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From Europe To Ireland: Artificial Intelligence Pivotal Role In Transforming Higher Education Policies And Guidelines

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Abstract

This study proffers an examination of policy considerations pertinent to the incorporation of Artificial Intelligence (AI) within various academic faculties specifically arts, humanities and social Sciences at the University of Limerick, proffering a nuanced panorama of both universal and faculty-specific governing principles. Utilising a qualitative research design, data were gleaned from a stratified random sample of academic staff via an open-ended questionnaire and subsequently subjected to thematic analysis. The findings elucidate two principal categories of themes: those which are universally recognised across all academic faculties, and those which are unique to individual departments. The common themes encompass areas such as data integrity, mitigation of bias, the explication of AI algorithms, human-centric augmentation of AI, stringent privacy and security protocols, and the necessity for ongoing assessment and refinement. These universally accepted principles reflect a commitment to maintaining high ethical standards within the integration of AI. On the other hand, the unique themes unveil the bespoke considerations intrinsic to specific academic departments, underscoring the inherent adaptability of AI

technology to diverse educational disciplines. Such differentiation acknowledges the distinctiveness of various academic fields, thereby fostering a more customised application of AI. The investigation underscores the University's sagacious and balanced approach in assiduously catering to the variegated needs of disparate academic disciplines, whilst concurrently sustaining a robust set of shared ethical guidelines. The insights derived from this research contribute substantively to the burgeoning discourse surrounding the integration of AI in higher education, engendering a more efficacious, inclusive, and avant-garde educational milieu.

Keywords: Artificial Intelligence, Higher Education, Policy Considerations, University of Limerick, Data Integrity, Bias Mitigation, Explainable AI, Human-Centric AI Augmentation, Faculty-Specific Considerations, Continuous Evaluation, and Improvement.

1.1 Introduction

The ascension of Artificial Intelligence (AI) applications across diverse sectors has emerged as a salient trend in contemporary times (Irfan & Murray, 2023). With the prowess to redefine industries through task automation, prescriptive analytics, and dynamism in adapting to evolving scenarios, AI has piqued significant interest and investigation (Vinuesa et al., 2020; Irfan & Murray, 2023). This literary exposition seeks to elucidate the assimilation of AI within assorted sectors in Ireland, probing its ramifications on sustainable development, pedagogics, healthcare, agri-science, and further realms.

1.2 Integration of AI within the Irish Context

The United Nations' Agenda for Sustainable Development 2030, encapsulating 17 overarching goals supplemented by 169 definitive targets, heralds opportunities wherein AI can indubitably play a pivotal role. A seminal study undertaken by Vinuesa et al. (2020) delved into the repercussions of AI on each of these goals, unearthing evidence of both its augmentative and deleterious implications for sustainable development. Such findings accentuate the imperative for a judicious contemplation of ethical facets, ensuring that AI's incorporation adheres to principles that bolster its salutary impact on sustainability (Irfan & Murray, 2023).

Within the healthcare ambit, AI portends to be transformative, bolstering clinical judgements, amplifying patient ingress and

involvement, and elevating care quality standards (Kellogg & Sadeh-Sharvit, 2022). Particularly within nursing care, AI shows promise in intricate care predicaments and documentation paradigms (Seibert et al., 2021). Yet, the synthesis of AI in healthcare is not devoid of impediments – necessitating stringent measures to maintain accountability, confront ethical quandaries, and seamlessly incorporate AI within clinical and sociotechnical ecosystems (Gualdi & Cordella, 2021; Salwei & Carayon, 2022). Distinct stakeholders manifest heterogeneous perspectives about AI's advantages and limitations, thus emphasising the exigency for rigorous academic enquiry and collaborative engagement (Lebcir et al., 2021).

Venturing into agronomics, AI exhibits potentiality to augment productivity, efficacy, and eco-sustainability. Tangible applications encompass agricultural novelties, reproductive technological advancements, and profound soil management methodologies (Howley et al., 2012; Ryan, 2022; Ryan et al., 2021). Notably, in the dairy farming sector, AI-enabled artificial insemination emerges as a linchpin for reproductive efficacy within seasonal calving frameworks (Howley et al., 2012). Nevertheless, AI's permeation into agronomy warrants addressing extant hurdles such as the requisite for adept training, technological accessibility, and integration into entrenched practices (Ryan, 2022).

In relation to Irish tertiary education, there's an increasing inclination towards leveraging AI to refine pedagogical delivery and optimise administrative functionalities (Duffy & Gallagher, 2014). The National Strategy for Higher Education in Ireland extols AI's potentiality to customise educational trajectories for students and bolster pedagogical efficacy (Irfan, alQahtani & Fahad, 2023). However, the infusion of AI within pedagogics begets profound ethical considerations encompassing data privacy, equitable accessibility, and the spectre of algorithmic prejudices (Wirtz et al., 2018; Irfan & Murray, 2023). Such ethical deliberations warrant meticulous attention to vouchsafe the principled instauration of AI in academia (Irfan & Murray, 2023).

1.3 Research Questions

1. What are the primary ethical considerations associated with AI integration across disciplines including arts, humanities, and social sciences at the University of Limerick?
2. How do faculty members plan to address and manage these ethical challenges when integrating AI into higher education?

3. What potential policy frameworks might support responsible AI integration, specifically within the faculties of Arts, Humanities, and Social Sciences?
4. How do these ethical concerns vary across disciplines, and what are the implications for individual academic sectors?
5. How important are continuous evaluation and refinement for successful AI integration, as highlighted by the academic faculty?
6. What future trends in AI integration are anticipated by faculty members in these disciplines at the University of Limerick?
7. How might AI impact administrative tasks, staff roles, job security, and confidentiality, and what strategies could mitigate these effects?
8. How can the benefits of AI be maximised while its challenges are addressed in the context of higher education?

1.4 Research Objectives

Ethical Exploration: Understand the main ethical concerns related to AI as identified by the academic faculty across various disciplines at the University of Limerick.

Strategy Assessment: Examine the approaches faculty members plan to use to navigate ethical challenges when introducing AI into their courses.

Policy Framework Development: Design policies to guide the responsible integration of AI in higher education, focusing on Arts, Humanities, and Social Sciences.

Comparative Analysis: Analyse how ethical issues related to AI differ across disciplines and determine the implications for each academic area.

Evaluation Significance: Assess the importance of ongoing evaluation and improvement for successful AI integration, as stressed by faculty members.

Future Trend Analysis: Predict future trends in AI integration within arts, humanities, and social sciences based on faculty insights.

Administrative Impact Study: Investigate the effects of AI on administration, particularly its impact on staff roles, job security, and data privacy, and recommend mitigation strategies.

Balancing Act: Identify methods to both leverage AI's benefits and address its challenges within higher education.

2.1 Literature Review

AI Integration in Irish Higher Education: Artificial Intelligence (AI) technologies have become pivotal in higher education, with institutions like the University of Limerick actively investigating its applications across diverse academic domains such as arts, humanities, and social sciences (Slimi, 2021; Zahid & Irfan, 2021; Muhammad et al. 2023).

Ethical Exploration in AI Integration: The increasing integration of AI warrants ethical scrutiny. McLennan et al. (2022) emphasise the importance of ethical considerations such as privacy and data protection. Similarly, Irfan (2023) highlighted these concerns within the context of AI implementation at the University of Limerick.

Impact of AI Across Sectors: AI has demonstrated transformative potential in areas like medical imaging (Ryan et al., 2021). It is believed to enhance educational practices (Blease et al., 2023; Khan et al., 2021), though reservations remain (Irfan & Murray, 2023).

Administrative and Pedagogical Implications of AI: AI promises personalised learning experiences with the capacity for adaptive feedback (Simonsen & Almeida, 2020; Khan, Ali & Irfan, 2022). Nevertheless, AI's role in streamlining administrative processes, such as recruitment in the hospitality sector, is evident (Khan et al., 2021; Nisa, Yousafzai & Irfan, 2021; Johnson et al., 2020).

Future Prospects and Challenges: AI's trajectory in higher education is promising, but necessitates continuous exploration, especially regarding ethical and pedagogical outcomes ("The Impact of AI on Teaching and Learning in Higher Education Technology", 2022). The challenges of training educators and potential employment implications must also be factored (Akinwalere & Ivanov, 2022; Rauf, Ali & Irfan, 2021; Crompton & Song, 2021).

3.1 Methodology

Research Design: The study employed a qualitative research approach, best suited for the exploratory objective, which aims to delve deep into the academic staff's viewpoints on AI applications.

Sampling Strategy: A stratified random sampling technique ensured representation from various academic faculties,

categorising them into three distinct strata: arts, humanities, and social sciences.

Data Collection Instrument: To elicit comprehensive views, an open-ended questionnaire was curated. This focused on various aspects of AI integration, from universal governing principles to privacy concerns.

Data Analysis: A rigorous thematic analysis of the gathered data was conducted. This began with a preliminary understanding and culminated in a refined representation of coherent themes.

Ethical Considerations: The study was conducted with utmost ethical integrity. Participants were informed of the research objectives, and complete anonymity was maintained throughout.

Limitations: Despite the stratified sampling ensuring diversity, the study's qualitative nature implies its findings are interpretative, potentially limiting their generalisability beyond the current context.

3.2 The Data Set

The dataset delineates the number of respondents from various departments that participated in the study and the total themes identified. Each department or school is uniquely identified through a serial number. The study engaged a total of 29 respondents from different academic and administrative areas, and 141 themes were identified.

Serial Number	Department/School	Number of Respondents	Total Themes
1	History	2	11
2	Irish World Academy of Music & Dance	5	27
3	School of Law	3	16
4	Politics & Public Administration	3	13
5	School of Modern Languages & Applied Linguistics	5	25
6	School of English Irish and Communication (Journalism).	4	20
7	Sociology	3	13
8	Administrative Staff	4	16

Table 3.1 This table represents the division of the dataset across these academic disciplines.

4.1 Discussions and Analysis

The subsequent discussion pertains to the examination of data, categorised under three principal themes, concerning the policies of Artificial Intelligence (AI). These thematic clusters are as follows:

1. Designing a Platform for AI Integration in Higher Education in Ireland: This section deals with the conceptualisation and development of a framework aimed at incorporating Artificial Intelligence within the higher educational system of Ireland. The objective is to leverage AI's capabilities to enhance learning experiences and educational outcomes.

2. Academic Integrity and AI-Augmented Dispute Resolution: This theme explores the intersection between AI and academic integrity, particularly focusing on how AI can be utilised to augment traditional methods of dispute resolution. By employing AI in such a context, it may contribute to more

efficient and transparent processes, thereby reinforcing the principles of fairness and honesty within academia.

3. Collaboration, not Confrontation: AI's Future Policy Development: Under this theme, the emphasis is on fostering a cooperative rather than confrontational approach to AI's future policy formulation and implementation. Collaborative strategies are considered crucial in aligning various stakeholders' interests, facilitating the ethical development and deployment of AI, and ensuring that AI's potential benefits are harnessed in a manner that serves the broader societal interests.

These themes collectively provide a comprehensive exploration of the various facets of AI policy, offering insights and proposing strategies that would inform future policy development as below.

4.2 The Main theme of Responsible Platform Design is the key for Policy of AI

The dataset analysed contains qualitative responses collected from different academic and administrative departments within the University of Limerick. These responses concern measures that can address ethical considerations arising from the integration of artificial intelligence (AI) within various contexts.

Common Themes

No.	Common Themes
1	Establishing AI Ethical Guidelines/Framework
2	Promoting AI Transparency
3	Advocating AI and Data Literacy
4	Preventing AI-Induced Misinterpretation
5	Addressing Algorithmic Bias
6	Inclusion of Diverse Perspectives in AI Algorithms
7	Upholding Privacy and Consent
8	Regular Auditing of AI Applications
9	AI for Inclusive and Accessible Education
10	Protection of Intellectual Property Rights in AI Studies

Table 4.1 Based on the Theme Responsible Platform Design of AI, Common Themes list from each discipline of Social Sciences

Department	Unique Themes
History	Curbing AI-induced Historical Distortion
Irish World Academy of Music & Dance	Safeguarding Cultural Heritage, AI's Role in Accessibility and Incl Fostering a Multidisciplinary Approach
School of Law	Maintaining Professional Confidentiality, Reinforcing the Indepen of AI Legal Advice, Cross-Jurisdictional Legal Studies
Politics & Public Administration	AI-Driven Decision Making in Public Policies
School of Modern Languages & Applied Linguistics	Safeguarding Linguistic Heritage, AI's Role in Translational Studie Interpretation, Preserving Idiomatic and Cultural Context, Balance Bilingualism, Support of Endangered Languages Study, Semantic Analysis in Linguistic Studies
School of English, Irish, and Communication	AI's Role in News Production and Dissemination, Role in Traditio Irish Language Revitalization, Credibility of AI-Driven Journalism Influence on the Evolution of Languages, AI's Role in Accessibilit Technical Communication
Sociology	None identified
Administrative Staff	Providing Training for Administrative Staff, Incorporating Human Oversight, AI Compliance with Legal and Regulatory Standards, Mitigating AI-Induced Administrative Errors, AI Layoffs and Job Displacement

Table 4.2 Based on the Theme Responsible Platform Design of AI, Unique Themes list from each discipline of Social Sciences

An immediate observation from the data suggests a university-wide consensus on establishing robust AI ethical guidelines or frameworks. This insight is reflective of a broader recognition of the importance of ethical considerations in AI applications.

Transparency in AI operations, a theme recurrent across multiple departments, highlights the collective need to make AI systems understandable to all stakeholders. Simultaneously, there's an apparent emphasis on fostering AI and data literacy, underscoring the importance of competence in using and understanding AI and data analytics.

Significantly, the data reveals a common concern about the potential for AI-induced misinterpretations across various academic disciplines. This is indicative of a consciousness of the limitations of AI and its propensity to introduce bias or errors, thus necessitating careful oversight.

Addressing algorithmic bias and advocating for diverse perspectives in AI algorithms, other recurrent themes, demonstrate an awareness of the need for fairness and inclusivity in AI applications. This recognition reflects the institution's commitment to equity and diversity.

Privacy and consent, central themes within the context of AI, recur across responses, indicating a critical ethical consideration within AI applications. Regular auditing of AI applications, another shared theme, demonstrates a need for constant evaluation and monitoring of AI use.

The data also reveals unique themes specific to different departments. For example, the School of Modern Languages & Applied Linguistics highlights the importance of safeguarding linguistic heritage, whereas the School of English, Irish, and Communication underscores the need for ethical AI use in news production and dissemination.

Within the administrative context, there is an emphasis on AI and data ethics training for staff, human oversight in AI-driven tasks, and mitigation of AI-induced errors.

These responses offer a comprehensive view of the ethical considerations and proposed measures in response to AI applications within a university context. They collectively illuminate the common understanding of the ethical implications of AI integration, with unique themes spotlighting department-specific concerns and strategies. This provides a valuable resource for institutions aiming to understand and address the ethical impacts of AI in academia. this dataset offers valuable insights into the ethical considerations and proposed measures for AI applications within an academic context. It provides a foundation for a robust and inclusive approach to AI integration, addressing both general and field-specific concerns. As such, it can be utilized

as a critical resource for other institutions aiming to navigate the ethical implications of AI in academia.

4.3 The Main Theme of Academic Integrity and AI-Augmented Dispute Resolution

The data, as presented across various academic departments, centers around the integration of Artificial Intelligence (AI) in the educational landscape. From the perspective of academic integrity, the data provides valuable insights into how institutions might weave AI into their pedagogical and research activities while upholding core values such as honesty, trust, fairness, respect, responsibility, and courage.

Common Themes	**Unique Themes (Futuristic Guidelines for AI i History Education)**
Incorporating ethical considerations in AI in education	AI and Human Collaboration in history education
Ensuring AI systems respect privacy	Contextualizing AI-Generated Historical Narrativ
Ensuring AI systems ensure transparency	AI-Powered Source Analysis for historical resear
Avoiding biases when presenting historical information	Personalized Learning Journeys in history educati
Ethical AI Data Collection for historical research	AI-Enhanced Historical Reconstruction for imme learning experiences

Table 4.3 Based on the Theme Academic Integrity and AI-Augmented Dispute Resolution, from history discipline.

Common Themes	Unique Themes (Futuristic Guidelines for Dance and Music Education)
Ethical considerations in integrating AI technologies in music and dance	AI-Assisted Performance Feedback for dance musicians
Promoting transparency and creative ownership in AI use	Ethical Data Usage in Music Composition to copyright infringement
	Cultural Inclusivity in AI-Driven Choreograp
	AI as a Collaborative Dance Partner for inter experiences
	AI-Enhanced Music Education Tools for personalized learning
	Human-Machine Music Ensemble for new fo artistic expression
	Ethical Use of AI in Music Therapy prioritizi patient well-being
	AI-Powered Musicology Research for deeper insights into music history
	AI for Dance Movement Analysis to improve techniques and avoid injury
	AI-Driven Music Curation for personalized p

Table 4.4 Based on the Theme Academic Integrity and AI-Augmented Dispute Resolution, from Irish World Academy of Music & Dance discipline.

Common Themes	**Unique Themes (Futuristic Guidelines for AI i Education)**
Ethical considerations in AI use in legal systems	AI-Powered Legal Research Assistance for effici legal research
Transparency and fairness in AI-driven legal systems	Ethical Use of AI in Legal Practice for avoiding
	AI-Driven Legal Argument Analysis for strength reasoning skills
	AI-Enhanced Legal Education Curriculum for understanding AI's role
	AI-Augmented Dispute Resolution for efficient alternative resolution
	Ethical AI Jury Selection for fair representation i
	AI-Powered Legal Compliance for adherence to regulations
	AI in Legal Ethics Training for handling ethical dilemmas
	AI-Based Legal Writing Assistance for improvec documents
	AI-Driven Legal Predictive Analytics for inform decisions

Table 4.5 Based on the Theme Academic Integrity and AI-Augmented Dispute Resolution, from Law discipline.

Common Themes	Unique Themes (Futuristic Guidelines for AI in Politics & Public Administration Education)
Ethical considerations in AI use in politics and public administration	AI-Driven Policy Analysis for decision-making pr
Transparency and accountability in AI systems	Ethical AI Governance in Government for transpa governance
	AI for Public Engagement to improve citizen participation
	AI-Driven Public Opinion Analysis for policy insi
	AI and Public Service Efficiency for optimized ser delivery
	AI-Enhanced Political Campaigns for voter outrea
	AI in Disaster Management for enhanced response planning
	Ethical AI in International Relations for diplomati

Table 4.6 Based on the Theme Academic Integrity and AI-Augmented Dispute Resolution, from Politics & Public Administration.

Common Themes	Department(s)
Ethical considerations in AI use	All
AI for data analysis and research	All
AI-enhanced learning and teaching	School of Modern Languages & Applied Linguistics, Schoo English, Irish, and Communication, Sociology
AI for language-related applications	School of Modern Languages & Applied Linguistics, Schoo English, Irish, and Communication
AI-driven decision-making	All
AI for improved accessibility and inclusivity	School of Modern Languages & Applied Linguistics, Schoo English, Irish, and Communication, Administrative Staff
Ethical considerations in data handling and privacy	All
AI for enhanced efficiency and productivity	School of Modern Languages & Applied Linguistics, Schoo English, Irish, and Communication, Administrative Staff

Table 4.7 Based on the Common Theme list under Academic Integrity and AI-Augmented Dispute Resolution, from all disciplines.

Unique Themes	Department
AI for language teaching and assessment	School of Modern Languages & Applied Linguistics
AI for multilingual content creation	School of Modern Languages & Applied Linguistics
AI in digital journalism and technical communication	School of English, Irish, and Communic
AI for literature analysis	School of English, Irish, and Communic
AI for social data analysis	Sociology
AI for sociological survey design	Sociology
AI for administrative efficiency	Administrative Staff
AI for student services and academic advising	Administrative Staff

Table 4.8 Based on the Unique Theme list under Academic Integrity and AI-Augmented Dispute Resolution, from all disciplines.

The recurring theme across all departments is 'Ethical considerations in AI use,' which reflects a widespread commitment to academic integrity. It is an acknowledgment that the development and deployment of AI tools in education should align with ethical norms and respect human rights and privacy. This theme mirrors responsibility and fairness, two pillars of academic integrity. The call for transparency in AI systems is another shared theme across the departments, resonating with honesty and trust, two more foundations of academic integrity. It necessitates that AI systems be developed and implemented in a manner that is understandable, explainable, and free from concealed biases.

The unique themes delineated for each department also propose innovative ways to uphold academic integrity in specialized disciplines. For instance, in the context of history education, AI can assist in contextualizing AI-generated historical narratives. This

helps promote accurate and unbiased information dissemination, fostering honesty and maintaining academic rigor.

In the School of Law, themes like 'AI-Driven Legal Argument Analysis' and 'AI-Augmented Dispute Resolution' can fortify reasoning skills and facilitate more efficient, fair conflict resolution, respectively. These applications align with the principles of academic integrity by promoting objective, unbiased analysis and fair outcomes.

In Music & Dance education, themes like 'AI-assisted performance feedback for dancers and musicians' and 'AI-powered musicology research' align with the principles of fairness and responsibility. They hint at a future where AI contributes to an impartial evaluation process and augments scholarly research. Moreover, the theme of 'AI for Dance Movement Analysis' emphasizes safety and well-being, demonstrating respect and responsibility, which are key components of academic integrity.

Within Politics & Public Administration, themes such as 'AI-driven policy analysis' and 'AI for Public Engagement' highlight AI's potential to facilitate informed, fair decision-making, and enhance participatory democracy. These themes align with the principles of responsibility and respect.

In departments such as Modern Languages & Applied Linguistics and English, Irish, and Communication, themes focusing on AI for language-related applications, literature analysis, and digital journalism underscore the potential of AI to promote academic excellence and uphold academic standards.

Nevertheless, the data also raises new challenges to academic integrity, including potential misuse of AI technologies, data privacy concerns, and the risk of AI-induced biases. The data underscores the need for ongoing vigilance, robust ethical guidelines, and continual discourse to ensure that AI technologies are deployed in ways that uphold and respect the principles of academic integrity.

However, it is essential to note that the integration of AI in academia comes with new challenges to academic integrity, including potential misuse of AI technologies, data privacy issues, and the risk of AI-induced biases. These challenges necessitate constant vigilance, robust ethical guidelines, and ongoing dialogue to ensure that the deployment of AI technologies upholds the principles of academic integrity.

4.4 The Main Theme of Collaboration, not Confrontation: AI's Future Policy Development

The dataset under review offers an exhaustive analysis of the ethical guidelines and policy considerations for the incorporation of artificial intelligence (AI) across diverse academic departments at the University of Limerick. It provides a framework for shared "common themes" that are universally applicable across all disciplines, as well as "unique themes" that specifically cater to individual academic fields, thereby demonstrating a comprehensive and adaptable approach to AI implementation.

Common Themes	History	Irish World Academy of Music & Dance	School of Law	Politics & Public Administration
Data Integrity and Bias Mitigation	Yes	Yes	Yes	Yes
Explainable AI	Yes	Yes	Yes	Yes
Human-Centric AI Augmentation	Yes	Yes	Yes	Yes
Privacy and Security Measures	Yes	Yes	Yes	Yes
Continuous Evaluation and Improvement	Yes	Yes	Yes	Yes

Table 4.9 Based on the Common Theme list under AI's Future Policy Development, from all disciplines.

Unique Themes	History	Irish World Academy of Music & Dance	School of Law	Politics & Public Administration
Intellectual Property Rights	No	Yes	No	No
Human-AI Collaboration	No	Yes	No	No
Ethical AI Representation	No	Yes	No	No
Accessibility and Inclusivity	No	Yes	No	No
Educational Guidelines	No	Yes	No	No
Public Engagement and Policy Dialogue	No	Yes	No	No
Human Oversight	No	No	Yes	No
Ethical AI Use	No	No	Yes	No
Transparent and Explainable AI	No	No	No	Yes
Human-Centric Decision-making	No	No	No	Yes

Table 4.10 Based on the Unique Theme list under AI's Future Policy Development, from all disciplines.

A detailed examination of the common themes underscores a collective acknowledgment across all departments regarding several critical facets of AI integration. These foundational aspects include the importance of Data Integrity and Bias Mitigation, the necessity for Explainable AI, the need for Human-Centric AI Augmentation, the commitment to Privacy and Security Measures, and the requirement for Continuous Evaluation and Improvement of AI systems. The unanimous recognition of these principles across various departments emphasizes their crucial role in

ensuring ethical, efficient, and secure application of AI, irrespective of the specific academic discipline.

Contrastingly, unique themes present an insight into department-specific considerations, highlighting the distinct needs and characteristics of each academic field. The Irish World Academy of Music & Dance identifies six critical areas unique to their field, the School of Law emphasizes ethical AI usage and human oversight, and the Politics & Public Administration department prioritizes transparency and human-centric decision-making. These unique themes signify the diverse roles and requirements of AI depending on the specific academic context, thus exhibiting the adaptability and flexibility of AI technology.

The combined analysis of these themes presents a balanced, multi-disciplinary approach to AI integration in higher education at the University of Limerick. The analysis underscores the university's commitment to upholding general ethical AI practices along with discipline-specific guidelines, thereby addressing the unique needs and goals of different academic fields while maintaining a consistent set of shared principles. This integrated approach is instrumental in harnessing the potential advantages of AI while effectively managing its associated challenges. This strategic balance contributes to shaping a more efficient, inclusive, and innovative higher education environment.

5.1 Conclusions and Recommendations

Following an exhaustive examination of the data related to the integration of artificial intelligence (AI) across various academic departments at the University of Limerick, several significant conclusions and recommendations have been drawn, illustrating a multifaceted approach to AI in tertiary education.

The data synthesis clearly shows a unanimous agreement amongst all departments regarding the crucial nature of specific foundational elements for AI integration, namely Data Integrity and Bias Mitigation, Explainable AI, Human-Centric AI Augmentation, Privacy and Security Provisions, and Ongoing Assessment and Enhancement. These recurrent themes confirm the essential nature of a solid ethical framework, which holds true universally, regardless of the academic subject, thus underlining the necessity for a secure, accountable, and efficient application of AI technology within the educational sector.

Concurrently, the data unveils departmental "unique themes", stressing the variability in AI application in relation to the distinct attributes and goals of each discipline. The existence of these

individual themes draws attention to the versatility of AI technology and accentuates the significance of customising AI integration to cater to the particular needs and aims of each academic area.

From this assessment, the following suggestions are made:

1. A university-wide policy ought to be introduced which incorporates the universally accepted core themes, thus providing a consistent ethical foundation for AI application across all departments.

2. In tandem with this, each department should formulate and put into practice AI integration strategies that resonate with their distinct themes, facilitating an approach that is specific to the context and hence, more efficient.

3. Continuous evaluation and enhancement procedures should be consistently enforced to ensure that both the shared and individual themes can adapt and develop as AI technology and its role in academia evolve.

4. Ultimately, cross-disciplinary conversations and collaborations ought to be promoted to cultivate a comprehensive, pioneering, and adaptable tertiary education setting that fully exploits the capabilities of AI.

   In summary, this data-led review validates the University of Limerick's multifaceted and well-considered strategy for AI inclusion in tertiary education. This method, whilst recognising the distinct necessities and aims of different academic areas, also promotes a mutual set of values that ensure ethical and conscientious AI application. It paves the way for maximising the benefits of AI, whilst simultaneously addressing its potential issues, thus promoting a pioneering, comprehensive, and efficient tertiary education system.

Reference List

Akinwalere, S., Ivanov, V. (2022). Artificial Intelligence In Higher Education: Challenges and Opportunities. Border Crossing, 1(12), 1-15. https://doi.org/10.33182/bc.v12i1.2015

Blease, C., Kharko, A., Bernstein, M., Bradley, C., Houston, M., Walsh, I., … & Mandl, K. (2023). Computerization Of the Work Of General Practitioners: Mixed Methods Survey Of Final-year Medical Students In Ireland. JMIR Med Educ, (9), e42639. https://doi.org/10.2196/42639

Crompton, H., Song, D. (2021). The Potential Of Artificial Intelligence In Higher Education. Rev.virtual univ. catol. norte, 62, 1-4. https://doi.org/10.35575/rvucn.n62a1

Duffy, G., Gallagher, T. (2014). Sustaining School Partnerships: the Context Of Cross-sectoral Collaboration Between Schools In A Separate Education System In Northern Ireland. Rev Educ, 2(2), 189-210. https://doi.org/10.1002/rev3.3034

Gualdi, F., Cordella, A. (2021). Artificial Intelligence and Decision-making: The Question Of Accountability.. https://doi.org/10.24251/hicss.2021.281

Howley, P., Donoghue, C., Heanue, K. (2012). Factors Affecting Farmers' Adoption Of Agricultural Innovations: a Panel Data Analysis Of The Use Of Artificial Insemination Among Dairy Farmers In Ireland. JAS, 6(4). https://doi.org/10.5539/jas.v4n6p171

Irfan, M. (2023). Ethics and Privacy In Irish Higher Education: A Comprehensive Study Of Artificial Intelligence (Ai) Tools Implementation At University Of Limerick. GSSR, II(VIII), 201-210. https://doi.org/10.31703/gssr.2023(viii-ii).19

Irfan, M., Murray, L.I.A.M. and Ali, S., 2023. Insights into Student Perceptions: Investigating Artificial Intelligence (AI) Tool Usability in Irish Higher Education at the University of Limerick. Global Digital & Print Media Review, VI, pp.48-63.

Irfan, M., Murray, L.I.A.M. and Ali, S., 2023. Integration of Artificial Intelligence in Academia: A Case Study of Critical Teaching and Learning in Higher Education. Global Social Sciences Review, VIII.

Irfan, Muhammad; alQahtani, Yahya; aldulaylan, Fahad (2023). Ethics and Privacy in Irish Higher Education: A Comprehensive Study of Artificial Intelligence (AI) Tools Implementation at University of Limerick. University of Limerick. Journal contribution. https://doi.org/10.34961/researchrepository-ul.23181584.v1

Irfan, Muhammad; MURRAY, LIAM (2023). Empowering Critical skills of Teaching and Learning with Artificial Intelligence (AI) tools. University of Limerick. Preprint. https://doi.org/10.34961/researchrepository-ul.22788506.v1

Irfan, Muhammad; MURRAY, LIAM (2023). Micro- Credential: A guide to prompt writing and engineering in higher education: A tool for Artificial Intelligence in LLM. University of Limerick. Preprint. https://doi.org/10.34961/researchrepository-ul.22868414.v1

Irfan, Muhammad; MURRAY, LIAM (2023). Policy for Merging Artificial Intelligence (AI) with Social Sciences in Central Asian's Higher Education Institutions. University of Limerick. Preprint. https://doi.org/10.34961/researchrepository-ul.22780049.v1

Irfan, Muhammad; MURRAY, LIAM; Ali, Sajjad (2023). Integration of artificial intelligence in academia: A case study of critical teaching and learning in higher education. University of Limerick. Journal contribution. https://doi.org/10.34961/researchrepository-ul.22723474.v1

Johnson, R., Stone, D., Lukaszewski, K. (2020). The Benefits Of Ehrm and Ai For Talent Acquisition. JTF, 1(7), 40-52. https://doi.org/10.1108/jtf-02-2020-0013

Kellogg, K., Sadeh-Sharvit, S. (2022). Pragmatic Ai-augmentation In Mental Healthcare: Key Technologies, Potential Benefits, and Real-world Challenges And Solutions For Frontline Clinicians. Front. Psychiatry, (13). https://doi.org/10.3389/fpsyt.2022.990370

Khan, A.N., Ali, S., Amin, S. and Irfan, M., 2021. Effects of Facebook on Exam Performance of Social Sciences Students: A Case Study of The University of Malakand. Humanities & Social Sciences Reviews, 9(2), pp.748-758.

Khan, Mashhud; Ali, Sajjad; Irfan, Muhammad (2021). Social media role marketing management the tourist perception in Malakand Division of Khyber Pakhtunkhwa, Pakistan. University of Limerick. Journal contribution. https://doi.org/10.34961/researchrepository-ul.21424416.v1

Khan, N.U., Ali, S. and Irfan, M., 2022. Influence of mobile phone usage on the academic performance of students: A case study of Malakand division students. Journal of Tianjin University Science and Technology, 55(9).

Lebcir, R., Vlaev, I., Atun, R., Cubric, M. (2021). Stakeholders' Views On the Organisational Factors Affecting Application Of Artificial Intelligence In Healthcare: A Scoping Review Protocol. BMJ Open, 3(11), e044074. https://doi.org/10.1136/bmjopen-2020-044074

Leimanis, A., Palkova, K. (2021). Ethical Guidelines For Artificial Intelligence In Healthcare From the Sustainable Development Perspective. EJSD, 1(10), 90. https://doi.org/10.14207/ejsd.2021.v10n1p90

Li, Y., Yang, P. (2023). Higher Education Worries and Response In The Era Of Artificial Intelligence. Education. https://doi.org/10.54647/education880398

McLennan, S., Fiske, A., Tigard, D., Müller, R., Haddadin, S., Buyx, A. (2022). Embedded Ethics: a Proposal For Integrating Ethics Into The Development Of Medical Ai. BMC Med Ethics, 1(23). https://doi.org/10.1186/s12910-022-00746-3

Muhammad Irfan, Prof. Liam Murray, & Dr. Sajjad Ali. (2023). The Role of AI in Shaping Europe's Higher Education Landscape: Policy Implications and Guidelines with a Focus on Ireland. Research Journal of Social Sciences and Economics Review, 4(2), 231-243. https://doi.org/10.36902/rjsser-vol4-iss2-2023(231-243)

Nisa, M.U., Yousafzai, D.M. and Irfan, M., 2021. Media Literacy Concepts & Role Of Media Literacy Inflict's: A Literature Review. Ilkogretim Online, 20(3), pp.2506-2518.

Rauf, A., Ali, S. and Irfan, M., 2021. PAKISTANI PRINT MEDIA COVERAGE OF ENVIRONMENTAL ISSUES: A COMPARATIVE STUDY OF URDU AND ENGLISH NEWSPAPERS. Pakistan Journal of Society, Education & Language, 8(1).

Ryan, A., Walsh, P., Walsh, P. (2021). Exploratory Study On Modelling Agricultural Carbon Emissions In Ireland. Agriculture, 1(12), 34. https://doi.org/10.3390/agriculture12010034

Ryan, M. (2022). The Social and Ethical Impacts Of Artificial Intelligence In Agriculture: Mapping The Agricultural Ai Literature. AI & Soc. https://doi.org/10.1007/s00146-021-01377-9

Ryan, M., O'Donovan, T., McNulty, J. (2021). Artificial Intelligence: the Opinions Of Radiographers And Radiation Therapists In Ireland. Radiography, (27), S74-S82. https://doi.org/10.1016/j.radi.2021.07.022

Salwei, M., Carayon, P. (2022). A Sociotechnical Systems Framework For the Application Of Artificial Intelligence In Health Care Delivery. Journal of Cognitive Engineering and Decision Making, 4(16), 194-206. https://doi.org/10.1177/15553434221097357

Seibert, K., Domhoff, D., Bruch, D., Schulte-Althoff, M., Fürstenau, D., Biessmann, F., … & Wolf-Ostermann, K. (2021). Application Scenarios For Artificial Intelligence In Nursing Care: Rapid Review. J Med Internet Res, 11(23), e26522. https://doi.org/10.2196/26522

Simonsen, H., Almeida, J. (2020). Artificial Intelligence and Learning Activities: A Match Made In Heaven?. JECP, 1, 198-206. https://doi.org/10.38069/edenconf-2020-rw-0022

Slimi, Z. (2021). The Impact Of Ai Implementation In Higher Education On Educational Process Future: a Systematic Review.. https://doi.org/10.21203/rs.3.rs-1081043/v1

Vinuesa, R., Azizpour, H., Leite, I., Balaam, M., Dignum, V., Domisch, S., … & Nerini, F. (2020). The Role Of Artificial Intelligence In Achieving the Sustainable Development Goals. Nat Commun, 1(11). https://doi.org/10.1038/s41467-019-14108-y

What Chatgpt Means For Universities (2023) : Perceptions Of Scholars and Students. JALT, 1(6). https://doi.org/10.37074/jalt.2023.6.1.22

Wirtz, B., Weyerer, J., Geyer, C. (2018). Artificial Intelligence and The Public Sector—applications And Challenges. International Journal of Public Administration, 7(42), 596-615. https://doi.org/10.1080/01900692.2018.1498103

Zahid Khan, D.M.A. and Irfan, M., 2021. Habit Of Study And Academic Achievements In District Dir (Lower) And District Malakand. Webology (ISSN: 1735-188X), 18(6).