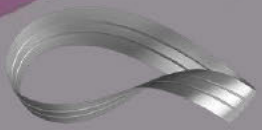
INQUIRY INTO THE ISSUES AND OPPORTUNITIES PRESENTED BY GENERATIVE AI

ISA SUBMISSION

14 JULY 2023



INDEPENDENT SCHOOLS AUSTRALIA

Independent Schools Australia is the national peak body and the voice for the Independent school sector. Our membership and board are comprised of the state and territory Associations of Independent Schools. We work closely with our members to promote choice, diversity and partnership in education, and advocate for ongoing and sustainable levels of Australian Government support through effective policy and fair funding.

Through these Associations, ISA represents more than 1,209 schools and 688,638 students, accounting for 17 per cent of Australian school enrolments and a workforce of 115,090 people.

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CONTENTS

1. INTRODUCTION

Independent Schools Australia (ISA) has prepared this submission in response to the House of Representatives Standing Committee on Employment, Education and Training Inquiry into the issues and opportunities presented by generative Artificial Intelligence (AI) and exploration of current and future impacts on education.

Since the commencement of the 2023 academic year, with the rapid emergence of OpenAI's advanced language model ChatGPT, Independent schools have been investigating the implications of the use of generative AI technologies in education. As generative AI is a relatively new technology with the ability to generate new content (image, text or animation) through 'machine learning' and imitate human writing, its long-term educational impacts on teaching, assessment and student outcomes are unclear.

Many Independent schools are seeking evidence-based guidelines to manage privacy risks, data security and copyright considerations to support the ethical implementation of generative AI, including examples of best-practice policies. Although there are many recognised benefits and potential for generative AI to contribute to education, the speed with which new AI products are being released on the market is raising concern for Independent schools as they investigate and navigate the risks and opportunities for teachers, students and the future of education.

A comprehensive national framework for the ethical and safe use of AI in education, such as that currently being developed for the school sector under the auspices of the Education Ministers Meeting (EMM), would therefore be of great benefit as the education sector navigates this difficult terrain.

ISA consulted with the eight state and territory Associations of Independent Schools (AISs) in preparing this submission. This submission also includes six case studies of Independent schools, highlighting a range of approaches to the use of generative AI in schools (See Appendix A).

2. THE INDEPENDENT SCHOOL SECTOR

Independent schools are a diverse group of non-government schools serving a range of different communities. Many Independent schools provide a religious or values-based education. Others promote a specific educational philosophy or interpretation of mainstream education. A number of Independent schools have been established by community groups seeking to meet particular needs or to reflect the religious values of a community. Independent Catholic schools are a significant part of the sector, accounting for eight per cent of the Independent sector's enrolments.

Independent schools include:

- Schools affiliated with Christian denominations for example, Anglican, Catholic, Greek Orthodox, Lutheran, Uniting Church, Quaker and Seventh Day Adventist schools
- Non-denominational Christian schools, Islamic schools
- Jewish schools
- Montessori schools
- Rudolf Steiner schools
- Schools constituted under specific Acts of Parliament, such as grammar schools in some states
- Community schools
- Indigenous community schools
- Schools that specialise in meeting the needs of students with disabilities

– Schools that cater for students at severe educational risk due to a range of social/emotional/behavioural and other factors.

Most Independent schools are set up and governed independently on an individual school basis. However, some Independent schools with common aims and educational philosophies are governed and administered as systems, for example Lutheran schools. Systemic schools account for 20 per cent of schools in the Independent sector. Four out of five schools in the sector are autonomous non-systemic schools. This autonomy has meant that some Independent schools have commenced their generative AI journey as described in Appendix A.

3. SUMMARY OF RECOMMENDATIONS

The use of generative AI holds transformative potential for the education sector, however this technology must be used discerningly to benefit and not harm individuals and society. Advances in the development of digital technology and especially generative AI are rapid and exponential. This creates a challenge for the education sector as governments, systems, sectors, universities, schools, educators, students and parents all attempt to chart a safe and ethical pathway that maximises opportunities and minimises risk within extremely short timeframes.

Independent Schools Australia recommends the following seven actions and considerations to ensure the responsible and ethical use of generative AI in education.

3.1 Leveraging the benefits of generative AI for a future focused, inclusive and equitable education system will require proactive planning and careful consideration of the effects of generative AI technologies on social relationships and human qualities**. ISA recommends the formation of a federal education advisory body of key stakeholders and cross sectoral school education representatives and academics to examine the benefits and risk of generative AI to inform education policy.**

3.2 To harness generative AI benefits that provide opportunities to support teacher workload in curriculum design, lesson planning, creating learning resources and assessment, **ISA recommends investigation and implementation of funded initiatives to support the national teacher workforce in all education sectors in the effective use of AI technology.**

3.3 Addressing the digital divide in disadvantaged and regional and remote communities by providing access to technology and internet connectivity as well as training and support for both teachers and students is essential. **ISA recommends the implementation of funded programs to develop and deliver safe, effective educational AI technologies which can reduce educational disadvantage and improve outcomes for students by supporting individual learning needs.**

3.4 As the ability to detect AI generated responses becomes more difficult, plagiarism concerns require widescale review of traditional methods of assessment to design authentic, rigorous assessments that measure the learning process. **ISA recommends that safeguarding, ethical use, equity and integrity are core principles of a national AI framework for education.** This framework should also underpin initial teacher education courses to inform the next generation of teachers with effective integration of generative AI into their teaching and assessment practices.

3.5 Educator generational differences may increase the digital divide between early adopters and those reluctant to embrace generative AI. School leaders and educators require professional development to gain confidence, to understand the risks and opportunities of generative AI and have the knowledge and experience to teach students how to use these technologies ethically and with discernment. International experiences can inform policies and practices in the Australian context but need to be adapted to the local educational landscape and cultural contexts. **ISA recommends the creation of a national generative AI in education website that is freely accessible to all educators to increase their knowledge base** by including:

– examples of best practice guidelines and human-centred policies for schools to adjust according to their context and adapt to a rapidly changing technological environment

– up to date information about cybersecurity, privacy, data security, data governance and copyright implications

- information on the quality and safety of available educational technology tools; testing validity and providing suggestions of evidence-based tools
- a clearing house of evidenced-based AI research.

3.6 It is essential that generative AI pedagogical practice is developmentally appropriate and informed by evidence-based research considerate of the potential long-term impacts of generative AI on the human condition. As generative AI is relatively new, it is important that early childhood and primary aged children have the opportunity to develop healthy social-emotional skills and become critical and creative learners before they experience the world of generative AI.

As generative AI is targeted to adult thinking processes, age-appropriate implementation of AI tools in education should be evidence-based, reviewed and evaluated and students need to be explicitly taught how to apply critical thinking skills to determine bias, relevance and accuracy in AI generated outputs. **ISA recommends that the importance of culture, play-based learning, social connection, teacher/student relationships and protecting the holistic development of children and young people informs and is at the core of generative AI education policy.**

3.7 Independent schools are in various stages of researching, investigating and implementing generative AI practices, aligning with their values and individual school community contexts. The Independent school case studies in Appendix A highlight that having a digital technology 'expert' on staff provides more confidence for those Independent schools wishing to explore generative AI opportunities.

Independent schools without staff expertise in digital technologies are more reluctant to embrace a generative AI journey and seek further guidance. Many Independent schools, particularly smaller Independent schools, seek support from their state or territory AIS for professional development and policy advice. **ISA strongly recommends that funding be provided to AISs to ensure that schools in all sectors have the necessary support to implement effective and ethical generative AI strategies.**

4. STRENGTHS AND BENEFITS OF AI TO IMPROVE OUTCOMES

Examining the strengths and benefits of generative AI tools to improve education outcomes for students is a global challenge as governments, education systems, school leaders, teachers and students attempt to keep abreast of these rapidly expanding digital technologies.

Generative AI produced material can provide educators and students with a broad range of ideas and concepts. Students and educators may also benefit from AI's sequencing of content in logical ways, however care and discernment are required to ensure there isn't an over reliance on generative AI, and that it does not distract from foundational learning in education.

> Educating students about artificial intelligence (AI) and the limitations of AI is important for the development of critical thinking, the promotion of ethical and responsible use of AI, and the equipping of students with the skills and knowledge they need to navigate a technological landscape that is rapidly changing.[1]

4.1 STUDENTS

The opportunities to use generative AI tools to support students with personalised learning is an area that many Independent schools are keen to explore. AI algorithms can adapt for individual learning needs and may improve accessibility for students with learning needs and provide personalised extension for academically gifted students.

As generative AI tools such as ChatGPT3 are freely available, some students are already experimenting with this technology.

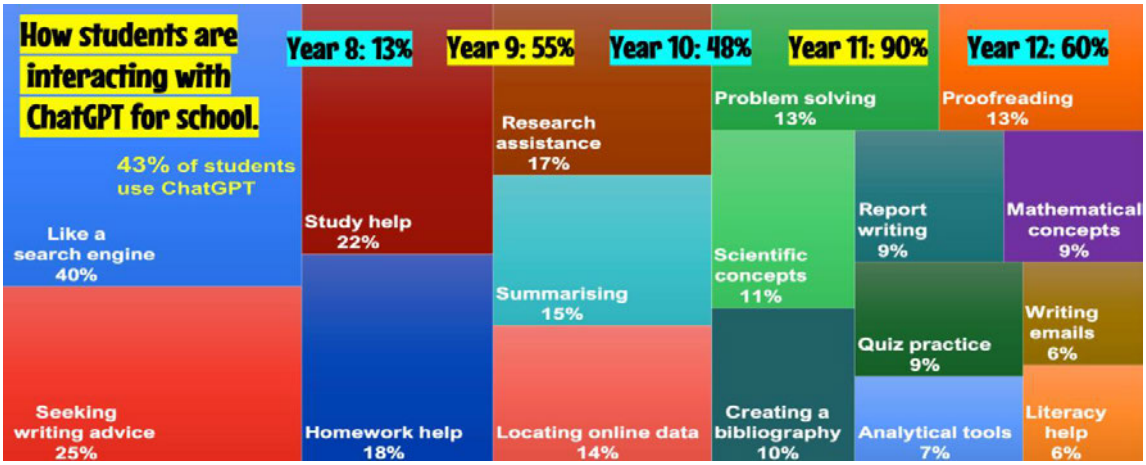
[1] David Mhlanga, "Open AI in Education, the Responsible and Ethical Use of ChatGPT Towards Lifelong Learning," SSRN Scholarly Paper (Rochester, NY, February 11, 2023), https://doi.org/10.2139/ssrn.4354422.

Hillbrook Anglican School in Brisbane wanted to find out what generative AI uses students were already engaging in, so they conducted a student survey to find out if, and how, students have used generative AI. Of 600 students, from years 8-12, forty-three per cent identified they had used ChatGPT for their schoolwork.

The most common examples were to use Chat GPT as a search engine. The second was seeking advice on how to write something, followed closely by proofreading and research assistance.

When asked to give a specific example of how they have used ChatGPT to assist with schoolwork, by far the most common response was that they used it 'as a jumping off point' to gain a basic understanding of a topic. Examples of student comments were:

- I asked it to explain a concept to me as though I was in Year 8.
- I used it to provide inspiration - like a drafting process.
- I used it to create practice questions for exams.
- I used it in Philosophy to create analogies.
- I used it to understand points of contention between Israel and Palestine in Modern History.



(2023 Digital Life Check-In Survey – Hillbrook Anglican School)

4.2 EDUCATORS

Many Independent schools are concerned about AI data security, privacy issues and the unknown consequences of using generative AI. They are also highly interested in utilising the potential benefits of AI.

School leaders and educators require a good working knowledge of generative AI tools, including the ways that responses are generated, and how AI tools function. Teachers in Independent schools see potential for AI to reduce labour and time intensive administrative processes including the use of generative AI tools in lesson planning, curriculum design, diagnosis of student learning, and assessment and reporting.

Generative AI can support lesson planning and create logical sequences of learning to align syllabuses and school contexts. It can assist with the creation of engaging resources, such as visual aids, to cater

more specifically for individual students and schools.[2] Educators can engage in reflective practice by analysing their own teaching methods through live video capture and AI feedback, using AI tools such as Edthena.[3]

Another key benefit to using AI tools is in the area of data analytics, as individual and cohort level data can be used to inform teachers and school leaders in real time about student progress.

Feedback from Independent schools is that AI tools for teachers could reduce workload and drive efficiency in seven key areas:

1. Identifying students who need additional support and extension, and designing intervention programs to improve student outcomes.
2. Assisting in developing assessments, marking, grading, lesson planning, and generating student feedback with consistency, objectivity and fairness in grading.
3. Collecting and analysing student data at scale (and low cost) and generating reports.
4. Undertaking and streamlining administrative tasks such as tracking attendance, and other record keeping requirements.
5. Using advanced software that can detect plagiarism.
6. Determining professional learning needs and recommending resources and further learning.
7. Developing a skills matrix to identify explicit skills that need to be taught to educators and students so that they can use and manage AI generated resources effectively by recognising dissonance and recognising and testing assumptions.

The effective implementation of these measures will require the upskilling of the teaching workforce. This will require an understanding of how the next generation of teachers will integrate generative AI into their teaching and assessment practices and building those skills into initial teacher education courses.

The following examples illustrate how some educators are already using ChatGPT prompts.

4.2.1 Comments for reports

This video [4] link provides an example of using ChatGPT to write comments for reports:

An excel spreadsheet was created with a column for the students' names, sex, their characteristics (such as happy, outgoing, etc), areas they excelled in, areas needing improvement.
Each field had descriptive words that were comma separated. The entire spreadsheet was then entered into ChatGPT, google bard and Bing, with the prompt to write reports based on the spreadsheet. Additional prompts could be added such as "make more personal".

4.2.2 Generating educational content

Prompt: Provide examples of [topic] for [grade level] students.

Teachers can use ChatGPT to generate educational content for their students, such as lesson plans, study materials, and interactive activities. The AI model can provide examples of topics that are relevant to their students' year level and learning style, helping teachers to create personalised and engaging lessons.

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[2] "A Teacher's Prompt Guide to ChatGPT Aligned with 'What Works Best'.Pdf," Google Docs, accessed June 27, 2023, https://drive.google.com/file/d/15qAxnUzOwAPwHzoaKBJd8FAgiOZYclxq/view?usp=embed_facebook.

[3] "Professional Development For Teachers | Edthena," May 11, 2023, https://www.edthena.com/.

[4] *ChatGPT Writing Reports*, 2023, https://www.youtube.com/watch?v=FH38EVsXO0c.

4.2.3 Creating interactive quizzes:

Prompts:

- Create a quiz with [number] questions on [topic]
- Generate a multiple choice quiz with [number] questions on [topic]
- Create a true or false quiz with [number] questions on [topic]
- Generate a fill-in-the-blank quiz with [number] questions on [topic]

5. FUTURE IMPACT OF AI TOOLS

Generative AI has rapidly established itself as a strong presence across a range of industries. How we respond in the education sector to embed AI in teaching and learning practices will be critical.[5] Many students are already using generative AI software in a range of social contexts and actively using it for academic purposes. It is clear is that generative AI tools will have both negative and positive impacts on teaching and assessment practices, and some of these are not yet known or understood.

As generative AI has the potential to redefine the educational landscape, new ways of thinking about assessment are necessary, including a continued and explicit focus on evaluating what is measured and how. While embracing AI advancements, it will become even more essential to prioritise the development of unique human skills such as those articulated in the General Capabilities in the Australian Curriculum.[6]

Traditional assessment methods will need to quickly evolve for assessment to stay relevant and rigorous in an AI-enhanced educational environment. Assessments could become more holistic, focusing on students' critical thinking, creativity, ethical understanding, and interpersonal skills rather than the traditional focus of assessing an end product, such as an essay.

This transition will require agility and adaptability from policy makers, universities, education systems, sectors, education leaders, educators and students. Embracing this change, rather than resisting it, will be key to leveraging the benefits of generative AI for a more future focused, inclusive and equitable education system.

The reality is that generative AI is here to stay, and Independent school leaders are asking themselves how they can support their teachers and students to manage and use generative AI appropriately while also asking the bigger question, how will generative AI impact the future?

The rapid proliferation of generative AI technologies designed for the consumer market is more than a wave of disruptive technology. It has a philosophical dimension to it that can challenge beliefs and mindsets. A quick investigation of three aggregator sites provides some understanding of the enormity of uptake of AI with more tools added every day:

- Futurepedia[7] lists over 2,000 AI tools with more than 150 categorised as Education Assistants.
- topAI Tools[8] lists more than 120 education focused tools and 17 AI detection tools.
- Futuretools[9] separates over 1700 AI tools into 28 categories.

[5] "For Educators, ChatGPT Poses Big Questions—and Big Possibilities," ASCD, accessed June 27, 2023, https //www.ascd.org/blogs/for-educators-chatgpt-poses-big-questions-and-big-possibilities.

[6] "Embedding the General Capabilities," 2022.

[7] "Futurepedia - The Largest AI Tools Directory | Home," accessed June 27, 2023, https://www.futurepedia.io/.

[8] "Best AI Tools and Services List," accessed June 27, 2023, https://topai.tools/.

[9] "Future Tools - Find The Exact AI Tool For Your Needs," accessed June 27, 2023, https://www.futuretools.io/.

The Independent sector is also interested to see the results of the South Australian trial of AI technologies in eight public high schools using 'Edchat', an AI tool designed specifically for educational use and developed by the South Australian Department of Education in collaboration with Microsoft.[10] The question is whether, if successful, this collaboration will lead to a national cross-sectoral approach of sharing evidenced-based generative AI technologies designed specifically for education.

As the neurological development of children and young people is different to that of adults, and generative AI is targeted to adult thinking processes, research into the impact of generative AI on the developing brain and critical thinking, creativity and learning processes is a high priority. Generative AI should not impact on the holistic development and important childhood skills of learning through play, experience, social connection and human relationships.

The integration of generative AI into educational practices means that the human element of teaching, the importance of human relationships and human capacities remains essential. Teacher/student relationships, connectedness and understanding of individual students, families, culture and their communities cannot be responded to by algorithms.

6. SAFE AND ETHICAL USE

One of the main challenges of the use of generative AI in education is ensuring safe and ethical use for all students and teachers. Robust policy and regulatory frameworks can support schools with implementation, specifically focusing on the potential for AI to exacerbate existing inequities in access to education and technology, particularly among students in remote and other underserved areas. It is imperative that AI tools are utilised in a way that protects human rights, are underpinned by the principles of inclusion and equity and align with data security and privacy protocols. Educators, schools and systems will need to ensure that the personal information of students is not compromised when using AI tools to write reports, mark student work, or complete other such administrative tasks.[11]

There is a significant potential risk from the unethical human use of generative AI where easily accessible tools can be used to create 'deep fakes' to spread misinformation or to plagiarise content within academic and research settings. However, not all risks originate from human interaction with generative AI. There is also an inherent risk that algorithmic bias originating from generative AI software could favour certain ideologies and perspectives given that generative AI models generally have a limited dataset for context and are oblivious to human emotions and reactions.

Relevance and accuracy in generated AI products can be difficult to detect. In the instance of ChatGPT, the limitation of the current information 'cutoff' date of September 2021 means that curriculum misalignment due to subsequent changes and updates relating to national, state and territory curriculum documents is likely.[12] Further, ChatGPT is a based on a large language model and as such does not 'test' the veracity of the inputs in providing the outputs. Inaccurate or incomplete information being considered as complete and accurate by the user is highly problematic and highlights the need for effective teaching of discernment in the use of generative AI tools.

Despite the perceived usefulness of responses generated by AI, the limitations outlined above mean that the provision of alternative answers or responses which at times contradict previous responses on the same topic are possible.[13] There is a degree of variability based on user preference, competence

[10] Shane Dawson and Vitomir Kovanovic, "High School Students Are Using a ChatGPT-Style App in an Australia-First Trial," The Conversation, July 6, 2023, http://theconversation.com/high-school-students-are-using-a-chatgpt-style-app-in-an-australia-first-trial-209215.

[11] Mhlanga, "Open AI in Education, the Responsible and Ethical Use of ChatGPT Towards Lifelong Learning."

[12] "Education & AI | Scottybreaksitdown," accessed June 27, 2023, https://scottybreaksitdown.com/ai/.

[13] Ahmed Tlili et al., "What If the Devil Is My Guardian Angel: ChatGPT as a Case Study of Using Chatbots in Education," *Smart Learning Environments* 10, no. 1 (February 22, 2023): 15, https://doi.org/10.1186/s40561-023-00237-x.

level in the generation of prompts, and the application of critical thinking skills in determining bias, relevance and accuracy.

Although the capability of generative AI to adapt to individual preferences and interests is a relative strength, it also serves as a challenge when used as a single source of truth. Students using generative AI without applying a critical lens may assume that AI-generated material is accurate.

Independent schools understand the need to reform assessment practices to avoid plagiarism issues as current plagiarism detection software cannot keep up with the advances of new AI technologies. Schools are seeking advanced anti-plagiarism tools and reviewing assessment policies to keep assessment integrity with more traditional styles of assessment.[14] Many Independent schools agree that the exploration of new assessment methods where students' active engagement in learning is visible, is necessary.

Although it appears that generative AI may improve efficiency for educators, some Independent schools are concerned that engagement with these tools may actually increase educator workload. Just as the advancement of the Internet made information readily accessible, it also created additional work as the scope of information became unlimited. The consequences of incorporating generative AI into educational practice may place significant demands on educator time, from understanding the operations and functionality, to fully engaging with ethical and creative considerations of the tools available.

Maintaining knowledge and understanding of AI tools which develop at rapid pace also places significant demands on educators, schools and systems, as the pace of development outstrips the capacity to keep up. Educators require adequate training and support to understand and manage the capabilities and limitations of AI in the context of their role. This includes:

- pedagogical guidance, in terms of how to best integrate AI tools to enhance practice
- technical support to navigate AI platforms and address technical challenges
- ethical and legal guidance and evidence-based school policy related to AI use in education
- mechanisms to share effectiveness and impact with other professionals.

The Independent education sector is cognisant of ongoing advancements in generative AI and the need to have a flexible approach. Independent schools are striving to review and evaluate generative AI tools, being aware of the need to be pragmatic with financial investment and to understand the risks and benefits. Many Independent schools are wary about committing to one 'version' of generative AI too soon, in case that version is rapidly superseded by further technological developments.

To support Independent schools in keeping up to date with AI technologies, some AISs have already initiated webinars and forums on generative AI in education or created further opportunities for collaboration. For example, Independent Schools Queensland (ISQ) has created an *Artificial Intelligence In Education Team* which is an online Teams site that has been developed to enhance an awareness of AI across member schools and support collaboration between schools in relation to the dimensions of teaching and learning, assessment, and related generative AI technical considerations.

ISQ is also currently working with the University of Queensland (ChatGPT Project Partnership) to upscale the university's ChatGPT Project to include more Independent schools in Queensland. The project aims to develop a prompt taxonomy of AI prompts that are useful for teaching across a range of Year 7-11 curriculum areas (e.g. English, EAL/D, math, history, etc.) as well as Communities of Practice for same subject teachers

[14] "For Educators, ChatGPT Poses Big Questions—and Big Possibilities."

6.1 RESPONSES FROM INDEPENDENT SCHOOLS REGARDING SAFE AND ETHICAL USE OF AI

6.1.1 Plagiarism and Academic Integrity

AI tools can generate text, essays, or other academic materials, making it easier for students to plagiarise or submit work that is not their own. This challenges the integrity of the academic environment and undermines the learning process. Independent schools need to continue to educate students about the ethical use of AI tools and implement more robust plagiarism detection strategies to maintain academic integrity. The adoption of alternative forms of assessment which cannot be subverted through the use of AI also need to be considered, such as in class essay writing.

6.1.2 Misinformation and Fake News

Generative AI tools can be used to generate highly convincing fake news articles, social media posts, or videos which can lead to the spread of misinformation within school communities and the wider community, affecting both students' understanding of current events and their wellbeing. Independent schools continue to teach students media literacy and critical evaluation techniques but need to be explicit in teaching generative AI discernment between authentic and manipulated generative AI content.

6.1.3 Bias and Stereotyping

AI models are trained on large datasets that may contain biases present in the data. Generative AI tools might unintentionally generate content that reinforces stereotypes, discrimination, or prejudice. Independent schools are aware of these biases and are actively engaged in finding ways to teach students how to be critical when utilising and interpreting outputs from generative AI tools.

6.1.4 Privacy and Data Security

Generative AI tools require large datasets to train effectively. Independent schools are necessarily cautious about the data they provide to ensure that personal information of students, teachers, or other individuals is protected. Some Independent schools will require support to ensure adequate measures are in place to safeguard personal information and comply with relevant privacy regulations.

6.1.5 Emotional and Psychological Impact

Generative AI tools can produce highly realistic content, including text, images, or videos that may have emotional or psychological effects on individuals. In an educational setting, such content may influence students' well-being, mental health, or emotional stability. Independent schools promote digital well-being and provide support mechanisms to address any negative impacts on students, but generative AI adds another level of complexity to this role.

6.1.6 Ethical Use and Accountability

Educators and administrators must use generative AI tools ethically and responsibly. This includes obtaining appropriate permissions for data usage, ensuring transparency in AI-generated content, and being accountable for the decisions made based on the AI outputs. Many Independent schools are seeking clear guidelines and sample policies to govern the use of generative AI tools in schools.

7. ADDRESSING DISADVANTAGE

Generative AI tools have the potential to bridge the educational divide that impacts students and families experiencing disadvantage. AI tools are accessible and have the capacity for personalised learning that allow learners of all backgrounds to access learning and to learn at their own pace.

There are also key questions around the cost and equitable access of generative AI tools so as not to exacerbate the digital divide. It is highly likely that superior versions of generative AI will be more expensive, and it is imperative that disadvantaged students are not further marginalised through lack of access to the same educational tools, including generative AI, as their peers.

Disadvantaged communities may lack the necessary infrastructure and resources required to access, implement and maintain relevant education technologies. The codesign of generative AI tools must be

sensitive to the diverse cultural, linguistic, and socioeconomic backgrounds of students, as must government decisions about cross-sectoral resourcing and investment. In this way, generative AI could contribute to the democratisation of knowledge, making high-quality education more universally accessible, and empowering disadvantaged learners to achieve their full potential.

Generative AI tools have capacity to provide improved student learning outcomes for those who experience disadvantage, but only if it is "well-designed, well-used and well-governed".[15] These powerful tools can have positive or negative impacts on student learning, depending on how they are implemented and how risks are managed. Indiscriminate implementation and use, without appropriate safeguarding structures around accountability and quality control may prove problematic and amplify disadvantage in some communities.

7.1 EDUCATOR SUGGESTIONS FOR USING AI TO ASSIST STUDENTS WITH ACCESSIBILITY CHALLENGES

Generative AI technologies have the capacity to offer support mechanisms like speech recognition, text-to-speech capabilities, and adaptive interfaces that accommodate different learning experiences, having the potential to make education more inclusive for students with diverse learning needs.

The following table provides a brief overview of the ways that AISs have noted generative AI tools can be used to improve outcomes for students with disability or accessibility challenges:

– Offer text to speech tools – Provide audio for visually impaired students – Provide memory aids – Provide multi-sensory learning – Dictation support – Teach sign language – Transcribe in real time for the hearing impaired – Use colour coding strategies – Visualise concepts graphically – Offer personalised learning	– Adapt content for colour blind students – Adapt text size and colour for dyslexia – Assist with notetaking – Auto generate captions for video content – Clarify complex instructions – Convert lectures to written notes – Create social narratives – Create step-by-step visual instruction – Help establish a daily routine – Implement visual timers

8. BEST PRACTICE IMPLEMENTATION

A UNESCO round table regarding AI in education, May 2023[16] captured important global developments currently occurring in generative AI applications as governments worldwide attempt to respond to a rapidly evolving education landscape.

Global concerns regarding student exposure to biased or false information, and how to rapidly train educators and integrate tools meaningfully into curriculum lie at the forefront of discussion. UNESCO,

[15] L. Loble and A. Hawcroft, "Shaping AI and Edtech to Tackle Australia's Learning Divide," Report (University of Technology Sydney, December 6, 2022), https://opus.lib.uts.edu.au/handle/10453/162604.

[16] "Ministerial Roundtable on Generative AI in Education | UNESCO," May 25, 2023, https //www.unesco.org/en/articles/ministerial-roundtable-generative-ai-education.

through the Beijing Consensus on AI and Education 2019,[17] stressed that a "human centred approach to AI" is crucial, so as not to exacerbate an already technologically and educationally divided world. Point 6 of the Consensus states:

> We also recognize the distinctive features of human intelligence. Recalling the principles set forth in the Universal Declaration of Human Rights, we reaffirm UNESCO's humanistic approach to the use of AI with a view towards protecting human rights and preparing all people with the appropriate values and skills needed for effective human–machine collaboration in life, learning and work, and for sustainable development.

Internationally, countries like Finland and Singapore have embraced generative AI in education. Finland has integrated AI tools into curriculum to enhance student personalised learning experiences.[18] Singapore, the first country in South-East Asia to develop a national AI strategy, has implemented comprehensive policies to govern the use of AI in education, emphasising data privacy, transparency and accountability.[19]

As of 2021, eleven countries have officially endorsed and implemented a K–12 AI curriculum, including India, China, Belgium, and South Korea with other countries such as Germany trialling pilot programs to allow teachers and students to explore the possibilities of AI in education within specific guidelines.

Generative AI in education is a relatively new field and requires independent evaluation of strategies to implement best practice. The United Kingdom, for example, has established the Centre for Data Ethics and Innovation[20] to examine the ethical implications of AI in various sectors, including education. Independent evaluations can assess the impact of generative AI on student outcomes, educator effectiveness, and educational equity. These evaluations also need to consider bias in AI algorithms and associated impact on disadvantaged communities to ensure fairness and inclusivity.

A July 2023 UNESCO report[21] highlights the unrelenting pace of the digital revolution and the fact that we have still not identified the immense social and educational implications of earlier digital revolutions, yet we find ourselves in the midst of another. The report states that with AI technology's capacity to simulate sophisticated human-like language and conversation we will need to review and reframe our understanding of human intelligence and our relationships not only with each other but also with machines.

It is not yet clear what this means for education and wider society and which human values we must preserve and safeguard. Governments and educators are discussing the wider implications of AI and collaborating not just within the education sector, but across industry to determine the future impacts on society.

> AI is forcing us to ask questions about the 'known-world' that we usually take as a starting point for education. Many of our old assumptions and norms, especially those concerning knowledge and learning, appear unlikely to sustain the 'weight' of this new technology. We can no longer just ask 'How

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[17] "UNESCO Publishes Beijing Consensus on Artificial Intelligence and Education - Ministry of Education of the People's Republic of China," accessed June 29, 2023, http://en.moe.gov.cn/news/press_releases/201909/t20190902_396913.html.

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> do we prepare for an AI world?' We must go deeper: 'What should a world with AI look like? What roles should this powerful technology play? On whose terms? Who decides?'[22]

Education systems globally have a responsibility to review and validate which AI technologies are suitable for education and put pressure on technology giants to provide an evidence base for their platforms as governments worldwide debate the pros and cons of regulating or even prohibiting some uses of artificial intelligence technologies.[23] Some work in this area is already progressing to support schools with tested products specifically for education such as 'Stretch'[24] and 'Edchat'.[25]

Although lessons from international experiences can inform generative AI education policies and practices in Australian, they need to be adapted to local and cultural contexts. It is also important that frameworks to support the education sector's use of generative AI tools in a responsible manner are part of a whole of government and cross-sectoral approach that ensures the adoption and use of these technologies aligns with best practice and benefits society.

9. CONCLUSION

Independent Schools Australia is the national peak body representing over 1209 Independent schools that educate 668,000 students and employ 115,000 teachers. Our sector is committed to exploring the new equitable education opportunities that can be created through generative AI, whilst being alert and proactive to identify and mitigate risks as schools navigate their way through new AI challenges.

Some Independent schools are adopting a cautious approach, allowing teachers to explore the use of generative AI whilst prohibiting student use, and some schools are actively engaged in the implementation of generative AI in teaching and learning (see Appendix A for Independent school case studies). All schools are seeking guidance and evidence-based strategies to implement generative AI through a risk management framework.

Many international programs have stressed the importance of educator effectiveness in teaching students to understand and use AI effectively, and Australia must invest in guidance, support and professional development for educators to understand how to use the AI technology safely, ethically and effectively for the good of learners, society and the future.

Harnessing the opportunities that generative AI might bring to education requires a coordinated, collaborative approach between government, regulators, universities, school sectors and other key stakeholders incorporating best practice, evidence-based research and futures thinking.

While harnessing the benefits of generative AI technologies, we cannot lose sight of the core purpose of education and foundational learning for students, to ensure that human beings retain human agency and the capacity to learn, think critically, be creative and confident with the capacity to make informed choices and make a positive difference in the world.

Contact details

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Tracey Taylor

Director, Education Policy

APPENDIX A - INDEPENDENT SCHOOL CASE STUDIES

Independent schools have adopted a range of approaches with the advancement of generative AI technologies. The following six case studies outline perceived challenges and opportunities, providing examples of how some Independent schools are engaging with generative AI, exploring ethical considerations, and highlighting strategies and initiatives. Some Independent schools are currently banning generative AI, some are taking gradual steps and others working towards full implementation of generative AI in teaching and learning.

Case studies include advice to other schools about to embark on an AI journey and a range of Independent school responses regarding the future impact of AI on education.

ISA would like to thank the Association of Independent Schools NSW and Independent Schools Queensland for their support in organising these case studies.

ISA would also like to extend its appreciation and gratitude to the following school leaders for their involvement in ISA's submission and case study process, as well as their professionalism, honesty and willingness to share their school's approach, information and ideas:

Aspect Education - National Office

- Maryanne Gosling - National Director

Loreto Kirribilli - Sydney NSW

- Anna Dickinson - Principal
- Johnathon Mascorella - Director of Innovation

Oakhill College - Castle Hill, NSW

- Brother Steve Hogan – Principal
- Gavin Russell – Assistant Principal

Calrossy Anglican College – Tamworth, NSW

- David Smith - Principal

Hillbrook Anglican School - Brisbane, QLD

- Miriam Scott - Head of Digital Education

St. Michael's College - Caboolture, QLD

- Christina Wellwood, Deputy Principal

ASPECT EDUCATION - NATIONAL OFFICE

Maryanne Gosling - National Director

Aspect Education is a network of nine schools and 102 sites within schools, dedicated to providing specialised education for students with autism between the ages of 4-17 offering programs and support to approximately 1300 students. Each student enrolled in these schools has a primary diagnosis of autism, often accompanied by other conditions. To ensure focused attention and support, the teacher-to-student ratio is maintained at approximately 1:6.

Aspect Education has sites within Independent, Catholic and public schools. The schools offer education from Kindergarten to Year 12, with specific arrangements for different year levels. School size typically ranges from 100 to 200 students, and the student cohort is diverse in terms of individual needs.

The majority of students in Aspect Education schools and sites fall into the substantial and extensive levels of support for autism; intellectual impairment is not always the primary factor. Programs offered by the schools are designed to be transitionary, allowing students to move between different programs and schools. While some students may stay for a certain period, many eventually transition into more inclusive environments within partner school settings.

While the majority of Aspect Education's campuses cater to primary school students, Aspect Education has a small number of campuses specifically designed for high school students. The main campus high school settings provide learning facilities within the schools such as coffee businesses, hospitality programs, mowing businesses and technical programs. The majority of Aspect Education schools are focused on delivering primary school programs either in highly specialised (main campus settings) or hosted in the grounds of partner schools.

The school's engagement with AI, and perspectives of staff, students, and parents

Aspect Education currently has limited involvement with AI technologies and is in a low-level trial stage. Since the focus is primarily on individualised programs for students, any use of activities involving AI are closely supervised, particularly due to the use of communication devices by many students, which necessitates structured interactions between staff and students.

However, Aspect Education is actively seeking partnerships with individuals and organisations to explore potential future uses of generative AI within their schools. They currently employ a hybrid model of AI integration with staff, combining generative AI technologies with human discernment to contextualise documents and materials. For example, AI may be used to generate initial drafts or briefs for articles, which are then adapted by staff to specific situations and needs.

Ethical considerations

Before implementing generative AI technologies more widely, Aspect Education is committed to addressing the ethical considerations associated with their use. They are in the process of establishing an AI consultative group to facilitate moral and ethical discussions regarding the hybrid use of generative AI to support both staff and students. This group will also explore the development of new ideas and formulate internal processes.

The organisation recognises the importance of governance and initiating conversations about data security, privacy, and student safeguarding. The Aspect Board has a robust lens across cyber security and demand that any data sharing is tightly managed, and it is expected that as generative AI tools and process are introduced, this same level of security would be applied to those. Aspect Education see it as crucial to define responsibilities and ensure transparency in informing their communities about the use of generative AI.

Aspect Education's shared usage with host schools primarily pertains to physical spaces rather than programs and policies, with activities and events involving host schools focusing on inclusion, such as participation in sport carnivals.

Implementation

Investigation of the implementation of generative AI within Aspect Education schools is currently being led by their IT Learning Integrator, a newly created role that provides expertise in learning requirements for students, with a focus on future thinking. The IT Learning Integrator is responsible for upskilling staff and providing opportunities for them to learn about cutting-edge resources that can make a positive difference for students on the autism spectrum and enable effective engagement with the curriculum. This includes trialling evidence-based programs and researching and exploring generative AI applications to leverage AI for the benefit of students.

Challenges and Opportunities

Implementing generative AI in Aspect Education schools presents challenges related to securing student information and maintaining privacy. Teaching discernment and responsible use of generative AI is crucial due to the often-literal nature of individuals on the autism spectrum.

Training, development, and moral guidance are necessary if generative AI is to be used to improve student learning outcomes. It is imperative that students (and their parents) understand the risks associated with AI and that they are taught explicitly to question and critically analyse the information they encounter.

While access to information generated by AI is not significantly different from the current abilities for students to gain information, there are different risks involved and expert advice is required to effectively manage cybersecurity.

Aspect Education acknowledges its hesitation to embrace AI based opportunities due to concerns about potential risks for students and the uncertainty surrounding risk mitigation. They emphasise the importance of retaining a moral imperative and prioritising student well-being in their approach.

Future impact of AI

The future impact of generative AI on teaching and assessment in Aspect Education schools is expected to be significant. AI technologies have the potential to revolutionise these areas, offering personalised and adaptive learning experiences for students on the autism spectrum. AI tools can provide tailored interventions, assist in data analysis for individualised support, and enhance assessment methodologies to accurately evaluate student progress.

However, it is essential to strike a balance between leveraging the benefits of generative AI and preserving human qualities, as genuine connections and relationships play a crucial role in the education of individuals on the autism spectrum.

Advice to schools that have yet to embark on an AI journey

For schools that have yet to embark on an AI journey, Aspect Education advises conducting thorough research and exploring proof of concept. It is essential to have someone within the school with the necessary skills and knowledge to effectively lead the integration of AI in teaching and learning practices.

Aspect Education strives to foster supportive communities where neurodivergent ways of thinking are better understood, and students are empowered. Engaging and educating the wider community about the contributions of individuals on the autism spectrum is important and new technologies may have role to play in this space.

While the pace of change can be daunting, it is important to have those on staff with the technical expertise to provide insights and information that can inform decision-making. Taking the necessary steps and seizing opportunities for meaningful progress, while ensuring alignment with safe and ethical guidelines, and available knowledge and expertise, is a priority.

LORETO KIRRIBILLI - SYDNEY NSW

Anna Dickinson - Principal

Johnathon Mascorella - Director of Innovation

Loreto Kirribilli, located in Sydney NSW, is an independent Catholic girls' school offering education from Kindergarten to Year 12. With a rich history spanning 115 years, Loreto Kirribilli is one of the seven Loreto schools and upholds the Catholic traditions and values established by the Loreto sisters.

Inspired by the teachings of Mary Ward, a disruptive innovator, the school embraces a forward-thinking approach to education and is well-prepared to engage with the challenges and opportunities presented by generative AI and emerging technologies. The school prides itself on fostering a strong, caring learning culture, growth mindset, passion for learning, inclusivity and excellent student outcomes.

At Loreto Kirribilli, their vision is to empower young girls to grow into confident women who make a positive difference in the world. The school's underlying philosophy is based on the following five values: Freedom of spirit, Justice, Sincerity, Verity and Felicity. These values permeate every aspect of the school's operations and guide its approach to engaging with generative AI and other technological advancements. By operating through a sincere lens, the school fosters an environment that encourages critical thinking, ethical decision-making, and a commitment to social justice.

Loreto Kirribilli has a vibrant and diverse student cohort, comprising 1160 students. The school maintains its Catholic identity by infusing the catholic traditions and values into all aspects of school life including its policies, procedures and behaviour. In the early years, from Kindergarten to Year 2, classes are kept small with an average of 20 students. As student's progress, Year 3 sees a transition to larger classes of 28, which continues through Year 5. From Year 6 onwards, the school expands to three streams, eventually growing to six streams in Year 7. This strategic approach allows for a supportive and inclusive learning environment that nurtures individual growth while fostering collaboration and cooperation among students.

Loreto Kirribilli places great importance on embracing diversity and welcoming others into their community through the concept of the Mary Ward circle. Additionally, Loreto Kirribilli maintains a collaborative relationship with St. Aloysius' College, a boys' school, engaging in joint extra-curricular activities, social justice initiatives, and large-scale events as part of the Companions in Learning Program.

The school's engagement with AI and perspectives of staff, students and parents

The school's engagement with generative AI expanded during the Christmas period with the rapid emergence and accessibility of ChatGPT. The School Executive immediately immersed themselves in extensive research to understand the opportunities, risks and challenges associated with generative AI. On return to school for term one, they engaged the middle leaders and staff in discussion and further learning to minimise risks, maximize opportunities, and maintain a realistic perspective, rather than locking down possibilities. They recognised the potential of generative AI but were cautious about allowing ChatGPT to replace genuine deep learning experiences.

While acknowledging the opportunities of generative AI, the staff were keen to prevent students from taking shortcuts. They understood that ChatGPT could only provide a baseline and not generate the same output as the students themselves.

Ethical considerations

Staff considered possible negative effects of generative AI such as limited cognitive capacity, cheating, plagiarism, prevalence of misinformation and bias in AI systems and impact on human thought processes. They discussed professional ethics and how staff could use generative AI as a tool to enhance their work.

Staff at Loreto Kirribilli are deeply committed to meeting the individual needs of each student, fostering a strong culture of support for all learners. There is a strong focus on critical thinking, truth and discernment, all skills necessary to use generative AI effectively and safely. They consistently refer back to their core values, aiming to instil in their students a sense of justice, good judgement, and the importance of long-term gains over shortcuts.

Loreto Kirribilli teachers have an in-depth understanding of their students through their coaching model, where all students from grades 7 to 12 have a middle leader as their learning coach, they also have two teachers allocated to each pastoral class, a Year Wellbeing Coordinator and House Academic Care Coordinator who remain with students from Year 7-12, The Junior School students have the benefit of a class room teacher with a range of additional support teachers for languages, music, literacy and special needs. Staff exhibited enthusiasm in exploring the concept of ChatGPT feeling confident that through their knowledge of their students, they could effectively mitigate the risk of plagiarism or cheating.

The school considered the importance of data privacy and security, data governance, storage location, and data protection which required a thorough understanding of the implications of international security measures and data practices in addition to Australian privacy laws. Ensuring cyber safety is of utmost importance, and the school has implemented various controls to address the associated implications.

Implementation

Principal Anna Dickinson and Johnathon Mascorella, Director of Innovation lead the implementation of AI fostering a culture of open-mindedness and learning from each other, where questions are asked, and confidence is built. They are encouraging staff to be early adopters of generative AI, to lead the way and create excitement, which in turn boosts confidence in others.

The way in which the school responded to the COVID-19 pandemic, demonstrated to staff that they can adapt to disruption and respond rapidly to the unknown, learn along the way, and emerge in a new and improved manner. Despite the hardships, there has been significant professional growth as a result of this challenging experience; a silver lining to the COVID-19 pandemic.

To explore possibilities, mitigate risks and begin implementation, staff attended forums to brainstorm operational ideas and discuss AI's utilisation in classrooms and its professional applications. The forums facilitated philosophical and ethical discussions about learning, professionalism, morals, values, and the overall alignment of generative AI with the school's culture, values and charism.

Feedback gathered from the forums served as a valuable tool for the executive team to structure discussions and inform the next phase of AI integration. Throughout the process, they diligently researched and shared articles on AI, ensuring they remained up to date with latest developments.

Recognising the need to involve students and parents, the school has organised an AI forum for parents to reinforce parents' understanding of AI, its opportunities, challenges, and strategies to manage risks, much like the school's previous experiences with disruptive technologies such as Google laptops and BYODD (Bring Your Own Designated Device). Following the forum, a workshop will be conducted, involving parents in discussions and gathering their perspectives, questions, comments, concerns, and ideas related to the use of AI. Parent insights will complement information collected from staff and will contribute to the formulation of guidelines for AI implementation. The school also prioritises student engagement in decision making and plans to offer specific activities and discussions to capture their wisdom and viewpoints. These guidelines will then be shared with the School Board for further endorsement.

With staff already utilising AI to inform the development of guidelines, the school's six-month journey so far has involved teachers exploring AI at their own comfort levels. The school is adapting and modifying guidelines as they progress, remaining open to continuous learning and evolution. As a learning organisation, they model action research, discovery, and reflective practice, consistently seeking to expand knowledge and improve educational approaches.

Throughout the entire process, the school's culture and values have remained aligned and students are demonstrating a clear understanding that taking the easy path would hinder long-term growth and authentic learning experiences.

Challenges and Opportunities

Although recognising the challenges, the school opted to proceed exploring ChatGPT possibilities rather than imposing restrictions.

To stay relevant, Anna believes it is crucial to adopt an open mindset and actively participate in shaping and embracing the future, rather than being passive users of technology. The school will continue to explore the capacity and opportunities that generative AI offers to envision a future where every child has a personalised learning path facilitated by AI, with teachers meeting their individual needs and designing lessons accordingly.

Future

Anna continues to be proactive, recently participating as a member of a panel on the impact of generative AI in education, emphasising opportunities to move away from assessing a final product and focus on measuring and understanding the learning process itself. This shift could benefit students of all abilities, when AI is implemented safely and effectively, encouraging educators to leverage technology for innovative ideas beyond traditional practices and students to generate new concepts and ideas and encouraging them to respond through investigation.

The school has adopted a learning lens that not only includes subject areas and literacy and numeracy, but also encompasses wellbeing, the 4 Cs (critical thinking, creativity, collaboration communication) and character strengths such as emotional intelligence, empathy, problem-solving and grit. Teachers are actively seeking ways to assess these human skills, recognising their importance for the future and embracing the importance of teachers as essential in providing care, support, and development of these vital human skills that machines cannot replicate.

Anna and Jonathon promote generative AI as an excellent opportunity for resource-limited schools to support student learning and promote equality and equity by providing access to learning tools. They believe the school should not shy away from risks and challenges; instead, they should confront them head-on, working together to find solutions.

Advice to schools who have not commenced an AI journey yet

Begin by immersing yourself in reading and attending webinars and learning everything you can about AI. This will provide a deeper understanding, hope, confidence, and a potential pathway to engage with AI. Connect with others outside your immediate circle and engage with those who are already involved in AI initiatives. See the opportunities rather than solely focusing on the challenges and actively support early adopters as valuable learning resources.

Allow staff to experiment and then learn from their experiences, fostering a culture of continuous learning and collaboration within your school.

Engage your community, including staff, students and parents. Encourage open discussions where fears can be shared, while demonstrating your passion as an educator and instilling confidence that we can embrace the future.

Conduct a mapping exercise that identifies the best and worst potential outcomes. Address the worst-case scenarios by problem-solving and finding solutions. By acknowledging and mitigating fears, we can remove barriers and unlock the potential for even more amazing things to happen.

OAKHILL COLLEGE - CASTLE HILL, NSW

Brother Steve Hogan – Principal

Mr. Gavin Russell – Assistant Principal

Established in 1932 in rural northwest Sydney, Oakhill College initially served as a training site for the De La Salle Brothers and a teacher training school. Until 1975, it catered exclusively as a boys boarding school for Years 7 – 10 until it expanded to include co-educational years 11 and 12. With over 2,100 students the school attracts students from diverse backgrounds and retains a rural community-oriented culture. The Oakhill College community is known for its active involvement, with parents playing a significant role. They place a strong emphasis on fostering a sense of brotherhood and sisterhood among students and teachers.

The school's engagement with AI and perspectives of staff, students, and parents

Initially, the College focused on updating assessment policies to explicitly prohibit the use of generative AI. The Academic Heads of Departments worked together to communicate to students the importance of not using AI tools.

Staff meetings were held to discuss the benefits and challenges of generative AI integration. Academic Heads expressed concerns about assessment tasks, as they were unable to accurately detect student use of generative AI, which compromised the credibility and fairness of assessments. Despite clear guidelines in the assessment handbooks, some students still managed to use generative AI.

Ethical considerations

The core values of Lasallian education lie at the heart of everything at Oakhill College. The values of honesty, respect, compassion, forgiveness and generosity form their ethical framework upon which decisions are made.

Oakhill College is currently conducting research into generative AI advancements. Ethical considerations regarding copyright are being explored, recognising that this field is still in its infancy. The school aims to proactively address AI-related issues such as managing classroom usage and teacher awareness of generative AI's presence during student laptop use. Staff have been shown various ways to plan lesson tasks and content using generative AI tools.

Given the current ban on student use of AI, Oakhill College is still in the early stages of determining how teachers can effectively incorporate it into their practices. Currently, the school lacks a comprehensive framework and established guidelines, which hampers its ability to permit AI usage. The school plans to adopt existing policies from reputable sources such as the Association of Independent Schools (AIS) once they become available, integrating them into its own policies.

Principal Brother Steve Hogan frequently visits classrooms, occasionally dedicating an entire day to observing or following a subject across different classes to witness the variety in teaching approaches. Technology in the classroom has always presented challenges and the availability of generative AI raises questions about whether it will enhance or exacerbate deep learning.

Parents using ChatGPT in their professions inquired about the school's approach to AI integration. Overall, parents expressed trust, positivity and confidence in the school's ability to manage and collaborate with AI technology.

Implementation

Gavin Russell, Assistant Principal has conducted Academic Heads meetings specifically dedicated to AI integration. These meetings addressed policy responses, the big picture surrounding AI, and allowed Academic Heads of Departments to voice their concerns about ensuring fairness for all types of assessment. Some staff are ready to fully embrace AI, emphasising the need to adapt and reduce administrative burdens for teachers. Other staff members feel conflicted or even guilty, perceiving AI use by staff as lacking authenticity. Determining when staff should disclose their use of ChatGPT remains an

open question. In general, early career teachers seem to be more receptive to AI integration into teaching and learning.

Challenges and Opportunities

Oakhill College recognises the following challenges and opportunities:

Challenges:

- Adapting assessment methods to ensure authenticity and quality.
- Students struggle to comprehend the distinction between permissible use of research via Google and the prohibited use of AI including ChatGPT to create rather than research.
- Some students leverage ChatGPT to create tasks while using other platforms to conceal changes in language, making the validity of the work produced for research tasks less meaningful.
- The NSW Education Standards Authority (NESA) guidelines emphasise the need for diverse assessment approaches, which may conflict with research tasks where students can utilise ChatGPT to generate content.
- ChatGPT's influence may shift the threshold for valid and reliable summative assessments.
- Plagiarism detection is crucial but unlikely to be reliable.
- Achieving deep learning that surpasses the hindrance posed by Google and ChatGPT may require explicit teaching, initially without technology.
- The swift pace of AI integration adds an additional layer of complexity, further compounded by generational differences among teachers.

Opportunities:

- Prioritisation of explicit instruction, allowing students to develop necessary content knowledge and the appropriate skills for incorporating technology including AI such as ChatGPT.
- Teaching the responsible and ethical use of digital tools and fostering skills acquisition before the implementation of generative AI in the classroom.
- Ensuring that ethical considerations surrounding bias, racism, confidentiality, and copyright are addressed.
- Maintaining alignment with the school's ethos and core values to guide AI-related solutions.
- Prioritising learning outcomes and striking a balance where technology enhances rather than dominates the learning experience.

Future impact of AI

The accessibility of generative AI has led to a need for re-evaluation at the College. A shift toward explicit instruction and the acquisition of foundational skills before introducing technology is a viable option to provide students with the necessary skills to utilise technology as a value-added tool rather than relying solely on it.

The importance of addressing bias, racism, confidentiality, and copyright within the AI landscape cannot be understated. Ethical considerations are the foundation for the decision to implement a ban-first approach followed by policy implementation. This is seen as the most viable solution for the College at this stage in their AI journey.

Advice to schools that have yet to embark on an AI journey

- Proceed cautiously and ensure that all essential elements are in place.
- Prioritise research and keep it at the forefront of every conversation.
- Focus on genuine learning outcomes while preventing generative AI from taking over.

- Seek guidance from reputable sources and remain receptive to expert advice.
- Listen to the concerns and expectations of the school community.
- Address ethical considerations, staying true to the school's values and ethos, as they will help guide appropriate solutions.
- Prioritise the establishment of a solid foundation before fully integrating generative AI into teaching and assessment practices.
- Balance the use of technology and ensure that the learning experience remains meaningful and authentic.
- Pay attention to bias, racism, confidentiality, and copyright issues and proactively address them.
- Encourage the acquisition of foundational skills before relying heavily on generative AI tools.

CALROSSY ANGLICAN SCHOOL – TAMWORTH, NSW

David Smith – Principal

Calrossy Anglican School is a regional boarding school located in Tamworth, New South Wales. The school caters to students from Preschool to Year 12, placing a strong emphasis on the success and well-being of every student. With approximately 1000 students, Calrossy is comprised of three divisions: Calrossy Junior School, Calrossy 7-9, and the Senior Secondary, which offers both Day and Boarding options.

Calrossy adopts a unique educational structure, fostering collaboration between boys and girls in Prep to Year 6. In Years 7-9, students are taught in single-gender classes at the expansive William Cowper Campus. From Years 10 to 12, students primarily participate in co-educational classes held at the specialised Senior Campus on Brisbane Street.

As a dynamic and caring school, Calrossy strives for excellence within a Christian environment, nurturing students to become individuals of faith, integrity, courage and compassion while fostering a love for learning. Approximately 170 high school students are boarders, with a significant portion of them coming from rural areas.

Calrossy is also in its third year of offering online classes for students in years 5-6 and also years 7-9. These online classes cater for approximately 50 students, where they participate in lessons from 8.30 to 12.30 (4 lessons per day) and attend week-long intensives in the term breaks to engage in practical learning for their subjects. These classes cater for students in remote areas, neurodivergent students and students that struggle to attend school in person.

The school's engagement with AI and perspectives of staff, students, and parents

Principal David Smith has observed mixed reactions from teachers and parents regarding generative AI. Some teachers have become early adopters and are enthusiastically embracing AI tools and technologies, others approach it with caution. The main concern raised by teachers is the potential impact of AI on the validity of assessment tasks.

David has interestingly observed that the humanities teachers have been more excited about utilising AI tools in their classrooms than those in the science and math disciplines, though AI presents authentic problems and ethical considerations for all key learning areas. David acknowledges the importance of supporting staff in overcoming fear of AI and ensuring the authenticity of assessments; Calrossy is currently looking at assessment practice as part of NSW curriculum reform that rightly views student learning as developmental and progressive.

The school understands AI as a form of disruptive technology (like the calculator was first thought to be) but does not see it as a deterrent to using it for critical thinking and problem solving with students, wanting to leverage it for our benefit, whilst sensibly mitigating risks for students to authentically demonstrate their own learning.

Having recently returned from study leave in the UK, David reflected on the UK education system's strong focus on memory recall and factual knowledge. At Calrossy, teachers aim to strike a balance, ensuring that knowledge recall is not prioritised over critical thinking skills and that future employability skills are highly valued, such as collaboration, communication, and problem-solving. With the rapid introduction of ChatGPT teachers at Calrossy are questioning what should be tested, what should be measured and how, and are seeking to define authentic assessment.

Ethical considerations

At Calrossy, higher order thinking skills, analysis and synthesis are greatly valued and the school wants to ensure there is no trade off with the impact of generative AI. Some of the teachers' reflections so far are that human qualities must remain at the core of education and discussions have highlighted the essential nature of exploring ideas, sharing opinions, listening to each other, respectfully disagreeing and exploring philosophical ideas and ethical questions, using reformed syllabuses that promote flexibility and depth over breadth.

Staff at Calrossy are exploring questions such as:

- How can teachers use AI as a tool?
- How will generative AI be used to support student learning?
- How will generative AI technology impact education?
- How does this shape our future?
- How will AI support future opportunities and learning design?

Calrossy has not yet implemented generative AI use in teaching and learning as they are still exploring ethical considerations. One key concern is to maintain academic integrity and the validity of assessments throughout an implementation process.

Another ethical consideration is intellectual ownership. Calrossy staff recognise the importance of fostering a culture of integrity and originality in student work, especially when utilising AI tools. They are mindful of the importance of fostering student creativity and critical thinking and want to ensure that the integration of generative AI in education does not compromise the authenticity of student ideas and contributions.

Equity is also a significant ethical consideration. At Calrossy, teachers acknowledge that AI could potentially benefit students who have great ideas but may struggle with writing. The school would like to provide equitable access to learning opportunities and see possibilities for generative AI being leveraged to support students by providing them with alternative avenues for demonstrating their knowledge and skills. While some AI resources and tools are freely available, David wants to mitigate any potential inequities that may arise for students that may not be able to afford additional resources.

Implementation

When the school does implement generative AI, it will be with a systemic, formalised approach that aligns with their values and fosters an inclusive and equitable learning environment.

Research is underway as to the potential benefits of generative AI tools and how they could be utilised to support individualised instruction, tailored feedback, and personalised educational pathways whilst ensuring that student well-being and developmental growth remain as their key educational principles.

The Head of ICT is currently conducting research and providing useful information to staff. The Director of Teaching and Learning, along with the Principal, stage coordinators, and middle leaders are engaging in discussions about pedagogy and leadership in relation to AI implementation. The school leadership are also currently investigating opportunities reducing teacher workload and encouraging early adopters to engage with AI tools.

Challenges and Opportunities

At Calrossy, staff have identified various challenges, such as clarifying the role of technology in teaching and learning, ensuring fair, valid and reliable assessment that monitors and evaluates authentic student learning. Overcoming fear from some teachers, bridging the generational divide and maintaining a focus on critical thinking skills are also key concerns.

Calrossy's school leadership sees opportunities in sharing examples of effective practices, encouraging research, fostering critical skills for students' future success, promoting safe and informed use of AI, and prioritising student well-being and social relationships. Calrossy's school leadership sees opportunities to support teachers and students to engage with generative AI in a way that prioritises critical thinking skills, promotes safe ethical and informed use and fosters student learning.

Future impact of AI

At Calrossy, teachers feed forward to facilitate student growth, profile student learners and teach them how to be better learners, to seek knowledge, analyse, synthesise and apply learning to new contexts. David acknowledges there is a need to review assessment practice and the monitoring of learning progress more authentically if generative AI is to have a positive impact on student learning.

Exploring the future potential of AI for data analytics and reducing teacher workload is an area of great interest. At Calrossy teachers emphasise the importance of social relationships, creativity and collaboration and see the future as adapting positively to generative AI tools.

David states that we can adapt in positive ways to harness opportunities and use AI as a tool, but cautions that we should not turn the world upside down; that there will always be the essential relationship between teacher and students and the role of the teacher to help young people learn and grow,

Advice to schools who have yet to embark on an AI journey

For schools yet to embark on an AI journey, David advises them to begin reading, researching, and interacting with AI technologies, collaborating and experimenting as part of the initial process. Overcoming fear and considering both the benefits and pitfalls of AI are crucial.

He encourages schools to utilise AI for positive benefits, leverage data analytics, reduce teacher workload, and gradually explore AI as a tool to problem-solve. Additionally, David stresses the importance of being diligent researchers, constantly seeking better ways of doing things, and identifying areas where AI is not applicable.

HILLBROOK ANGLICAN SCHOOL - BRISBANE, QLD

Miriam Scott - Head of Digital Education

Hillbrook Anglican School has experienced significant growth over the last five years and will be at capacity in 2024 with 900 students from years 7 – 12. As an Independent school they have the autonomy to adapt to change and plan according to the needs of the Hillbrook community. They have an open, inclusive and collaborative environment that fosters inquiry, innovation and creativity.

The school's engagement with AI and perspectives of staff, students and parents

Although generative AI is now easily accessible, many teachers, parents and students remain unaware of the various ways it can be both utilised and misused.

Principal Maria Woods and Miriam Scott, Head of Digital Education attended a ChatGPT conference which was largely targeted to industry. Although there were few educators at the conference, they were inspired by this experience and decided to host their own conference in May, which attracted over 200 participants, including students, Ministers, teachers, and industry specialists. The conference served as a platform to address the need for more information in generative AI and possible applications for education.

Following the conference, some students prepared a business report and presented it to the Principal, demonstrating how generative AI could be integrated into the school's practices. As students are well informed and involved, if they misuse AI, they do so with awareness of consequences, making conscious choices.

Ethical considerations

Over the past six years, Miriam has developed the Digital Access Pass (Digital Access Pass | Be better.), a resource influenced by student input, designed to connect and provide students with the knowledge and ethical mindset to approach generative AI with integrity and safety.

Given the ever-evolving nature of digital technologies, teachers have received professional development so they can explicitly teach students how to make informed choices regarding the use of assistive technology such as generative AI within clear school guidelines. Teachers at Hillbrook have been encouraged to familiarise themselves with the technology of generative AI, explore its potential within assessments and lesson planning, and be creative.

Both teachers and students are taught how to effectively use prompts, establishing example banks for teachers and students and creating spaces where teachers can share resources. This collaborative effort presents a great opportunity for teachers to work together with a growth mindset.

Implementation

Miriam is confidently guiding and supporting the school's journey into generative AI territory. Hillbrook has also been proactive in supporting other schools, sharing their practices, and providing support to those seeking advice. The ever-evolving nature of the AI landscape necessitates continuous evaluation and adaptation therefore teachers receive guidance on how to effectively implement AI, understanding what is permissible and what is not.

A significant professional development initiative has been implemented for all teachers at Hillbrook to showcase their use of generative AI. Recognising the importance of valuing teacher involvement in exploring the potential opportunities and challenges of generative AI in education, the school has provided dedicated time for education and implementation of AI tools, such as ChatGPT.

An action research team focused on AI, comprising members from various subject areas, has been formed to explore different approaches, including adjustments to assessment and curriculum.

The school has also conducted a series of lessons to students to address expectations about the ethical use of generative AI as in this example for Year 12 students https://youtu.be/P4givEF6BTo.

Challenges and opportunities

While Turnitin, a plagiarism checker, is trusted by teachers, its current accuracy in assessing generative AI output is limited. It serves as a starting point for investigations, but additional tools and assessments are required.

Given the constant evolution of technology, students need to make informed choices. They often feel uncertain about what they can and cannot do and need clarity. It is therefore crucial to educate teachers and students about the specific assistive technologies that students can use for particular tasks.

Challenges:

- The potential for abuse by students; if they are not taught how to use it appropriately, they will push boundaries.
- Generative AI is about to be embedded across everything, e.g., Google for Education for AI, but will only be released for teachers (18+ only). Microsoft is doing something similar.
- Teaching students the appropriate way to use generative AI, supporting them through this transition.
- Overcoming fear and confusion about what generative AI really is, with high resistance from some teachers.
- The need for schools to provide extensive support to future skill staff.
- Teacher workload, time and resources required to integrate AI into their work. Teachers are the gatekeepers to students, so supporting them is crucial.
- Knowing the difference between AGI (Artificial General Intelligence) and generative AI.
- Current technology divide is growing and becoming more significant. Every technology has pros and cons.

Opportunities:

- Personalised student tutoring and differentiation tools could be facilitated through creating tutoring services accessible to anyone with internet access.
- Government grants could be offered to make these services accessible.
- Teacher collaboration, where teachers support each other with the backing and support of schools and peak bodies.
- Use of generative AI could reduce teacher workload.

Future impact of AI

Generative AI could provide an opportunity to enhance learning and assessment for students and support teacher workload.

Generative AI can be a catalyst for change and improvement if implemented properly, leading to the next evolution of education. This change will be driven not solely by generative AI but by the conversations we have and the people involved.

Resources

Hillbrook Anglican School has provided the following resources for public viewing.

- Year 12 AI information session video: https://youtu.be/P4givEF6BTo
- AI in Education Miriam Scott's website for teachers: https://scottybreaksitdown.com/ai/
- Digital Access Pass website – https://digitalaccesspass.com.au/

– As a result of an Independent Schools Queensland grant, they also developed three parent courses. See https://digitalaccesspass.com.au/courses/chatgpt-in-education/

ST. MICHAEL'S COLLEGE - CABOOLTURE, QLD

Christina Wellwood, Deputy Principal

St. Michael's College is an Independent Prep to 6 school located in Caboolture, Queensland. With approximately 370 students, the school operates as a co-educational school with two primary streams. It is not part of a school system and functions autonomously. Alongside the Principal and Deputy Principal, the staff consists of 14 class teachers, 6 specialist teachers, 18 education assistants, a Head of Learning Support, Learning Support and Extension teachers, and a Head of Student Wellbeing. The IT Manager also serves as the Digital Technologies teacher.

The school's engagement with AI and perspectives of staff, students, and parents

Although generative AI is not entirely new, the introduction of ChatGPT has meant it is more accessible. This sparked a deeper interest among staff, leading them to explore generative AI further.

Having extensively researched articles and studies on generative AI, Christina Wellwood, Deputy Principal, recognised its potential benefits for teaching, learning, and staff wellbeing. The school values a healthy work-life balance for its staff, prompting their initial focus on investigating how generative AI could support teachers, reduce administrative overload, and mitigate staff burnout.

Independent Schools Queensland extended an invitation for St. Michael's College to join their Artificial Intelligence in Education Teams platform to learn more about generative AI and its impact on schools and have access to current resources.

St. Michael's College seeks opportunities for teachers to enhance productivity within their work environment through generative AI. Christina began by personally experimenting and exploring ChatGPT, participating in Facebook AI groups, and, as her confidence grew, presenting the concept to staff.

Recognising the enthusiastic response from staff, Christina formed a committee comprised of interested staff who were early adopters, so they could experiment and identify solutions applicable at a whole staff level. They created a Google Drive folder to collect prompts and resources, which they could then disseminate to the staff. Different platforms are also shared with the teachers, such as report card writers and lesson planning tools to inspire ideas and aid in their work.

The committee has extended their efforts to the administrative team, ensuring that office staff can benefit from specific applications. For instance, one staff member is using generative AI for tasks related to the school's Facebook page, letter writing, and other time-saving activities. The school has scheduled online professional development sessions during staff meetings.

Ethical considerations

During the early adoption phase, the AI committee members, discussed ethical considerations. They focused on determining how to properly reference generative AI outputs. Additionally, they explored how the platforms might evolve and what preparations should be made to equip students for the future. They are yet to determine the appropriate age groups for introducing generative AI to students but recognise its potential to enhance student learning if used properly with safeguards in place.

Internet safety, copyright concerns, privacy issues, and the incorporation of generative AI into digital technology policies are ongoing topics of discussion. The school aims to thoroughly address these considerations before introducing generative AI to students. They recognise the rapid pace of technological advancements and plan to ensure that staff members have a comprehensive understanding of various platforms and their effective utilisation.

Implementation

The implementation of generative AI in St. Michael's College is being led by Christina and the IT Manager, who serves as the Digital Technologies teacher, also plays a crucial role in sourcing relevant resources and collaborating with Christina to ensure that the school remains equipped and competitive.

Challenges and opportunities

The challenges and opportunities that St. Michael's College faces in implementing generative AI include potential issues of staff plagiarism and referencing guidelines, particularly since there are currently no established standards in this regard. Furthermore, the school has a diverse staff demographic, including seasoned staff members who may be hesitant to embrace new technologies. The school is mindful of the possibility of an overload of apps and platforms and seeks ways to select the most appropriate tools for their needs.

To address this, the school emphasises structured change management processes and provides support to build staff confidence in utilising generative AI. The school sees it as crucial to educate staff about the limitations and potential misinformation generated by AI tools. Nevertheless, the benefits of generative AI can outweigh the negatives, and the school believes there are opportunities to improve student learning outcomes if generative AI is used safely and ethically.

Future impact of AI

Regarding the future impact of AI on teaching and assessment, St. Michael's College sees the future as uncertain. Though they can envision differentiation opportunities for lesson planning through AI tutors, they say this should not replace human teachers, as student-teacher relationships are essential for student success.

Advice to schools that have yet to embark on an AI journey

For schools that have not yet embarked on an AI journey, St. Michael's College suggests the following advice:

- build a resource bank for staff
- collaborate with early adopters to gain insights and experiences
- provide staff with learning opportunities
- align AI integration with the school's culture and well-being initiatives
- encourage staff to join AI communities for teachers on platforms like Facebook
- explore evidence-based articles
- engage in networking opportunities
- attend relevant courses
- carefully plan the implementation process while embracing and accepting change.