findings confirm that usability perception (Component 1) plays a major role in AI adoption, with ethical concerns (Component 2) and AI limitations (Component 3) acting as key barriers.

To further assess group differences in AI adoption, an ANOVA was conducted. The results indicate that Performance approaches statistical significance ($F(3,18) = 3.096$, $p = 0.053$), suggesting meaningful group differences in AI adoption. The deviation term ($p = 0.041$) further supports this, implying that variations between groups contribute substantially to the overall effect. Similarly, Future Use is near significance ($F(3,18) = 2.689$, $p = 0.077$), with a strong

weighted linear term (p = 0.012) indicating a potential trend in AI adoption across different user groups.

The comparison between AI and traditional methods is statistically significant (F(3,18) = 3.708, p = 0.031), reinforcing students' perception that AI offers an improvement over traditional approaches. Additionally, the variance in Perceived Improved Quality among groups is significant (F(3,18) = 3.697, p = 0.031), with a strong weighted linear effect (p = 0.011). However, the recommendation factor (F(3,18) = 2.095, p = 0.137) does not reach significance, suggesting that while AI is generally viewed positively, opinions on recommending AI for widespread use remain mixed.

The Reliability Statistics indicate a Cronbach's Alpha coefficient of 0.819, reflecting strong internal consistency and reliability of the scale used in this study. These findings highlight critical implications for AI adoption in multimedia editing. Concerns about job displacement and privacy suggest the need for ethical AI implementation and transparent AI policies. The low score on learning new techniques (0.95) underscores the importance of structured AI training programs. Furthermore, concerns about AI's impact on creativity (Mean = 3.27) suggest a need for AI systems that enhance rather than restrict innovation. Addressing compatibility issues (Mean = 2.09) and dependency concerns (Mean = 3.09) is also essential to ensure seamless AI integration into existing workflows.

Overall, the findings indicate a generally positive perception of AI, with strong recognition of its benefits for efficiency and productivity. However, key challenges remain in ethical considerations, AI dependence, and adaptability. A balanced approach that fosters both AI-driven innovation and ethical responsibility will be crucial for successful AI integration in multimedia workflows.

Insights from the Analysis

Most of the students have some previous experience of multimedia editing before being introduced to AI tools, according to an analysis of the data. Their use is sporadic, with some students interacting with them weekly, and others using them monthly or seasonally. Many students have been using AI tools for several months, but a much smaller number have more than six months of experience. This indicates that tools like AI remain relatively new and haven't yet become fully incorporated into their normal workflows.

In addition, students showed differences in their abilities at different multimedia editing tasks. They reported feeling most confident in presentation and video editing skills, and least confident in 3D modelling skills due to limited experience in that area. The skill levels for image and audio editing was rated fairly average indicating a basic level understanding but also an indication for opportunities for further skill building. The differences in proficiency levels for animation and video editing reflect the fact that while AI tools help you implement simple tasks quickly, learning how to leverage them effectively requires specific training with a focus on how to build advanced skills, especially in areas such as animation and 3D modeling. Lijia Chen et al. (2020) argues that AI has a unique capacity to tailor the teaching process of individual students based on their personalities, skills, and complementary abilities. Such an outlook is consistent with the noted individual differences in multimedia editing proficiency, which suggests that AI-based adaptive learning systems can provide personalized assistance to help students can work on their areas of weakness while also building upon their existing strengths.

In this respect, students tend to use images and/or graphics more frequently included as a media component in multimedia editing, followed by text and video, whereas audio and animation were still being used less frequently as students have limited experience. With regards to learning preferences, majority of the students prefer online platforms like YouTube and Udemy, which indicates a heavy reliance on the digital format. Krstić et al. (2020) also affirm this trend and highlight how the penetration of AI into course content delivery, from curriculum design to instructional experience, has fueled the growth of the online and web-based learning industry. This reflects the growing reliance of students on digital resources, which shows that AI-based learning tools actively assist students in developing their multimedia skills. Formal education (schools or universities) and self-study are also key players in learning new skills while peer learning and official documentation are relatively less utilized reflecting a shift away from text-based resources to interactivity and visual learning methods. Most students use multimedia editing for academic workshops, then for personal projects like social media title. We also see many collaboration projects with some professional freelance opportunities, which given that students have not yet reached career level work it is expected to see less of.

For the most part, students recognize that AI tools make the editing process easy and increase the ability on producing the finished product, affirming the correlation of efficiency to output. However, some worry that such heavy reliance on AI could restrain creativity, even if not forcefully. And if AI is clearly used to optimize workflow, its effect on creative autonomy is unclear. This is in line with Nantheera and David (2021) who suggest that AI is made for dealing with structured data, while human creativity is an act of imagination that takes place largely outside the box and produces ideas that may have been bubbling under long before they have settled in any framework. AI not only streamlines work processes and improves output quality, but also leaves continuing concerns of it taking away creative control of the end-product of work. Concerns about ease of use, quality, or productivity are not greatly influenced by students leaning on AI. More work is needed to unpack the involvement of AI in supporting and hindering creative expression.

Though students acknowledge the benefits of AI tools for multimedia editing, they communicate concerns surrounding ethical implications, job security, and data privacy. Many users report them easy to use and an improvement to both productivity and output. But some fear too much dependence on AI could hinder creativity. This matches a much broader change discussed by Caporusso (2023), who notes that with generative AI, we are approaching a turning point — technology is no longer just automating labor; technology is now pretending to perform one of the most human of all tasks: that of creating. Specifically, issues of compatibility and ethical concerns seem to be minor hindrances: technical and moral reservations do not seem to widely constrain the use of AI tools.

Responses regarding creative control and usability change, it is indicating different levels of AI tech savviness. In general, students view AI as a helpful tool to simplify tasks and improve productivity. They are confident of using these tools, helping them to finish a project faster. For all that, there are fears about the AI's effect on creativity and the dangers of dependence on such systems. Caporusso (2023) notes that the growing prevalence of generative AI throughout creative workflows may damage people's faith in their internal creative potential. Believing that AI produces better outputs all the time may decrease self-efficacy and create reliance on tech support. While the general sentiment is positive for AI, the challenge lies in mastering AI-focused skills. Although AI is seen as a step beyond standard methods, it might need to be complemented with support that provided students with the privilege to adapt their

processes better. The major themes associated with AI adoption are presented in Table 4, along with the benefits and challenges associated with students' use of these technologies.

Table 4: Summary of AI Tools Adoption and Challenges

Category	Key Insights
Usability & Learning Impact	Students find AI tools user-friendly, which boosts confidence, satisfaction, and perceived learning benefits. AI is viewed as an improvement over traditional methods.
Ethical & Socio-Economic Concerns	While AI enhances quality, students worry about job displacement and financial costs affecting long-term adoption.
Privacy & AI Limitations	Concerns about AI restricting creativity are linked to fears about data security and integration challenges.
Ethical Role & Workflow Impact	Apprehension exists about AI replacing human expertise, and adoption is often based on necessity rather than preference.
Technical Learning Difficulties	Mastering AI tools is challenging, and a steep learning curve affects overall satisfaction.
Ethical Dilemmas & Trust Issues	Ethical concerns lower trust in AI's ability to enhance quality, and customization challenges further complicate adoption.
AI Reliance Concerns	Excessive dependence on AI is a risk, influenced by financial constraints and perceived overreliance.
Skill Acquisition & Customization	Learning new AI techniques is a dominant factor, with challenges in understanding and customization being key hurdles.
AI's Influence on Performance	AI tools improve efficiency and speed up project completion.
Technical & Overreliance Issues	Overdependence on AI makes integration into workflows difficult.
Integration & Recommendations	Students struggling with AI integration are less likely to recommend AI tools for wider use.

In addition, the results show that the use of AI is heterogeneous between group of users, and different of them are differentiated by their current performance and future use of AI. For the specific methods on students preparing up their essay, students broadly view AI as an improvement to traditional methods, especially the quality of output. According to Tiwari (2023), AI assisted systems can help provide an interactive experience, increasing student engagement. But the opinions of fully applying AI tools are mixed. Reliability was found strong on these factors, underlining that the evaluation framework is robust, the study concluded.

The concerns of job displacement, data security and the impact of AI on creativity stress the need for its ethical introduction and the construction of solid principles. Moreover, successfully integrating AI into existing processes is acute by compatibility problems and the risk of over-dependence on AI. Nguyen et al. (2023) emphasize that preventive safeguards and human monitoring to shape the design, functioning, and evolution of AI systems are critical. They believe that weaving in concepts of behavioral science, specifically self-awareness and empathy, will motivate artificial intelligence developers to make more responsible and trustworthy technologies. Focusing on these theories creates the rationale for AI to behave ethically, to evolve deliberately, and to serve as an enhancement, not a substitute, for human ingenuity.

5. Conclusion

Based on the analysis, some of the contributions of this study are the adoption of AI-driven multimedia editing tools among students, ease of use, learning curve, and overall satisfaction. The results show that although those tools help to make education more accessible to more

people and help improve the institution's operations, student engagement is dependent on their previous technological skill. While a significant number of respondents see AI as a helpful tool for increasing productivity and boosting creative processes, obstacles in terms of adapting to such technologies, as well as ethical questions, still exist. The implications of these findings highlight the importance of consideration of individualized approaches to course delivery to reduce skill inequities and the responsible adoption of the use (or nonuse) of AI technologies in educational settings.

The study emphasizes that AI tools are still a nascent part of students' academic workflows, with considerable variability in familiarity with, and frequency of use of, the tools. A portion of the student cohort makes these AI-enabled multimedia tools a regular part of their routine, others use these tools only occasionally. Additionally, cross-over implications from technology adoption models such as the Technology Acceptance Model (TAM) indicate that perceived ease of use and perceived usefulness are critical drivers shaping students' motivation to engage and use multimedia resources in their learning.

Future work should explore the impact of AI literacy training on resolving the tension between automation and skill acquisition, allowing students to attain competence in technical skills as well as autonomy in creativity. Moreover, tackling ethical considerations and improving AI tools' transparent nature will be vital in terms of ensuring continuous utilization by students and in developing trust in AI-powered electronic learning platforms.

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Conflict of Interest Statement
The authors declare that there is no conflict of interest regarding the publication of this study.

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