



AIRED
AI reshapes education

WP4: Ethical and Inclusive use of AI

Task 1: Analysis of Risks of AI in Education and Training in Ireland

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Introduction

The integration of Artificial Intelligence (AI) in Irish education and training presents both opportunities and challenges for educators and learners. AI tools are increasingly used to streamline workloads, enhance accessibility, and personalise learning experiences. However, these advancements also bring significant risks, including data privacy concerns, ethical issues, algorithmic bias, and the potential decrease of critical thinking skills among students. The rapid evolution of AI further complicates its integration, leaving many educators struggling to keep pace with best practices and ethical considerations.

This report explores the growing impact of artificial intelligence across education, training, and professional practice in Ireland. It examines how AI is reshaping teaching and learning processes, as well as its implications for equity, ethics, and professional integrity. More specifically, it considers the risks and challenges associated with AI adoption as reported by teachers, trainers, and education professionals in Ireland, including concerns about data privacy, bias, and the evolving role of educators. The report also highlights current policies, guidelines, regulatory frameworks, and emerging best practices, offering insights into how Ireland can harness AI's potential while mitigating risks and ensuring its responsible and effective integration into the education sector.

While this report contributes valuable insights, it also highlights that data and research on the experiences, expertise, and attitudes of Irish educational professionals regarding AI remain limited. There is a clear need for more comprehensive research and attention in this area to better understand the nuances of AI integration within Irish classrooms. The findings offer a foundation, but further investigation is essential to ensure that Ireland can effectively navigate AI's evolving role in education, balancing its potential with the need for responsible, informed implementation.

Overview of Risks Associated with the Use of AI in Irish Education and Training

Artificial Intelligence tools are increasingly used in teaching and training in Ireland, including chatbots, course creation tools, animation, text-to-speech, and presentations. While creating opportunities to streamline workload, enhance accessibility and personalise learning, AI tools pose a myriad of risks and concerns. Dependence on technology, inequity across schools, data privacy issues or lack of transparency and accountability are just some of the issues being faced by educators and learners (Irfan et al., 2023a). The challenge is further compounded by the rapid evolution of AI technologies, making it difficult for educators and trainers to keep up with

best practices for integrating AI into teaching while ensuring ethical and responsible use. Additionally, there are concerns that AI and automation could displace jobs and change the skills needed in many sectors, including education (Bukartaite & Hooper, 2023). While it's unlikely that AI will eliminate jobs altogether, it will transform the nature of work (Bukartaite & Hooper, 2023). Addressing these concerns requires a strong focus on digital literacy, critical thinking skills, lifelong learning and importantly, clear guidelines on ethical use of AI in Irish education.

Ireland is considered a global leader in AI, with numerous companies and research centres established on the island over the last few years (Becker, 2017). This leadership is also reflected in national policy, with the National Strategy for Higher Education in Ireland acknowledging the potential of AI to tailor learning experiences to individual students and improve the efficacy of teaching and learning (Irfan et al., 2023a). However, this does not imply that teachers in Ireland are experts in the field, that they feel confident and at ease using AI in their work, or that they are ready to encourage their students to utilise AI in their learning. A recent study found that while 55% of Irish teachers have used AI tools in education, 53% of those report not fully understanding how the underlying algorithms work, limiting their ability to use these systems effectively and safely (Daskalaki et al., 2024). The most common reason for using AI tools is to support teacher training and professional development (72%), followed by improving lesson accessibility for all students, including those from vulnerable groups (54%) (Daskalaki et al., 2024). The widespread but often uninformed use of AI poses a risk, as teachers may rely on inaccurate outputs, struggle to evaluate AI-generated content, or overlook data privacy and academic integrity issues. Without proper training and clear guidelines, AI integration in classrooms could create more problems than benefits.

Like most educators, those teaching in Ireland share concerns about the growing risks associated with the use of AI tools in teaching and learning. Key issues include students' tendency to trust AI-generated information without applying critical thinking, which may lead to the unquestioned acceptance of inaccurate or misleading content (Daskalaki et al., 2024). AI tools based on language models, such as ChatGPT and PerplexityAI, tend to be favoured by students in assisting in their essay writing (Byrne & Mooney, 2023). However, there are concerns from educators and professionals that an over-reliance of such tools can result in generic information to specific questions, the use of unrelated citations, and potentially strip students and academics of the chance to develop core reflective research skills (Morris & Connolly, 2023). Additionally, as these tools generate information from sources unknown by those using them, educators highlight the risks of students being exposed to biased, incorrect, or even harmful material, raising ethical concerns about the responsible use of AI in learning environments (Daskalaki et al., 2024).

Perspectives on the use of generative AI (GenAI) among teachers to aid in lesson planning, assessment strategy, and feedback remain relatively divisive. For instance, while primary school teachers see the appeal of the use of GenAI in lesson planning by increasing efficiency and implementing final quality checks, they express significant concerns regarding its long-term implications, such as introducing implicit biases in learning content and increasing educational inequity across schools (Hsu et al., 2024). Over-reliance of GenAI can lead to the rise of potential biases in educational content, particularly as ChatGPT is majorly used among Irish educators (Hsu et al., 2024) - an issue further exacerbated by the fact that students in Ireland also report extensive use of ChatGPT in their academic work (Byrne & Mooney, 2023).

Furthermore, the use of AI assistants (AIAs) in education and training poses a huge long-term risk, as AIAs gather extensive data on students' behaviour, learning patterns, and personal information (Cunneen et al., 2020). Without proper safeguards, this data could be misused or exposed, raising concerns about privacy, particularly with minors or vulnerable populations (Cunneen et al., 2020). In Ireland, adherence to GDPR and data protection regulations is critical but challenging to enforce given the complexity of AI data flows.

It is also important to acknowledge that there are challenges in appropriately adopting new technologies like AI in Irish classrooms due to limited resources and a cultural preference for traditional teaching methods (Dooly et al., 2024), which suggests further risks of inappropriate and uncontrolled use. In Ireland, most teaching occurs in-person, with online learning being more common for adult and lifelong learning rather than mainstream education (Dooly et al., 2024). Although 91% of secondary school teachers surveyed express an interest in learning more about how to adopt AI-assisted technologies into their work, they expressed feeling held back by insufficient resources, including lack of time to learn and reflect on new technologies and insufficient technical support in classrooms (Association of Secondary Teachers in Ireland, 2024). This is concerning, as lack of support in integrating AI in the classroom implies a lack of knowledge and guidance on risks and challenges associated with the use of this type of technology. To move forward, a focus on lifelong learning and innovative teaching methods are needed to help educators embrace new technology in their work, with clear guidelines in place to mitigate risks and ensure these methods can be seamlessly integrated into their existing workload.

Ireland's dual-language education system also faces unique challenges, particularly in Irish-language schools due to limited data availability for training AI tools in Irish (Wieczorek and Costello, 2024). AI tools require large amounts of training data, which is harder to collect for minority languages like Irish, leading to errors and disparities in AI quality. The cost of developing Irish-language AI tools may not be justifiable due to the small user base, raising concerns about unequal access in schools (Wieczorek and Costello, 2024). This raises the risk

that AI-driven educational tools may reinforce linguistic inequalities, limiting the availability of high-quality AI-assisted learning resources for Irish-speaking students and educators and potentially undermining efforts to promote and preserve the language.

In summary, the integration of AI in Irish education and learning presents several risks, including over-reliance on technology by teachers and learners, lack of educator expertise, potential biases in AI-generated content, privacy concerns, and inequities in access, particularly for minority languages like Irish. While AI offers opportunities to enhance learning and teaching, these risks require careful management through proper training, clear ethical guidelines, and safeguards to protect data privacy. Addressing these concerns is essential for ensuring AI tools are used effectively, responsibly, and equitably, fostering a balanced approach to AI adoption in education.

Professional Perspectives on AI in Ireland: Survey Findings

To enhance our understanding and gather further empirical data on the risks and ethical considerations surrounding the use of AI in education and training, the AIREd project partners conducted a comprehensive survey of attitudes and experiences with AI amongst teachers, trainers and other education professionals in their national contexts. This initiative aimed to contribute valuable perspectives to the ongoing discourse on AI ethics in educational settings and to support the data presented above. The responses from Irish professionals ($n = 37$) highlighted several key concerns which mirrors those found in existing research:

- Academic integrity and plagiarism: Many respondents observed that students are increasingly using AI to complete assignments, leading to concerns about authenticity and originality. One respondent expressed frustration, stating: "I have students who used AI for projects and pretended they wrote the information all by themselves." Another stated: "Many of my students are presenting AI work as their own when clearly it is not."
- Lack of critical thinking and over-reliance on AI: There is apprehension that AI's tendency to provide surface-level information might hinder students' development of critical thinking skills. One respondent commented: "If you require critical analysis as demonstration of learning, it is not currently achieved through AI which tends to respond with a list of 'factoids'." Another warned against "over-reliance by those who do not have the requisite knowledge of the subject."
- Privacy and data protection: The potential misuse of student data by AI systems emerged as a significant ethical issue. Respondents stressed the importance of

safeguarding personal information, with one stating, "Absolutely no school attainment data or student information should be shared with AI systems." Another highlighted concerns about "GDPR, and acquisition of knowledge for the individual student as opposed to knowledge of how to generate information through the effective use of AI."

- Bias and accuracy: Respondents expressed worries about AI strengthening biases and disseminating inaccurate information. One respondent mentioned "biases inputted by humans," while another noted that "some of it can be inaccurate."
- Copyright and intellectual property: The use of AI-generated materials raised questions about copyright infringement and the ethical use of content created by others. Respondents highlighted the necessity of acknowledging sources and respecting intellectual property rights when utilising AI tools: "AI has been trained on and uses content created by others."

These observations from Irish professionals highlight the complex ethical risks and challenges of integrating AI into their work. The feedback aligns with existing research on AI ethics in educational contexts and global concerns about academic integrity, critical thinking, data privacy, bias, and intellectual property rights.

Responses to Risks of AI in Irish Education: Case Studies and Examples

The European Commission has labeled AI in education as "high-risk" and called for clear guidelines to ensure ethical use and transparency (European Commission, 2022). As such, schools, universities and other education providers in Ireland are under pressure to act quickly and frequently, updating their policies in line with the rapid developments of freely available AI (QQI, 2023).

Universities and other third-level institutions have been at the forefront of adapting their guidelines with the emergence of AI, funding research on risks and challenges, and harnessing resources to facilitate the adoption of AI. One example of this is The University of Limerick, which recently updated its policies to ensure the ethical use of AI in higher education, emphasising data integrity, bias mitigation, transparency, and academic integrity (Irfan et al., 2023b). Faculty-specific guidelines, continuous evaluation, and cross-disciplinary collaboration support responsible AI integration while maintaining fairness in assessments and safeguarding academic standards (Irfan et al., 2023b). In a similar vein, Dublin City University has provided a sandbox of relevant resources for staff and students on the use of AI in academia, including key guideline documentation, literature reviews, government reports, and DCU-specific resources on academic integrity with AI (Dublin City University, 2024).

Trinity College Dublin, in partnership with various other Irish Universities, has also made strides in supporting staff with advancements in AI. The University launched the ADAPT Centre, focused on producing research on AI technologies that are human-centric and responsive to industry needs (ADAPT, 2024). Recently, ADAPT has launched a programme focused on supporting secondary school educators in teaching students how to navigate AI tools in a critical and responsible manner (ADAPT, 2024). Notably, current programmes and incentives tend to focus on supporting students in their use of AI tools, yet little to no support has been developed to assist primary and secondary school educators with their use of AI.

Unlike third-level institutions, primary and secondary schools may not be so quick to act in updating their guidelines and providing support to their staff. Many schools' Acceptable Usage Policies (AUPs) are outdated, with some still referencing 'floppy disks' (Casey, 2024). Due to limited resources and guidance, schools struggle to update them and in turn, to stay on top of technological advancements and be aware of the risks of using them. Although the Department of Education has launched a statement confirming that new guidelines for the ethical use of AI in schools are projected to circulate to schools in early 2025, the statement also emphasises that it is the individual responsibility of each school's management board to select appropriate resources to implement AI into their curriculum (Casey, 2024; Murphy, 2024). However, school staff often express concerns over under-resourcing of appropriate IT structures to support day-to-day operation (Hsu et al., 2024), a problem that is often exacerbated in schools in rural and in disadvantaged areas (Scully et al., 2021). As artificial intelligence becomes more integrated into education, it should be explicitly addressed in these policies to ensure privacy, ethics, and misuse prevention.

Recommendations and Irish-Specific Solutions

Encouragingly, as artificial intelligence continues to reshape education and training, Ireland has taken some proactive steps to equip professionals and learners with the tools and knowledge needed to navigate its challenges and opportunities. This section outlines key national initiatives and policy responses designed to ensure the ethical and effective use of AI in Irish education and training, from professional development programmes to government-backed funding and institutional strategies.

One of the key resources supporting this effort was published in 2022 by the Department of Education in Ireland. The Digital Strategy for Schools acts as a guide for schools to establish a clear direction for school management and the use of digital technology in educational environments at both primary and secondary levels (Le Borgne et al., 2024).

Another resource is the NAIN Generative AI: Guidelines for Educators document, published by Quality and Qualifications Ireland (QQI) (2023), which provides guidance on the ethical and effective use of generative AI in education. It aims to help educators understand AI's capabilities and limitations, navigate institutional policies, and uphold academic integrity. The guidelines encourage informed discussions with students, the development of AI-aware assessments, and the responsible integration of AI tools in teaching and learning. By outlining best practices, the document seeks to equip educators with the knowledge and strategies needed to adapt to the evolving role of AI in education while maintaining high academic standards.

Building on these efforts, several strategies to prepare educators and learners for the ethical use of AI have already been implemented in Ireland. The 'AI in My Life' Programme is a teacher-led modular workshop designed for AI literacy, ethics and career awareness among Transition Year students in Ireland (Barber et al., 2024). Developed in collaboration with teachers and students, it covers AI basics, ethics, the future of work, and is delivered through teacher-led sessions. An evaluation of this initiative indicated increased student understanding of AI, greater awareness of ethical concerns, and improved confidence in discussing AI-related topics, with expanded vocabulary reflecting deeper engagement (Barber et al., 2024). While the teachers found the resources useful and accessible, they also highlighted a lack of national-level support and a general difficulty in finding suitable AI teaching materials.

Furthermore, a €40m #NextGenerationEU funding initiative is driving a transformative programme across seven technological higher education institutions in Ireland (Flynn et al., 2024). The National Technological University Transformation for Recovery and Resilience programme, known as N-TUTORR, aims to empower learners, enhance staff capabilities, and improve digital infrastructure, with a holistic approach focusing on academic integrity, digital transformation, sustainability, employability, diversity and inclusion, and universal design for learning (Flynn et al., 2024). Students will engage in focused projects and act as student champions to inform discussions, while staff development will include AI training and specific programmes for senior leaders (Flynn et al., 2024).

Teachers and school leaders can also access a free course provided by Oide (Oide Technology in Education, 2025). This course provides foundational knowledge on AI, covering key policy documents, ethical considerations, and the strengths and limitations of AI in education. Aligned with the Digital Strategy for Schools to 2027, it supports educators in addressing both the opportunities and risks associated with AI. Input from organisations like the Adapt Centre ensures that the course is informed by the latest developments and research, helping educators navigate the evolving landscape of AI in schools responsibly.

The Department of Education is working to establish comprehensive guidelines for the safe, ethical, and responsible use of AI in Irish schools, aiming to raise awareness of both its potential

benefits and risks (Department of Education, 2024). In addition to monitoring AI developments globally, including consultations with EU member states, the department is conducting research into the impact of digital devices in classrooms (Department of Education, 2024). This research is set to identify the most effective ways to integrate AI and technology into education. Feedback from educators, gathered through recent discussions, is helping shape future AI policy, particularly around enhancing AI and data literacy among staff and school leadership (Department of Education, 2024). For Irish educators, this means clearer guidance and much-needed resources to navigate AI integration, ensuring it enhances teaching while safeguarding against potential risks.

Conclusion

The use of AI in Irish education, training, and professional settings presents several risks that need careful consideration. Key concerns include the over-reliance on AI tools, leading to diminished critical thinking and research skills among students, and the potential for AI-generated content to present biases or inaccuracies in educational materials. Data privacy is another significant issue, particularly with AI assistants gathering sensitive student information, raising concerns over misuse and long-term implications. Additionally, the rapid evolution of AI technologies, coupled with inadequate resources and technical support for educators, creates challenges in ensuring safe, responsible, and ethical AI integration in Irish classrooms. In the context of Ireland's bilingual education system, there is also a risk that AI will contribute to linguistic inequalities, with the lack of high-quality Irish-language AI tools limiting access for Irish-speaking students and further marginalising the language in digital learning environments. These risks highlight the need for clear guidelines for educators and learners (Donnell et al., 2024), digital literacy support, free and accessible training opportunities and ethical frameworks to guide the adoption of AI in education.

Furthermore, more research into the experiences of Irish education professionals is needed to ensure that supports are tailored to their needs and experiences. While this report contributes valuable insights, it reveals a significant gap in understanding the unique challenges faced by Irish educators in adopting AI technologies. Educators' concerns, attitudes, and expertise with AI remain under-researched, and without a deeper exploration of these factors, it will be difficult to develop effective, context-specific training and resources.

References

ADAPT. (2024). ADAPT Launches 'AI Literacy in the Classroom' Programme to Equip Teachers for AI-Driven Future.

<https://www.adaptcentre.ie/news-and-events/adapt-launches-ai-literacy-in-the-classroom-programme-to-equip-teachers-for-ai-driven-future/>

Association of Secondary Teachers Ireland. (2024). *Digital Technology and its Impact on Teachers' Working Lives*.

<https://www.asti.ie/document-library/red-c-asti-survey-2024-digital-technology-and-its-impact-on/>

Barber, G. L., Grehan, L., Dunne, J., Davis, B., & Qadeer, H. (2024, December). Towards an educational framework for integrating AI education into second-level education in Ireland: Preliminary insights from a national workshop series on AI ethics and privacy (Work in Progress). In *Proceedings of the 2024 Conference on Human Centred Artificial Intelligence-Education and Practice* (pp. 29-33).

Becker, B. (2017). Artificial intelligence in education: what is it, where is it now, where is it going. *Ireland's Yearbook of Education*, 2018, 42-46.

Bukartaite, R., & Hooper, D. (2023). Automation, artificial intelligence and future skills needs: an Irish perspective. *European Journal of Training and Development*, 47(10), 163-185.

<https://www.emerald.com/insight/content/doi/10.1108/ejtd-03-2023-0045/full/pdf>

Byrne, A. & Mooney, P. (2023). *Exploring the potential impact of ChatGPT on student learning activities*.

https://www.cs.nuim.ie/~pmooney/HCAI-ep2023/Aibhe_Byrne_Peter_Mooney_ChatGPT_2023.pdf

Casey, J. (2024, December 20). Schools 'ill-equipped to deal with artificial intelligence'. *Irish Examiner*. <https://www.irishexaminer.com/news/arid-41540165.html>

Cunneen, M., Mullins, M., & Murphy, F. (2020). Artificial intelligence assistants and risk: framing a connectivity risk narrative. *AI & Society*, 35(3), 625-634.

<https://link.springer.com/article/10.1007/s00146-019-00916-9>

Daskalaki, E., Psaroudaki, K., & Fragopoulou, P. (2024). Navigating the Future of Education: Educators' Insights on AI Integration and Challenges in Greece, Hungary, Latvia, Ireland and Armenia. *arXiv preprint arXiv:2408.15686*. <https://arxiv.org/pdf/2408.15686>

Department of Education. (2024, April 1). *Minister Foley pledges commitment to establishing guidelines on the use of AI*.

<https://www.gov.ie/en/press-release/87b43-minister-foley-pledges-commitment-to-establishing-guidelines-on-the-use-of-ai/>

O'Donnell, F., Porter, M., & Fitzgerald, S. (2024). The role of artificial intelligence in higher education: Higher education students use of AI in academic assignments. *Irish Journal of Technology Enhanced Learning*, 8(1).

<https://journal.ilta.ie/index.php/telji/article/download/169/186/919>

Dooley, Z., Moran, L., Wall, P. J., & Lodge, E. (2024). Searching for application areas for using AI and VR in the Higher Education classroom in Ireland. *Ubiquity Proceedings*, 4(1).
<https://ubiquityproceedings.com/articles/150/files/66cec4a36799b.pdf>

Dublin City University. (2024). *AI in Education Sandbox*. National Observatory for Digital Education. <https://www.dcu.ie/nidl/ai-education-sandbox>

European Commission. (2022). *Ethical guidelines on the use of artificial intelligence (AI) and data in teaching and learning for Educators*.
<https://op.europa.eu/en/publication-detail/-/publication/d81a0d54-5348-11ed-92ed-01aa75ed71a1/language-en>

Flynn, S., O'Reilly, S., & O'Neill, C. (2024). N-TUTORR: Addressing Artificial Intelligence as one element of the transformation of Ireland's technological higher education sector. *Ubiquity Proceedings*, 4(1).

Hsu, H., Mak, J., Werner, J., & White-Taylor, J., Geiselhofer, M., Gorman, A., & Torreijon, C. (2024). Preliminary Study on pre-service teachers' applications and perceptions of generative artificial intelligence for lesson planning. *Journal of Technology and Teacher Education*, 32, 409-437.

Irfan, M., Aldulaylan, F., & Alqahtani, Y. (2023a). Ethics and privacy in Irish higher education: a comprehensive study of Artificial Intelligence (AI) tools implementation at University of Limerick. *Global Social Sci Rev*, 8(II), 201-210.
<https://www.humapub.com/admin/alljournals/gssr/papers/ASgARoC8vq.pdf>

Irfan, M., Murray, L., Aldulayani, F., Ali, S., Youcefi, N., & Haroon, S. (2023b). From Europe to Ireland: artificial intelligence pivotal role in transforming higher education policies and guidelines. *Journal of Namibian Studies*, 33(1), 1935-1959.
https://researchrepository.ul.ie/articles/journal_contribution/From_Europe_to_Ireland_artificial_intelligence_pivotal_role_in_transforming_higher_education_policies_and_guidelines/24087813/1

Le Borgne, Y. A., Bellas, F., Cassidy, D., Vourikari, R., Kralj, L., Obae, C., ... & Weber, M. (2024). *AI Report*. Royal College of Surgeons in Ireland. Report. <https://doi.org/10.25419/rcsi.25021193.v1>

Morris, P., & Connolly, M. (2023). Reflections on Engaging Pragmatically with Generative AI to Augment Research and Education Practice. *Irish Journal of Technology Enhanced Learning*, 7(2).
<https://doi.org/10.22554/ijtel.v7i2.149>

Murphy, Ann. (2024). Guidelines being drawn up for teachers and other educators on use of AI in school. *Irish Examiner*. <https://www.irishexaminer.com/news/arid-41365471.html>

Oide Technology in Education. (2024). (New!) *AI for Schools*.

<https://www.oidetechnologyineducation.ie/onlinecourses/ai-for-schools/>

Scully, D., Lehane, P., & Scully, C. (2021). 'It is no longer scary': digital learning before and during the Covid-19 pandemic in Irish secondary schools. *Technology, Pedagogy and Education*, 30(1), 159-181. <https://doi.org/10.1080/1475939X.2020.1854844>

Quality and Qualifications Ireland (QQI). (2023). *Generative Artificial Intelligence: Guidelines for Educators (NAIN)*.

<https://www.qqi.ie/sites/default/files/2023-09/NAIN%20Generative%20AI%20Guidelines%20for%20Educators%202023.pdf>