Implementation Suggestions On Incorporating Artificial Intelligence Into The Media Study Program

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Executive summary

This policy paper aims to suggest suitable methods for integrating artificial intelligence into the media program of Breda University of Applied Sciences (BUas). It is based on previous research papers that describe the whole process in more detail, and this paper, being the final one is focused more on proposing final solutions for the university.

The media industry is constantly changing. New ideas appear, tools become outdated, and the race for the best solutions to today's problems never ends. It is not easy to prepare a person for this environment.

With the current trend of AI tools being introduced to wider public, it is important to make sure that students are not losing their race before it even begins. To make sure of that, our team studied the media domain, conducted survey, meetings, and statistical analysis, and proposed solutions for implementing AI into the study.

Our solutions try to keep the creative side of media intact, while optimizing the repetitive part. We aim to facilitate human creativity to its maximum potential using artificial intelligence to limit the time needed for less creative tasks. Since the level of proficiency in using AI differs, we advise to create a flexible plan for implementing those solutions, and let the students achieve their full potential.

We propose a plan of implementing new technologies in a way that will preserve the balance between traditional skills and AI proficiency, that will be monitored, and constantly evaluated. From simple guest lectures, through addressing ethical concerns, to adjusting assignments and grading so that students using new technologies are not punished.

Introduction

The integration of Artificial Intelligence (AI) into various sectors has led to profound changes. Within these fields, the media and entertainment sector has undergone a major transformation, giving rise to numerous inquiries, obstacles, and prospects. As society

attempts to navigate the implications of AI in content creation, the ability to differentiate between AI-generated and human-generated content is becoming increasingly difficult.

This raises significant questions concerning the ever-evolving media education landscape. The present policy paper is a response to the pressing need to scrutinise the adoption and impact of AI in media education, with specific attention given to the Media program at Breda University of Applied Sciences (BUas). Our motivation for this project stems from various factors, such as acknowledging the widespread impact of AI on the media sector and the need to equip media students for a dynamically evolving industry.

In terms of background, this policy paper reflects the historical context of the exponential growth of AI and data technologies, which have fundamentally transformed how media content is created and consumed. The extensive distribution of Artificial Intelligence (AI) in various industries, ranging from healthcare to finance, highlights its crucial role in our society. As AI and machine learning algorithms shape our engagement with technology, they are inevitably extending their influence into the media industry. Not only have these technologies improved media control, but they have also started to redefine audience engagement and marketing strategies in the media and entertainment sector.

This paper is also based on personal research papers describing the statistical processes in greater detail Stachowiak (2023); Borisova (2023); Li (2023); Daniel (2023); Meiners (2023)

Literature review

To determine the current status of how AI is used in the industry, we conducted a literature review for different subdomains taught within BUas media program. This allowed us to get a better understanding of the industry, and set a base for us to work on.

Content

Despite the fact that the gap between content produced by humans and AI slowly closes, there are still major differences between those two. Human made content tends to be more robust and thought-through, but artificially intelligent systems can produce

personalized content at a rate impossible to match (De Cremer et al., 2023). However, creating high quality products cannot be left to AI alone, as it still requires human attention to help algorithms manage human desire for relevance and quality. If AI can reliably identify factors that transfer into those variables, artificially generated content can become a force to reckon with.

Production

The application and optimization of AI algorithms in multimedia and media production have become pivotal in recent times, steering significant research and developments in this domain. A critical examination of current methodologies reveals certain limitations, particularly in the context of layout and resource allocation during multimedia production, as outlined in a recent study (De Cremer et al., 2023). This paper noted that despite AI's potential, there are prevailing issues with design rationality and efficiency in resource allocation. It proposes a structured approach to content distribution and design in multimedia production, utilizing AI algorithms and engines to enhance the pre-processing stages of production, potentially leading to more accurate and efficient design processes compared to traditional methods (De Cremer et al., 2023).

Marketing

The marketing industry benefited heavily from the introduction of artificial intelligence (AI). It allows to have more personal contact with the customer, identify needs, and analyse data (Haleem et al., 2022). The use of AI was already broad. In 2012, Target discovered that their client was pregnant before she was able to tell her family, and four years later, 55% of CFOs stated in a report that "artificial Intelligence is expected to have greater impact on marketing than social media" (Conick, 2017). Commonly used techniques include product recommendation, advertisements personalization, and clustering clients to find similar patterns with the possible complete marketing automation on the horizon. AI can also help with price management or marketing planning. (Mariani et al., 2022; Verma et al., 2021).

However, AI has its disadvantages as well. Both advertising and media in general show low level of acceptance. On top of that, many people do not understand what AI can and cannot do. This causes concerns about jobs and worse attitude towards adopting AI into marketing. (Vasiljeva et al., 2021). This causes questions regarding preparation for future jobs - education.

Summary

Drawing upon these insights, our research seeks to further explore these avenues within the context of media studies at Breda University of Applied Sciences (BUas). Our paper intends to build upon these foundational insights by focusing on the integration of AI tools in the curriculum at BUas, potentially revolutionizing the approach to media studies at the university. The aim is to devise strategies that can facilitate a higher degree of innovation and efficiency in media production, fostering a new generation of professionals who are proficient in leveraging AI tools in their future jobs. By developing a tailored strategy for BUas, our paper aims to pave the way for a strong relationship between AI and media studies, nurturing a learning environment that is in tune with the contemporary advancements in the field.

Methodology

Research Design

The survey aimed to investigate awareness and perspectives regarding Artificial Intelligence (AI) within the media domain. We collected essential variables for a comprehensive analysis. To achieve this, we conducted an online survey to explore AI awareness, attitudes, and acceptance among BUas students and staff. Additionally, we interviewed a teaching staff member from the Media domain. This combination of qualitative and quantitative methods provided valuable insights into BUas's current AI landscape.

Data Collection

The online survey, conducted using Qualtrics, was distributed university-wide through various methods, including email and flyers with QR codes, enhancing convenience and maximizing data collection. The survey consisted of two parts: a general section and a domain-specific section, with participants directed to the section corresponding to their domain. It was conducted from October 4, 2023, to October 27, 2023. Insights were obtained from interviews with lecturers. All participants provided their consent by completing a form that explained the study's purpose and scope, allowing us to document the meetings. For data analysis, we utilized specialized Integrated Development Environments (IDEs) for programming languages such as R and Jupyter Notebook, enabling comprehensive data analysis.

Procedure

we wrote R scripts in the tidyverse style to extract meaningful insights from our study. We gathered a total of 94 respondents, including 84 students, 8 lecturers, 1 support staff member, and 1 member of the management team. We also received helpful suggestions from ChatGPT for improving our scripts.

Validity and Reliability

The survey questions used in this study were obtained from previous research, obviating the need for additional validation. We also incorporated segments of multiple questionnaires from different sources to construct our survey. Specifically, for assessing attitudes toward AI, we drew from a study by Schepman and Rodway (Schepman and Rodway, 2020). However, adaptations were made to the acceptance questions, as the original questionnaire was tailored for clinical artificial intelligence applications (Schepman and Rodway, 2020). In addition, we integrated elements from another survey (Eschert et al., 2022) to construct our questionnaire, which, in turn, was influenced by prior studies (Sur et al., 2020). The data exhibits a high level of consistency and reliability, making it feasible to replicate this study with confidence and precision. This reliability assures us

that the findings and conclusions drawn from this research are robust and can be applied to similar scenarios or contexts, contributing to the overall validity of the study. The ability to replicate the study's procedures and outcomes underscores the rigor and dependability of the research, reinforcing its value in contributing to the broader body of knowledge in the field.

Ethical Considerations

In addressing ethical concerns, we kept all relevant matters within BUas' physical boundaries. Participants were also given the choice to grant informed consent for data analysis, ensuring the safeguarding of their rights and privacy. Notably, many participants expressed concerns about AI's increasing impact, especially concerning copyright issues.

Analysis of findings

A total of 586 people participated in the survey and 94 were from the Media domain (16%). 476 respondents pressed the "I consent" button so they agreed to answer the survey honestly and gave us informed consent. Out of all the answers from the Media domain 84 were students, 8 were lecturers, but the survey was also filled in by 1 management person, and 1 supporting staff person. Most of our respondents were from the age category of 18-24 years old. However,the age range does include individuals between 25-34 years, suggesting older students also participate in the survey. Educators were more spread out, selecting multiple age groups for a total range of 25 to 64 years old. Majority of survey respondents (67%) declared to have less than 2 years of experience with artificial intelligence, and only a couple (6) declared more than 10 years of experience. Gender representation is diverse, with 71 females, 19 males, and 2 individuals identifying as non-binary or third gender.

In summary, the survey showcases a media community that is youthful, diverse, and comprises both newcomers and seasoned professionals.

Raw survey questions can be seen in a codebook.

General information

Our study was heavily focused on knowledge about AI, since this is one of the major factors when implementing it into the study. It is also important to ensure that lecturers have the needed knowledge, and will be able to guide students.

As the survey results suggest, educators have more knowledge than students, which is a positive sign.

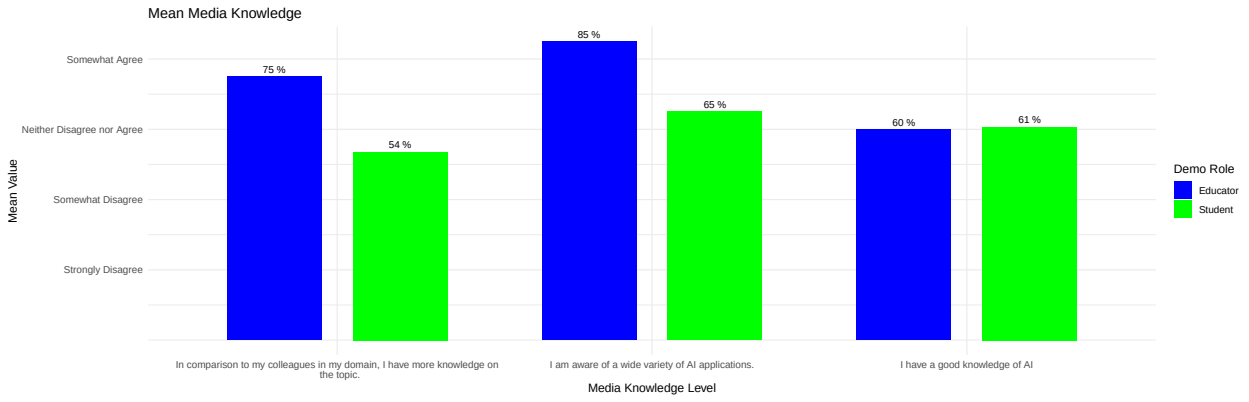

Figure 1

Knowledge questions compared between students and lecturers

As Figure 1 implies, the belief in their knowledge is similar. However, as Figure 2 suggests, despite smaller knowledge, students tend to overestimate their capabilities, while educators are not confident with theirs.

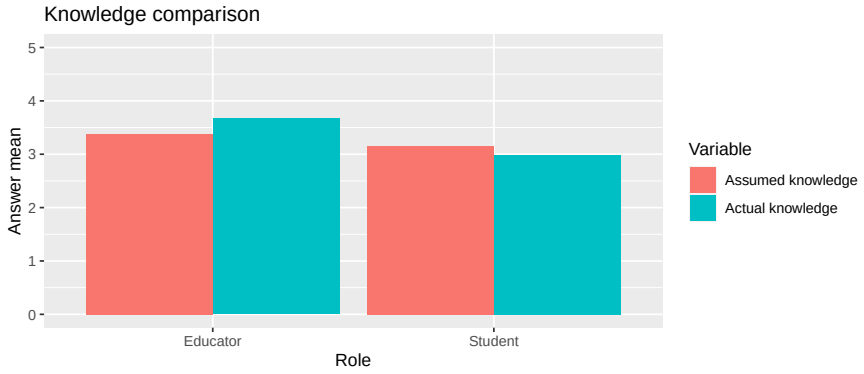

Figure 2

Assumed and actual knowledge comparison

The study also suggests, that lecturers are more eager to learn about AI (acceptance), and their overall attitude is more open, which is indicated by higher positive attitude and lower negative attitude. Surprisingly, both groups seem to trust AI on a similar level.

Figure 3

Variable comparison between students and lecturers

Apart from a couple, the average attitude answers were rather balanced, and are placed around the middle of the scale. People seem to recognise the potential of artificial intelligence, but are less ready to include it in their domain.

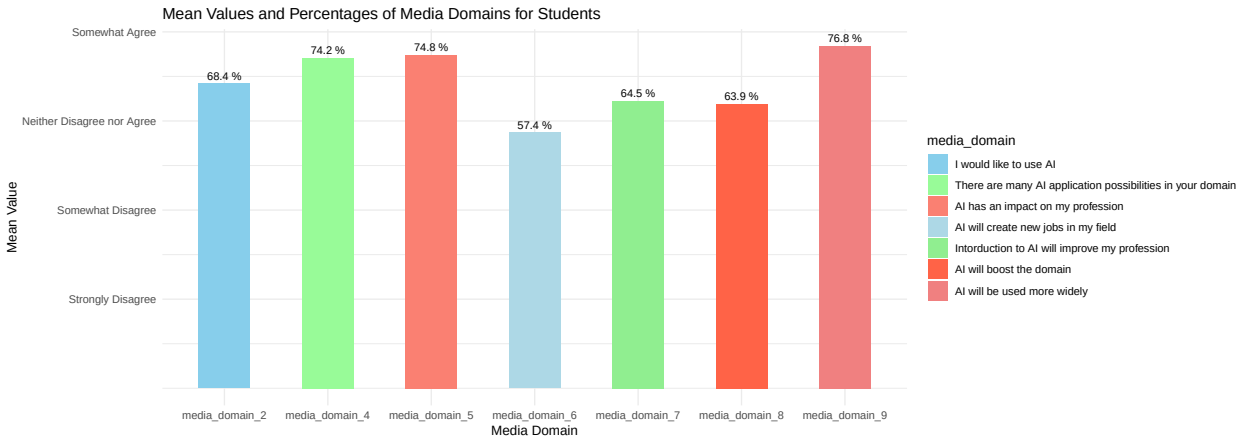

Figure 4

Attitude questions

This may be connected with the fact that most respondents are new users of AI solutions, and do not understand how those tools work.

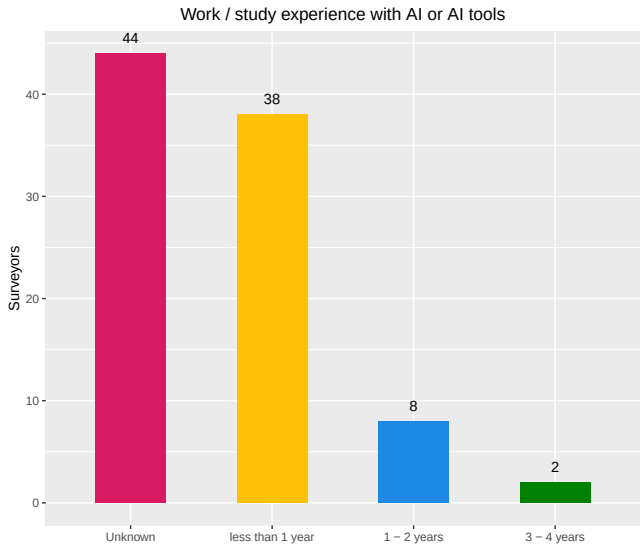

Figure 5

Experience using AI tools

The results are backed up by the comparison between the use of more popular chat bots like ChatGPT or Bing AI, with the use of less common solutions.

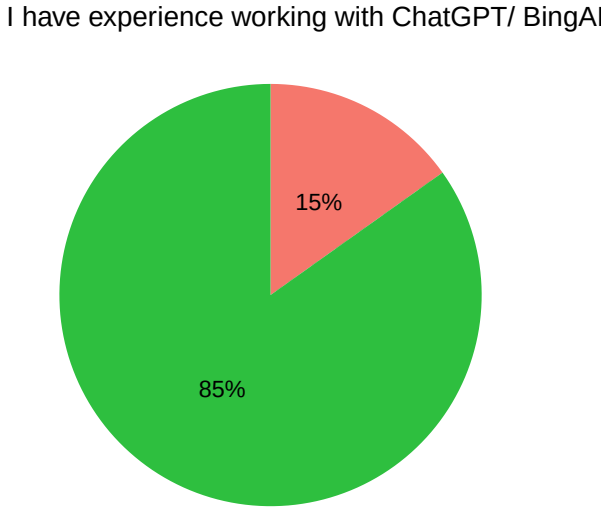

Figure 6

The use of more popular AI tools

The percentage of respondents declaring to use given tools drops significantly when they are asked about less popular tools. From almost 85% to 50%.

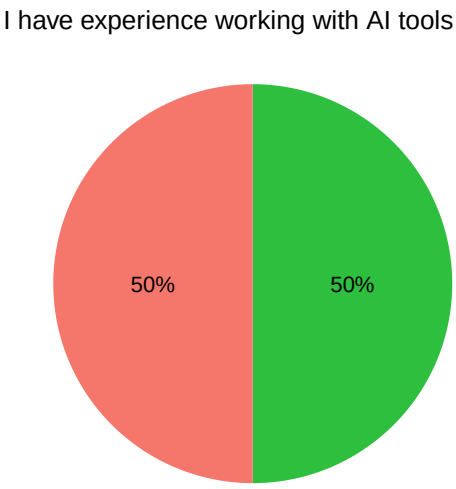

Figure 7

The use of less popular AI tools

Statistical tests

To confirm relationships between variables, we performed multiple statistical tests. Several differences were proven big enough to be statistically significant.

The difference between educators and students is visible again, as another part of our study shows that lecturers are more willing to work with artificial intelligence.

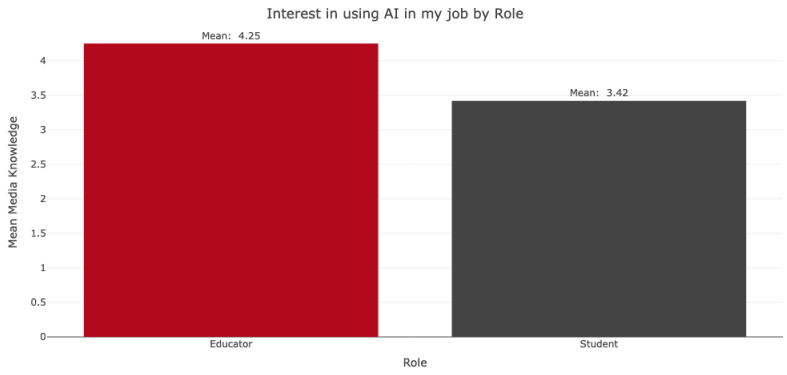

Figure 8

Willingness to use AI tools

Additionally, lecturers treat those tools more like an advisor, while students are more prone to blindly accepting the answer as the truth, and believe that AI can help accelerate the work by automating boring, repetitive tasks.

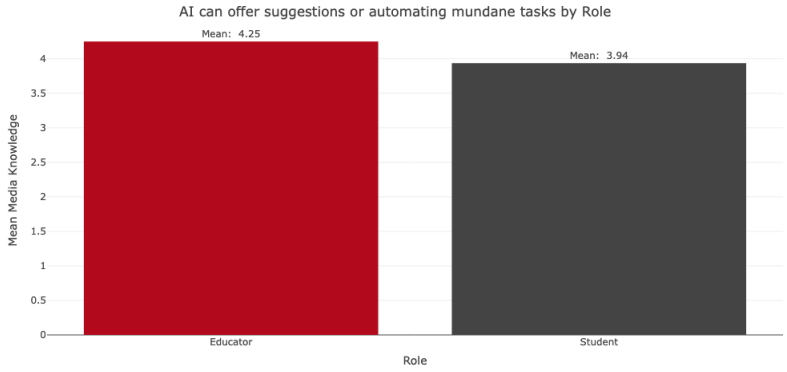

Figure 9

AI can enhance creative processes in media by offering suggestions or automating mundane tasks.

Modeling findings

The models created were not good, or relevant enough to reliably tie two meaningful variables together, However, this part of the study also delivered some important findings. Despite the models failing, the study suggests that experience with artificially intelligent tools does not influence acceptance of AI.

The belief that AI has a noticeable impact on respondent's profession, does not connect with thinking that AI leads to offering more tailored and engaging media content.

Policy: Integrated Approach to Media Studies with AI Integration

Policy Context

The integration of AI into media studies presents an opportunity to enhance education and prepare students for the evolving media landscape. It is imperative to strike a balance between AI modules and traditional media studies, ensuring that human creativity is not marginalized. Ethical considerations, practical training in AI tools, and critical engagement with AI-driven content should be prioritized.

Current intervention efforts in media education may vary, with some institutions incorporating AI elements into their courses. However, there is a need for a standardized approach that addresses the varying levels of AI knowledge among students and staff. The

introduction of multiple AI tools across different projects can accommodate diverse skill levels while ensuring that essential skills like writing and storytelling are not overlooked.

Policy Recommendations

This policy advocates for an integrated approach to media studies, seamlessly merging traditional curriculum with AI integration. It places a strong emphasis on ethical considerations, providing students with practical training in AI tools, and fostering critical engagement with AI-generated content. By infusing AI elements into media courses, graduates will develop a well-rounded comprehension of AI's capabilities, without eclipsing the essence of human creativity.

Moreover, this policy underscores the need for flexibility in introducing AI tools, allowing students to learn at their own pace, and ensuring they feel adequately prepared for a future in the AI-driven industry. To bridge disparities in AI knowledge, strategies such as guest lectures from industry experts and specialized programs in Applied Data Science & AI will be implemented. Evaluation methods will shift towards prioritizing critical thinking and decision-making skills, aligning with the evolving landscape of media production with AI integration.

For those with a keen interest, a specialization in AI within the media domain will be offered, enabling a deep dive into AI applications across various media roles. This ensures that future professionals are proficient in harnessing AI technology to its fullest potential. Ultimately, this integrated approach aims to equip graduates with a comprehensive understanding of AI's possibilities, while upholding the paramount importance of human creativity in the ever-dynamic media sector.

Implementation & next steps

Implementation

Phase 1: Curriculum Development and Faculty Training.

1. Form a Curriculum Development Committee with experts in both traditional media

studies and AI technologies.

2. Identify core courses for integration, ensuring a balanced blend of traditional media studies and AI-related modules.
3. Develop course materials, including the syllabus, lesson plans, and learning resources, incorporating ethical considerations, practical AI training, and critical engagement with AI-generated content.
4. Provide comprehensive training for faculty members on AI tools and technologies, emphasizing pedagogical approaches that foster creativity alongside technical proficiency.

Phase 2: Testing.

1. Test the integrated approach with a select group of courses.
2. Collect feedback from students, faculty, and industry experts to assess the effectiveness of the integrated curriculum.
3. Identify areas of improvement and make necessary adjustments to the curriculum and teaching methodologies.

Resource Allocation and Support

Technology Infrastructure.

- Ensure access to necessary AI tools, software, and hardware for both faculty and students.
- Establish dedicated AI labs or workstations equipped with the required resources.

Guest Lectures and Industry Partnerships.

- Arrange regular guest lectures by industry experts to provide real-world insights and perspectives on AI integration in media.

- Make partnerships with AI-focused companies or organizations to facilitate internships, workshops, and collaborative projects.

Addressing Risks and Challenges

Ethical Guidelines and Oversight.

- Establish clear ethical guidelines for the use of AI in media studies, emphasizing responsible AI practices and transparency.

- Implement a review process for AI-generated content to ensure compliance with ethical standards.

Mitigating Disparities in AI Knowledge.

- Offer specialized workshops, seminars, and tutorials for students with varying levels of AI knowledge to bridge any gaps.

- Provide additional support resources, such as tutoring or mentorship programs, for students who require extra assistance or provide online courses for them to do.

Monitoring and Evaluation

Performance Metrics.

- Develop/adjust grading criteria to measure the impact of the integrated approach, including student performance, and engagement.

- Regularly review and analyze data to make data-driven adjustments and improvements.

Continuous Feedback Loop. Get feedback from faculty, students, and industry partners to ensure the curriculum remains relevant and effective.

Future Steps

- Explore opportunities for research and innovation with media studies and AI.
- Continuously monitor advancements in AI technology and update the curriculum accordingly to stay at the forefront of industry trends.

By following these steps and remaining adaptable to emerging challenges and opportunities, this policy aims to equip graduates with the skills and knowledge needed to excel in the evolving media landscape.

Conclusion

In conclusion, this policy paper highlights the crucial importance of evaluating the implementation and impact of Artificial Intelligence (AI) in media education, with a specific emphasis on the Media program at Breda University of Applied Sciences (BUas). Notably, the media and entertainment industry has experienced a significant transformation due to the increasing presence of AI. The line between AI-generated and human-generated content has become less distinct, prompting inquiries about the developing media education landscape.

Our policy advocates an integrated approach to media studies that combines traditional curriculum with AI integration. The approach prioritises ethical considerations, practical training in AI tools, and critical engagement with AI-generated content. To address knowledge disparities, we will introduce guest lectures and specialized programs.

During the implementation phase, we will form a curriculum development committee, identify core courses, and conduct faculty training. The methodology will undergo testing, with adjustments made based on feedback received. The establishment of ethical guidelines, partnerships with industry experts, and necessary resources will be prioritised. Measures will be taken to mitigate existing disparities in AI knowledge, while the development of performance metrics will allow for effective evaluation.

The aim is to achieve a cohesive balance between AI and traditional media studies,

with a focus on maintaining human creativity as a top priority while simultaneously equipping students for an industry where AI is becoming increasingly prevalent. This integrated methodology has the potential to revolutionize media studies at BUas, cultivating an educational environment that is innovative, productive and aligned with the demands of the contemporary media landscape.

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Appendix A

Stakeholder analysis

Curriculum Advisory Board. The Curriculum Advisory Board stands as a pivotal stakeholder in the success and effectiveness of this project. They are entrusted with overseeing the development and implementation of curriculum components. As the final decision-makers on curriculum matters, their responsibility is to critically review and shape the curriculum, ensuring it is both academically robust and reflective of current societal developments.

Lecturers. The vision of how the study program would look like differs in a way that does not allow to integrate all ideas in the curriculum. However, some ideas are common. Critical thinking and using AI generated content as a quick draft or to personalize/improve it further are often mentioned. We spoke to multiple lecturers, and gathered their thoughts on implementing AI into the study.

Government. Even though the government is not directly engaged in this project, their presence is felt through the existing legal and regulatory frameworks that govern educational undertakings, it is paramount to operate within these established boundaries, demonstrating our adherence to both legal and quality standards.

Students. Due to our limited time frame, we were not able to interact with many students. However, we conducted a focus group and collected their thoughts on the possible directions. We gained a deeper and more valuable understanding.