



Governance of artificial intelligence and data in Australasian higher education: A snapshot of policy and practice

An ACode Whitepaper

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Introduction

Governance of Artificial Intelligence (AI) is becoming increasingly urgent in higher education institutions for its impact on the quality and equity of education. Earlier in 2023, AI usage conversations across the sector appeared to predominantly focus on the other AI, Academic Integrity. Just like the technology has advanced in the past eight months since the first ACode (Australasian Council of Open Digital Education) whitepaper on this topic this year, so too has the practice of using AI. In October 2023, ACode conducted a survey to get an understanding of AI policy and practice in member institutions. The results show there is a mixed view whether guidelines and policies are in place with respect to the governance of AI and data which suggests the sector needs to continue these conversations for some time to come. Furthermore, ethical application of AI is emerging through experimental activities and pilots of proof of concepts, suggesting that case studies and recommendations for practice could be developed in 2024 to further assure quality and equity in education.

Literature review

There is an emerging corpus of work signalling the importance of AI policy and practice, and the principles that govern it. Some propositions for institutional activity in this space are to consider human agency and oversight (including AI literacy, collaboration, inclusiveness), technical robustness (e.g. sustainability) and integrity (including privacy, transparency and accountability) (Russel Group, 2023; Nguyen et al, 2023; European Commission, 2022). At a national level, for example in Australia, the Australian government's Tertiary Education and Standards Agency (TEQSA) released guidelines for assessment reform in light of AI and advice for students in using AI. Additionally, the Australian Government's Department of Industry, Science and Resources (2023) released a voluntary framework that is aspirational and intended to complement existing AI regulations and practices. The TEQSA guidelines and Government framework both emphasise the need to ensure that AI is inclusive and accessible to build trust in its application and evaluation.

However, there can be significant variance to how AI principles are interpreted, prioritised, and implemented (Jobin et al., 2019). There are strong views that there should be implementation strategies that include concrete metrics that are measurable (Burt, 2020), and protection of human rights (Office of the High Commissioner for Human Rights, 2023). Reputational, regulatory and legal risks associated with the use of AI due to bias and non-transparent algorithmic decision making create additional challenges for organisations to work through to operationalise AI effectively (Blackman, 2020). Governance of AI is necessary to navigate the challenges to ensure that the "structures and processes that are designed to ensure the development and use of AI systems are compliant to ethical regulations and responsibilities" (CSIRO, 2023). Governance can be a multi-tiered approach as shown in Figure 1 at industry, organisation and team levels.

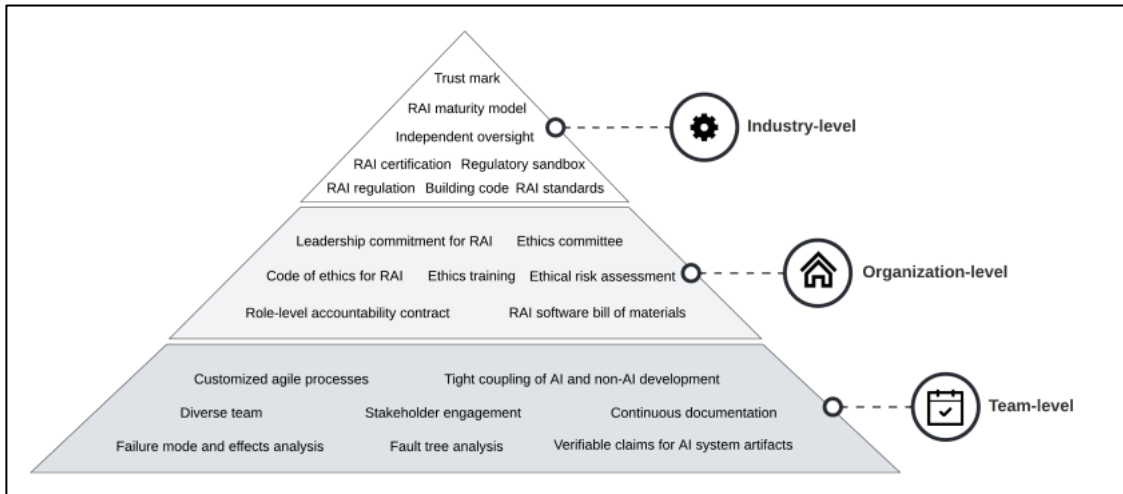


Figure 1. CSIRO’s model for governance patterns for responsible AI

The literature also shows the human element in AI governance needs to be carefully considered to be inclusive. In education, for example, emotional intelligence is an important attribute, as a response to nuanced cues (Bozkurt, 2023) while equity is a consideration that cannot be missed (Southgate, 2020). At a global level, there is argument that geopolitical dominance is a risk (Nemorin et al., 2022), as AI systems can be developed and deployed with biased narratives and norms. There is also emerging concern of the impact of AI on indigenous wisdom. In New Zealand, for example, there is work to test AI against Maori culture, embracing concepts of harmony, ecology and kinship (Skogstad, 2023).

Methodology

A survey comprising 10 questions was sent out to 47 member institutions of the Australasian Council for Open and Digital Education (ACODE) in October 2023. The survey questions were designed based on the key principles of AI governance highlighted in the literature. The Qualtrics survey link was sent out via the ACODE Members’ Forum and through follow-up emails. 36 responses were received from member representatives whose roles range from Directors to Educational Technologists, many in consultation with the other key stakeholders in their respective institutions, in addition to pedagogical perspectives from digital and learning designers. The outcomes of the survey were shared with members in a presentation at the ACODE 90 Business Meeting in November 2023. Further insights on the data from members at the Business Meeting are also captured in the Discussion section of the paper. The authors wish to acknowledge that there are two limitations to the findings. Firstly, the institutional representatives responding to the survey may not always know all the activity of the institution in this space. However, the perception of effective governance of AI and data is important to developing guidelines and standards. Another limitation is surveying members on both data and AI. While the terms can be regarded as separate, AI is only as good as the data it feeds on, hence the choice to retain both terms in the survey.

Findings

In eliciting how AI is being used within member institutions, respondents considered whether AI is being used in activities for creation or consumption. Multiple responses were allowed. Figure 2 indicates 79% of respondents used AI for content creation. A close second at 70% each indicates research on AI and use in assessment task design. Interestingly, some of the fringe uses include intelligent learning systems such as metahuman and machine learning services for data mining.

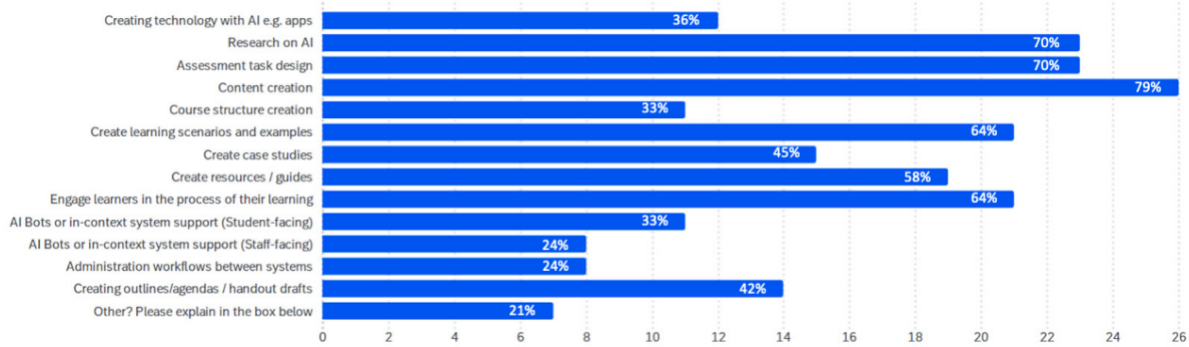


Figure 2. Whether AI is used to consume or create

To get a sense of specific use cases within institutions, respondents were asked for examples of current applications of AI or projects. Some noteworthy examples include:

- specific trials, including third party tools, within courses, including brainstorming for design concepts
- writing content copy, writing draft emails
- expanding on, and generating, ideas
- creating custom generative AI tools to support learning and teaching as well as operations such as first level enquiries
- creating communities of practice
- integration into digital literacies

To set the scene for the respondents’ perspective of the governance, the survey sought to ascertain whether member institutions have policies or guidelines related to the ethical use of AI and data. In Figure 3, we can see 55% of members replied in the affirmative, which is an encouraging number.

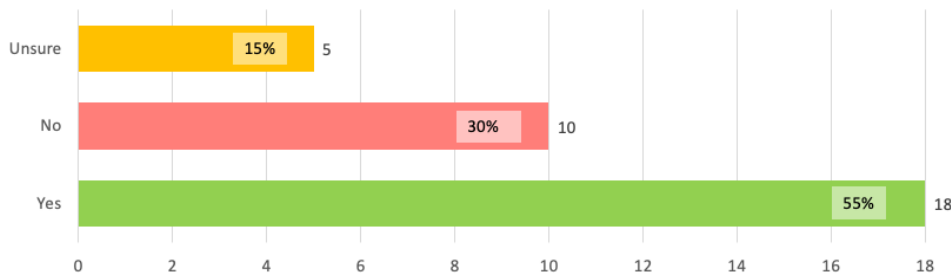


Figure 3. Number of institutions which have policies or guidelines on the ethical use of AI and data

The following clarifying question investigates the extent to which current policies or guidelines address the ethical implications of AI and data usage. In Figure 4, most institutions, or 42%, appear to address only some ethical implications. So, we can see that while many have some kind of governance, the extent of implementation may be limited.

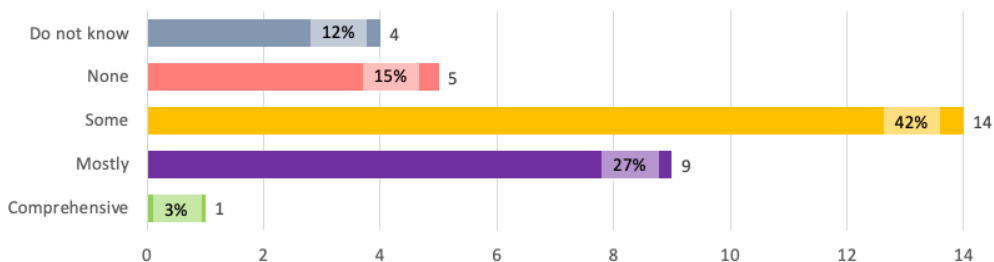


Figure 4. Extent to which institutions’ current policies or guidelines address the ethical implications of AI and data usage

Members were also asked to describe how AI and data is used ethically within their institutions. Figure 5 shows 48% of activities are in the proof of concept or pilot stages in specific projects. 33% are conducting limited experiments. This is encouraging feedback showing the majority of institutions, or 81%, are active in this space. However, they appear to do so cautiously.

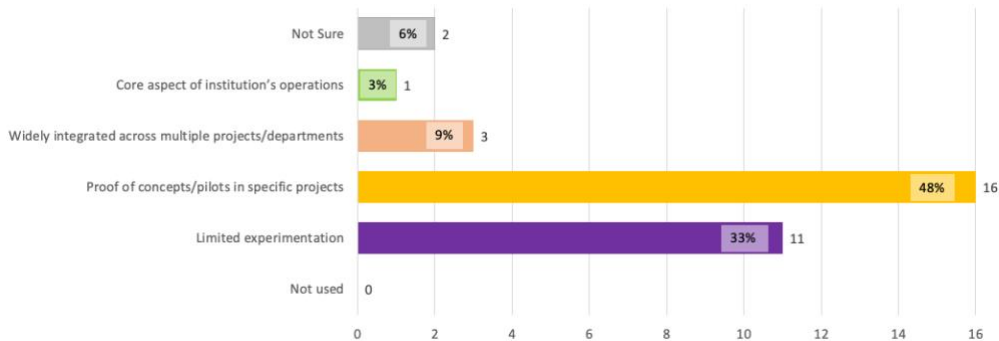


Figure 5. Extent to which AI and data are used ethically in institutions

To determine responsibility for governance, members were asked who in their institutions is primarily responsible for overseeing AI and data ethics initiatives. They were allowed to select multiple options recognising that responsibility may sit across multiple key stakeholders. In Figure 6 we can see most of the responsibility lies at the Deputy Vice Chancellor level, though it is only at a 25% selection rate. In the qualitative response, members named various other types of committees or boards, different to AI or data ethics committees, that are responsible for oversight.

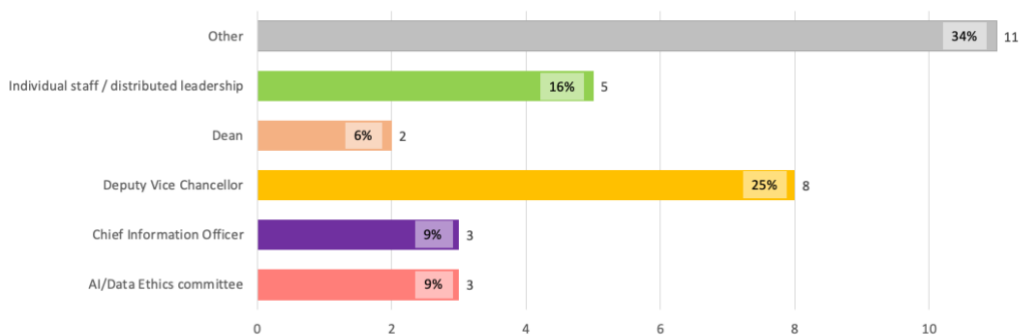


Figure 6. Primary responsibility for AI and data ethics initiatives

Figure 7 shows institutions' rating of their strength in privacy, security and data governance. Most respondents agree there are mechanisms in place to ensure sensitive data is kept anonymous; there are procedures in place to limit access to data only to those who need it; there is security in place to protect against data breaches; and that there are mechanisms in place for data collection, storage, processing and use.



Figure 7. Institutions' rating of their strength in privacy, security and data governance

Accessibility is an important component of AI and data governance in institutions. Members were asked whether they believed their institution has taken adequate steps to ensure that AI systems are accessible and usable by individuals with diverse backgrounds and abilities. A telling response shows 39% do not think so, and another 33% are unable to comment. Only 27% agreed there are adequate steps for accessibility. See Figure 8 for the breakdown of results.

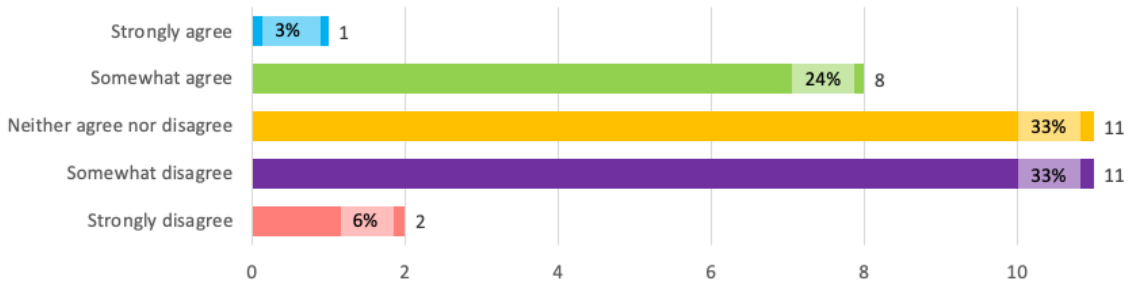


Figure 8. AI systems are accessible and usable by individuals with diverse backgrounds and abilities

In addition to accessibility, the survey also sought to gather further insight on the human-centered perspective of interacting with AI systems. Members were asked whether their institutions have considered the social and emotional wellbeing of learners and educators in doing so. Figure 9 shows only 33% could say yes to that. They cited research that is occurring in the space, planning still underway and how it is only in pockets of practice.

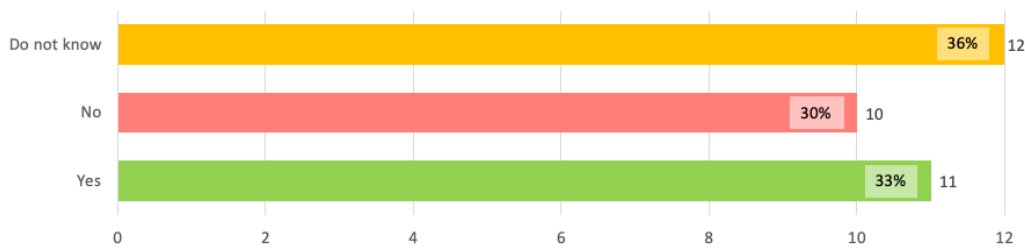


Figure 9. Whether institutions have considered the social and emotional wellbeing of learners and educators in interacting with AI systems

Finally, members were asked to share any final comments on AI governance. Some key comments and themes include the following:

- Institutions are relatively advanced with our policies and procedures in relation to data and governance however are still developing approaches to the use of AI
- There is significant focus on ethical use by students to submit assessment with generated content but not enough on privacy and security
- There is need to keep up with rapid development and the pace of change in the space, including frequent reviews of policies and procedures
- Consider both bottom-up and top-down approaches
- Institutions are being forced by large technology vendors to adopt AI solutions
- It is very much a work in progress in this space

Discussion

There are several themes emerging from the data. Firstly, AI is a product in teaching. It is used for creating course content, structures, learning scenarios, case studies, resources and guidelines. Secondly, AI is a process for learning. It is used in conversations with learners and for intentional inclusion of using AI in their learning. Thirdly, AI is a product in research. AI is used for developing applications, researching using AI and research

on AI. Finally, AI is a product in administration and/or business operations of the university. It is used for support, information and knowledge management, and to create more efficient workflows.

However the survey also reveals some challenges and gaps in the ethical use and governance of AI and data, such as accessibility, human-centeredness and wellbeing, and policy implementation. The survey findings show that a significant proportion of institutions are actively using AI for a wide range of applications in the absence of robust governance frameworks to ensure responsible and ethical use of AI. The majority of participants responded that AI is used for content creation which is consistent with literature that suggests AI can augment human creativity and innovation in education (Yang, et al., (2021). However less than a third of respondents believe that their institutions have taken adequate steps to ensure that AI systems are accessible, usable and support the well-being of individuals with diverse backgrounds and abilities. The survey also reveals insights into the current state of AI policy as about half of the participants report their institutions have policies or guidelines related to the ethical use of AI and data which is a positive sign of awareness and commitment to having ethical principles and standards. However the survey also shows that institutions only address some ethical considerations and most activities are in the proof of concept or pilot stages which suggest further development work is necessary to implement and evaluate AI and data ethics.

In the Business Meeting, ACOE members further discussed the data presented from the survey. Members highlighted the nuanced tensions between data and AI, and the importance of data governance and stewardship within institutions. This surfaces the importance of governance in this aspect and the need for collaborative management. Governance at national or regional levels are to be watched, especially in Europe with the EU AI Act (European Parliament, 2023). This will support the use of AI with human review and pay attention to addressing the needs of different users and stakeholders and mitigate the risks and harm of AI for marginalised and vulnerable groups. However, it was also acknowledged by members that a single national or institutional policy may not be possible but will likely need to be localised with procedures more attuned to specific areas in the institution. As this is a rapidly evolving field, respondents acknowledged that the institutions themselves are learning organisations, so governance of AI not only needs to be in order but also constantly reviewed for relevance.

Conclusion and Recommendations

In summary AI usage spans several organisational dimensions in nuanced ways and the approaches reported in the data suggest that there is no one solution for the governance of AI and data. Governing how data is used is a starting point for using AI ethically, however it is also a constraint if a single approach is applied. The approaches for using AI in teaching and learning need to weave into the approaches for research and for administration or business operations as users, i.e. staff and students, span multiple domains for different reasons and different points in time. As the governance of AI and data is still emerging, case studies and recommendations for practice could be developed in 2024, possibly through collaborative approaches between ACOE and other leading Australasian organisations in the field. The sector needs to continue these conversations for some time to come.

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