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A Pragmatic Approach to using LLMs

Abstract

The advent of Generative Artificial Intelligence, and the plethora of large language models that followed has brought to the forefront aspects of artificial intelligence that have been discussed over the past 75 years or so. This paper posits that practitioners in the field of open and distance learning (ODL) provision should probably adopt a pragmatic approach to the utilisation of these new tools, similar to the ways in which ODL practitioners have embraced previous technologies. Reflecting on personal experience as well as current work in progress with the Commonwealth of Learning, the paper argues that a cautious and critical engagement, based on gradual improvement is probably going to be more beneficial than non-engagement or any attempt at delayed perfection.

Keywords
Large language modules (LLMs), open and distance learning (ODL), artificial intelligence (AI), generative artificial intelligence (GenAI), Commonwealth of Learning (COL)

1. Introduction

The release of ChatGPT on 30 November 2022 quickly followed by the launch of other tools like Bard, Claude, Copilot, Gemini, and others, brought to the fore a modern discussion that was arguably sparked by the publication of Turing's *Computers and intelligence* (Turing, 1950). This publication subsequently led to a variety of experiments and studies in diverse fields over the past 75 years, related to machine learning, deep learning, natural language processing, computer vision, and chatbots among other issues, collectively referred to as Generative Artificial Intelligence (GenAI) (Adamopolou and Moussiades, 2020; Kaul *et al*., 2020; Yadav, 2023).

Large Language Models (LLMs) are particular forms of GenAI which focus on analysing large language-based datasets and offering an interface that mimics a conversation which can be used to help create educational content, promote interaction and personalise learning (Kasneci *et al*., 2023) and would therefore seem to offer tools that might be useful to open and distance learning (ODL) providers. However, concerns about the distinction between being about to process language rules and being able to use language in the real world, as well as concerns about hallucinations, the potential for misinformation and bias, as well as potential ethical breaches (Håkansson and Phillips-Wren, 2024; Liu *et al*., 2024; Mahowald *et al*., 2024), among other issues, naturally result in some hesitation in adopting the use of LLMs more widely in ODL provision.

The commentary presented here derives from a presentation made as an invited speaker during an online conference. It offers a personal perspective based on a moment in time, drawing on past experience as well as current engagement with several projects currently in progress at the Commonwealth of Learning (COL). In many of these projects, practice is still evolving into theory, which might

subsequently be tested empirically. As noted in the following section, the author's views are shaped by lived experience as an ODL practitioner, a teacher, and a user rather than developer of educational technology within a developing country and commonwealth context. The reflections shared here may not, therefore, necessarily resonate with other contexts.

2. Review Lenses: ODL, Pedagogy, Technology

ODL is concerned with the use of teaching, learning, and support provision which do not necessarily require teachers and learners to be in the same place at the same time, and which actively seeks to reduce any barriers to access and success. COL (2023, p. 5) defines ODL as

> the provision of distance education opportunities in ways that seek to mitigate or remove barriers to access, such as finances, prior learning, age, social, work or family commitments, disability, incarceration or other such barriers. 'Open' refers to a commitment that removes any unnecessary barriers to access to learning. Distance education refers to teaching and learning that temporarily separates teacher and learner in time and/or place; uses multiple media for delivery of instruction; involves two-way communication and possibly occasional face-to-face meeting for tutorials and learner-learner interaction. Open learning is not the same as distance learning, but both are complementary and hence the two terms are often used together as open and distance learning.

Bates (n.d.), building on the work of Hegarty (2015), identifies the following characteristics of an open pedagogy suitable for ODL provision: It uses participatory technology; foregrounds people, openness, and trust; encourages innovation and creativity; supports the sharing of ideas and resources; builds a connected community; emphasises learner-generated content; and encourages reflective practice and peer review.

ODL providers have a long history of adopting and adapting technology, often originally intended for other purposes, to achieve

these open goals. For example, in an early work in the field, Taylor (2001) identifies five generations of provision, corresponding with characteristics of delivery technologies. As noted by others, implicit in the fifth-generation model identified by Taylor is that it embraces new technologies as these emerge, such as the use of Learning Management Systems (LMSs), Massive Open Online Courses (MOOCs) or, more recently, GenAI/LLMs (Teachers.Institute, 2023). As noted by Anderson and Dron (2011), however, how ODL practitioners choose to use technology for teaching and learning will depend on their views on the nature of teaching and learning. The authors suggested there were three dominant approaches:

Summary of Distance Education Pedagogies

Generation of distance education pedagogy	Technology	Learning activities	Learner granularity	Content granularity	Evaluation	Teacher role	Scalability
Cognitive–behaviourism	Mass media: Print, TV, radio, one-to-one communication	Read and watch	Individual	Fine: scripted and designed from the ground up	Recall	Content creator, sage on the stage	High
Constructivism	Conferencing (audio, video, and Web), many-to-many communication	Discuss, create, construct	Group	Medium: scaffolded and arranged, teacher-guided	Synthesize: essays	Discussion leader, guide on the side	Low
Connectivism	Web 2.0: Social networks, aggregation & recommender systems	Explore, connect, create, and evaluate	Network	Coarse: mainly at object and person level, self-created	Artifact creation	Critical friend, co-traveler	Medium

Source: Anderon and Dron, 2011, p. 92.

It is not hard to see how this kind of thinking plays out in practice. For example, video is a well-established technology in ODL provision and has typically been integrated into new formats such as MOOCs, but the

ways in which the medium is used can be quite varied. There are numerous examples of 'talking head,' didactic presentation videos, presumably informed by behaviourist/instructivist assumptions and sometimes collated into massive open online courses (dubbed 'xMOOCs'). In contrast, videos developed by teachers with a more cognitive/constructivist perspective will likely be more carefully scaffolded, will likely invite greater engagement by posing questions or discussion points, and when integrated into online courses, will likely be complemented by discussion forums and other tools that promote student engagement with the content and the sharing of ideas (dubbed 'cMOOCs') (Kesim and Altinpulluk, 2015). The enduring influence and use of TED talks is testament to how an otherwise expository presentation can be made very engaging and provoke subsequent discussion. However, a teacher coming from a more socio-constructivist perspective would likely take this further – using video to share real-life or animated scenarios which pose questions and prompt debates between students rather than delivering content and right answers. This approach paves the way for a more personalised learning journey through a course which might have multiple pathways, using multiple video clips, and multiple entry and exit points based on the use of predictive modelling and actionable analytics among other tools (Jebarri *et al*., 2024; Yu, 2024). A teacher who has embraced a more connectivist approach, would probably encourage learners to find, create, and critique their own and others' videos even beyond the bounds of the official course syllabus and include confirmatory or contradictory resources in other media to explore real world challenges rather than to master a pre-defined syllabus (Bozkurt and Keefer, 2017; Mukhlis *et al*., 2024). Given this diversity in the use of current technology, it can be anticipated that there will be similar diversity in the extent to which teachers understand and engage with the potential of more recent technology such as LLMs.

As with any technology, there are pros and cons to consider which may be innate to particular examples of AI or LLMs or which may derive from the ways in which the technology is typically used (Chaushi *et al*., 2024; Håkansson & Phillips-Wren, 2024).

3. Lessons from Literature

In the latest edition of their ongoing review of research on AI, Perrault and Clarke (2024) conclude that AI performs better than humans on many tasks, can result in higher productivity and higher quality work if used well and can accelerate scientific progress. However, they note the lack of robust and standardised evaluations of the use of AI and LLMs and observe that while people are more aware of the potential, they are also more nervous about the possible risks.

However, as educators engage more with this technology, they are learning how to harness the potential while simultaneously mitigating the risks. Some early lessons (from Bates, 2024; Du *et al*., 2024; Garcia *et al*., 2025; Kizilcec, 2024; Law, 2024; Li *et al*., 2025; Sevnarayan and Potter, 2024; Williamson, 2024; Zhang *et al*., 2025) include the following:

- Using AI/LLMs in an intelligent and adaptive way.
- Automating routine and administration tasks.
- Finding a balance between providing personalised support and creating over-dependence.
- Supporting both students and teachers to generate and critique AI responses.
- Focusing on the creation of authentic assessment tasks that will be hard to complete based only on the use of AI tools.
- Addressing and mitigating cybersecurity and academic integrity risks on an ongoing basis.
- Using digital twins or avatars to provide greater privacy.
- Making ethical use of learning analytics, by ensuring all stakeholders know what is being tracked, how the information is being used and controlling who has access.
- Providing ongoing continuing professional development for educators in ways that create an imagination for what is possible or could be possible in future.

Capacity-building in the deployment of LLMs might usefully be framed within emerging frameworks like those developed by UNESCO (2024a) for both students and teachers.

4. Reflections on Practice

Some years ago, while still based in South Africa, the author was commissioned to support an NGO called Harambee to help unemployed young people around the age of 23 who had completed Grade 12 but who were unable to pass a standard industry entry level maths test or perform well during an interview, even though entry level jobs were available to them if successful. An analysis of the example maths tests indicated that these were about Grade 6 level. It was decided to use Khan Academy resources. The Khan Academy had developed a platform which incorporates automated feedback and progression, a digital dashboard so that learners would be able to track their progress in real time and digital badging to motivate continued engagement. Within a few minutes of starting, each learner was on a slightly different trajectory through the resources, and, sustained by health snacks and immediate feedback, proved willing to stick at the maths for several hours a day. A further innovation introduced by the Khan Academy at that time was that the learners could nominate an online tutor to chart their progress and provide human-generated feedback. In practice only 5-10% of learners needed this additional feedback and encouragement each day, which was just as well given that there were over 100 learners in a cohort. Many of the learners engaged in the pilot, went on to successfully resit an industry entry level maths test and gained entry to employment. In an ordinary classroom setting, it would not have been possible for a teacher to monitor all the learners individually on an ongoing basis, provide immediate feedback, and then point them to what to do next. This was possible only through the use of the automated tracking and feedback system.

The Khan Academy resources described above, were openly licensed. The COL has long advocated the use of Open Educational Resources (OERs) as a key component of ODL provision and has supported capacity-building for OER creation and adaptation and the sharing of OERs through various kinds of repositories, recently including in the Pacific (Madhan and Mays, 2022). Unfortunately, while it is easy to track whether users are engaging with the resources, it is not always that easy to track the extent to which educators

subsequently use and adapt OERs in the ways intended (Beaven, 2018; McGeary, 2025).

An LLM can, however, be used to combine the immediacy of digital engagement and provide some risk mitigation by working with only a limited dataset of OERs. For example, in 2023, COL responded to a request from the University of Samoa to use an LLM to create a chatbot that would assist students new to using the University's Moodle LMS. Using only resources available in the public domain or otherwise openly licensed to train an LLM, COL developed, and the University of Samoa deployed a Moodle chatbot successfully, reducing the number of repetitive questions about Moodle which needed to be answered by staff (COL, 2023). The following year, a similar request was received from the University of the South Pacific and this time, course content was added to the LLM dataset, so the resulting chatbot could answer both platform and course content questions, mostly successfully with only a few questions being elevated to academics (COL, 2024). In both cases, the use of the LLM was optional and deployment was managed by the universities according to their own institutional policies and procedures. Building on this experience, COL instituted an 18-month exploratory project called Teacher-in-the-Loop in which an LLM is trained on national curriculum documents and existing OERs are combined to empower teachers to create new OERs in a collaborative way. The model has been field-tested in several countries, most recently in Ghana (COL, 2025). Findings and recommendations will be shared at the conclusion of the project. However, it is already evident that the technology can help build an active community of practice for the collaborative development of new or revised resources (Balaji *et al*., 2025). Further lessons of experience from the work in progress outlined above will become available through the publication of the peer-reviewed conference proceedings of the eleventh Pan-Commonwealth Forum recently hosted in Botswana.

5. Discussion

As with any new technology, there are advantages and disadvantages to the deployment of LLMs.

The continuing digital divide, as well illustrated by UNESCO's 2023 report, Technology in education: A TOOL ON WHOSE TERMS? remains a caution when seeking to deploy new technology, although the more recent Pacific version of the report (UNESCO 2024b) contains several examples of how Pacific stakeholders have found ways to innovate around technology challenges. Bates (2022) offers a useful heuristic to follow when considering deployment of new technologies called SECTIONS – suggesting providers consider the students' access and skills; ease of use; cost; teaching functions enabled; interaction facilitated by the technology; organisation issues (for example policy and ICT systems requirements); networking potential, and security and privacy issues. Understanding the students' intent in potentially using AI is particularly critical (Lavidas *et al*., 2024). In the USP example cited above, the Semester Zero chatbot is an optional tool rather than a required part of the course. In similar vein, in COL's work in Open Schooling, course content developed in a platform like Moodle is first drafted in a form that can be exported and printed for those who do not have regular internet access or high-end digital devices. Then the core content is supplemented with multimedia content which can be deployed in some form of open textbook format for those who have higher-end devices and can get to a Wi-Fi-enabled centre to download the content. Finally, H5P interactive elements are added for those able to work online on a regular basis. In similar vein, a local or offline LLM like LLamafile or GPT4ALL, can be used to create tools which can be used even offline and with a limited dataset, without sharing provider or user information with the cloud. Novikau (2024, p. 5) offers a useful summary suggesting a 'best of both worlds' approach when considering online and offline use of an LLM, although as observed by Tian *et al*. (2025), more research is needed to understand how to get the best out of an offline LLM.

Security and privacy issues are usually in the forefront of consciousness when providers consider deploying an LLM and Yao *et al*. (2024) offer some interesting insights into the good, the bad, and the ugly in this regard, calling for ongoing monitoring and research.

Reporting on a recent survey conducted among post-secondary educational institutions in the Commonwealth, Paskevicius (2024) concludes that there is need to develop policies to guide the use of AI

and ongoing training to navigate appropriate deployment in teaching and learning. In this regard, Mohamed and Mishra (2024) undertook a scoping review of existing institutional policies and guidelines and used this to identify key stakeholders, issues, and competences that need to be addressed.

6. Implications

AI in general and LLMs in particular are not going away anytime soon and there is both optimism and pessimism about the long-term impact of progress in this area and need for ongoing research (Grace *et al*., 2024). At the same time, students and teachers are already using the technology, through a growing plethora of different tools, so there is need to invest in ongoing training and development to harness the benefits and mitigate the risks (Walter, 2024; Xia *et al*., 2025). Meanwhile, while educators debate the relative pros and cons, development continues apace in the world outside of most current classroom constraints with emerging issues such as agentic AI and neuroadaptive learning, and a growing use of AI in healthcare.

ODL providers contemplating the use of LLMs, which was the basis of a recent online international conference hosted in South Africa, can either hold back from deployment until more research has been done and greater clarity obtained, wholeheartedly embrace the affordances of the technology, or find some middle ground which could be summarised as 'continued improvement is better than delayed perfection' – an expression that has variously been associated with the Japanese philosophy of Kaizen and the works of the American writer Mark Twain.

This would call for a pragmatic approach based on ongoing inquiry, reflection on experience and ongoing critical debate (Legg and Hookway, 2024).

7. Conclusion

The advent of GenAI and LLMs as a key subset, offers ODL providers an ever-growing set of new tools with which to augment provision. As with previous generations of technology integration, ODL providers will likely progressively integrate aspects of the technology into their

provision in ways that reflect their contextual reality and their underpinning pedagogic assumptions. This would seem to be a pragmatic response to the deployment of these tools.

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