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AI and academic libraries: what's all the fuss about?

Over the last couple of years, whenever I have engaged in general conversations with academic library colleagues, invariably, the topic of Artificial Intelligence (AI) comes around. Quite often colleagues will say things like 'it's the next big thing', or 'there will be a lot of changes ahead because of AI'. When asked what these changes might look like and what the impact will be on the library, many colleagues tend not to have a fully considered response, which led me to question exactly what it is that we are waiting for with regards to AI and academic libraries and what are these big changes ahead? Clearly, the even more recent emergence of Generative AI is having an impact on higher education in general, which in turn is likely to impact on academic libraries, but I'm not personally witnessing anyone in either the teaching and learning, research, or professional services areas having to reprioritise to deal with the 'next big thing' and the wholesale changes that are 'just around the corner'. So, rightly or wrongly, I found myself asking 'what's all the fuss about?' and thought I would share my musings by way of this editorial.

In 2022, I wrote an editorial entitled '*Trendspotting*' in which I tried to bring together a series of trends that we were (and still are) witnessing in a post pandemic academic library environment. This piece has been largely very well received, and in it I identify several trends including digital transformation and digital shift, Open higher education and data management and curation (Appleton, 2022). I mention these particular trends, as it is in these areas that there is potentially some overlap with AI, but what is curious is that I didn't specifically mention AI as a trend with regard to something that would be having an impact on academic librarianship. Did I get it wrong? Or am I still right to ask 'what's all the fuss about?'

It would be foolish to say that AI wasn't around in early 2022 as it clearly was. In fact in another key 'trendspotting' paper from back in 2019, Cox, Pinfield and Rutter (2019) gather the thought leaders' views on the impact of AI on academic libraries during the years ahead. They acknowledge that the use of machine learning for things like chatbots and text and data mining, whilst not new were at the time fairly recent innovations, and I would suggest that these early uses of AI were seen more as technological developments which were providing more options for academic librarians with regard to the delivery of services, rather than 'the next big thing'. However, in their paper, Cox, Pinfield and Rutter were able to provide a much deeper analysis than we had seen before on what the potential ramifications and impact of the new era of machine learning could be on academic librarianship. This included more sophisticated use of AI for the development and delivery of services, particularly around the scope of collections and enquiry services. They also suggested that AI was bringing about an increased drive for skills development around data management, including quality control, curation and stewardship and data literacy, but also pointed out that the emergence of research data management (RDM) as an academic library activity had already begun to enable some of this.

In some of the literature, there seems to be a general acknowledgement that the academic library should have, and indeed does have, a role in designing and developing AI systems to better assist library processes and services, but my sense is that the sector itself is struggling to define exactly what all this looks like and is still a little bit speculative than strategically

grounded. For example, through their study with academic library thought leaders, Cox, Pinfield and Rutter (2019) identify several *potential* applications of AI in academic libraries, some of which are mentioned above, and others include: providing content for AI to work on and with; designing data infrastructure to enable AI; procuring AI tools. More recently, Cox (2022) provided a conceptual perspective combining the current and potential impact of AI on professions (including librarianship) and focused particularly on academic libraries and librarians. He identifies AI supported searching, AI interfaces to library systems and chatbots, AI applications to the management of users (e.g. via learning analytics), AI applications for the management of marketing (e.g. social media analysis) and most significantly, AI in knowledge discovery, where library collections become 'data' which can subsequently be subject to data mining. Some or all of these activities have become 'business as usual' for academic libraries, and this has occurred in part because of the sector's ability to keep up with the general digital shift taking place within higher education. However, interestingly several of these applications and potential applications have never really been grouped together as 'AI' or 'machine learning', nor indeed as 'the next big thing for academic libraries'. Perhaps, more pragmatically, Lo (2023) writes from a US perspective, suggesting that academic libraries have a unique opportunity to be at the forefront of the AI evolution through enhancing their own services through the use of AI and also becoming part of the wider discussion around the use of AI in higher education more generally.

My suspicion is that AI being 'the next big thing' actually came about in late 2022, with the emergence of Generative AI, including ChatGPT. This has naturally heightened the interest in AI within academic libraries, and indeed within the higher education sector more generally. Whilst higher education and academic libraries have been taking discrete AI and machine learning technologies and, where relevant, further developing and applying them practically (e.g. chatbots, datamining, search interfaces, etc.) it seems to be that generative AI impacts and effects everybody within the academy, in so much as it is a machine learning technology that can quickly and easily generate content in any number of contexts and circumstances, and in doing so, has many practical applications. Similarly the use of generative AI by students poses many challenges, and it is the current mix of practical applications and challenges, which I think has become the next 'big thing' for academic libraries, and it has come about us quite suddenly. Vogus (2023) summarises this quite neatly in his column '*Generative AI and ChatGP: friend or foe for academic libraries?*' in which he identifies reference services, collection development, metadata creation and content creation as all being areas of academic library work where generative AI could have a significant impact. Similarly the role which academic libraries have in ensuring that academic staff and students acquire and make use of information and digital literacy skills has now expanded to include AI literacy skills and understanding. This is quite a significant space for academic libraries to operate in, and is also early on in the widespread understanding and application of generative AI and its place in higher education.

There is certainly an acknowledgement in the literature and in practice that there are a number of areas in which academic libraries need to engage with AI and AI developments. Many AI and machine learning tools are already widely used in the academic library workplace, and 'on paper' it looks as though there are many more opportunities ahead. However, at the moment, I think that academic libraries are still learning and that this learning is being naturally subsumed in the sector's response to the digital shift. AI is already

well used in higher education and academic libraries have responded accordingly. New developments such as generative AI continue to emerge, and academic libraries are still responding accordingly. It could be argued that AI has, or will quite soon, become business as usual, and therefore I ask again 'what's all the fuss about?' I have been intentionally provocative by asking this, and suggesting that it is not really 'the next big thing', but I am very willing to be persuaded otherwise. Therefore, if you would like to respond to this editorial by way of a future 'guest editorial' please do get in touch, as I would very much welcome a conversation about 'the next big thing'!

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