

#### Editorial

# AJET in 2022: Bibliometrics, academic publishing trends, and future opportunities

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After two years of change and uncertainty in tertiary education, in 2022 the editorial team of AJET saw a return to a focus on research that explores educational technology use in a range of learning and teaching environments. It has also been an interesting year in terms of the changing academic publishing environment and the opportunities and challenges facing AJET as a leading educational technology journal. In this end-of-year editorial we will look at what has been published in AJET throughout 2022, the bibliometrics that help characterise the journal's role in the field, and consider the trends that are emerging for academic publishing and their impact on how AJET develops into the future.

Keywords: bibliometric data, educational technology, academic publishing, tertiary education

# Introduction

At the end of each year the AJET Lead Editor team looks back at what has been learned - both in terms of new knowledge for the educational technology field, but also in relation to academic publishing trends that impact the environment in which this publication is situated. The former is of primary importance to ensure that AJET services the community of educational technology researchers and practitioners for whom it was established and who continue to support the journal. The latter is to ensure that AJET remains current, innovative, and able to respond to changes in academic publishing processes and innovations. This issue is especially important in relation to the ways that editors maintain a high level of quality and integrity in publishing new contributions to the field in an ever-changing environment. In this end-of-year editorial we will look at what has been published in AJET throughout 2022, the bibliometrics that help characterise the journal's role in the field, and consider the trends that are emerging for academic publishing and their impact on how AJET develops into the future.

The theme of our editorial at the end of 2021 was about change - primarily change in relation to impact of COVID-19 on the ways educational technology had been used in tertiary institutions to respond to the emergency online teaching conditions (Corrin et al., 2021). In 2022 we have seen a return to research that explores educational technology use in a range of learning and teaching environments. Many of these articles build on lessons learned from the sudden increased role of technology in tertiary education that COVID-19 necessitated, exploring how these approaches can be improved in sustainable and pedagogically sound ways. There have also been a number of review articles published this year that show how the field has changed in recent years as well as synthesising the recent research on key topics relevant to the use of educational technology in tertiary education.

The other significant area of change this year has been in relation to academic publishing and the emerging trends that AJET must consider and respond to in order to remain relevant and impactful going forward. The increasing number of journals in the field, the increase in articles submitted for review, changes to charges associated with publication by some publishers, and academic integrity issues all present challenges to academic publishing in the area of educational technology. At the same time there have been many positive advances in areas such as open access, including the increase in engagement with open science practices (Santoro, 2022, Lodge et al., 2021). Technologies such as artificial intelligence (AI) also have the



potential to assist academic publishers to make processes more efficient, but also could present challenges to the ways we currently view authorship. These issues will be explored in greater detail below. First, however, we present the bibliometric data for AJET in 2022.

# Bibliometric data for 2022

The articles published in AJET in 2022 have included empirical studies about the use of educational technologies in practice, proposals for new frameworks, systematic/meta-analysis reviews, and explorations of student characteristics (e.g., motivation) and learning (e.g., confusion) within the context of technology-enabled learning designs. The large number of submissions to the special issue this year meant that AJET was able to publish the full 12 articles in every issue, with a total of 72 articles published in 2022 - the largest number published by AJET in a single year (see Table 1).

Table 1 *AJET Publication Summary* 

|                      | 2019 | 2020 | 2021 | 2022 |
|----------------------|------|------|------|------|
| Issues published     | 6    | 6    | 6    | 6    |
| Articles published   | 63   | 59   | 67   | 72   |
| Editorials published | 6    | 6    | 6    | 6    |

After the sudden increase in abstract views in 2020, possibly due to the pandemic response, the access figures for abstract views over the past two years have become more consistent again. While the access to abstracts rose slightly in 2022, there was a decrease in access to full articles. Although the 2022 figure (202,114) was still much higher than the pre-pandemic figure in 2019 of 156,809, it is possible that this is the tail of the increase in the use of AJET articles during the pandemic to inform learning and teaching practice.

Table 2
Readership interest in AJET

|   | 2020    | 2021    | 2022     |
|---|---------|---------|----------|
| Access numbers to article landing pages (abstracts) | 416,427 | 176,158 | 182,064* |
| Access numbers to full articles                     | 315,129 | 226,371 | 202,114* |

<sup>\*</sup> These figures are calculated up to mid-December 2022, so do not include the last few days of the year.

Table 3 below outlines the statistics in relation to submissions and the peer review processes for the past three years. During 2022 the Lead Editor team has been working on improving the quality of data collected on the review process through the OJS system. In doing so, it was found that some duplicate submissions had previously been counted in submission figures reported on. These were removed from the 2022 data set, which somewhat explains why the total number of submissions is less than in previous years (619 in 2022, compared to 767 in 2021).



Table 3

AJET Submission and Review Statistics based on submissions per year

| AJET Submissions and Reviews   | 2020      | 2021      | 2022*     |
|--|-----------|-----------|-----------|
| Total submissions  | 703       | 767       | 619       |
| Declined at editorial screening (percentage of total submissions)                                  | 496 (71%) | 597 (78%) | 474 (77%) |
| Peer reviewed (percentage of total submissions)  | 207 (29%) | 170 (22%) | 145 (23%) |
| Declined at peer review (percentage of peer reviewed)  | 159 (77%) | 106 (62%) | 123 (82%) |
| Accepted (percentage of peer reviewed)   | 48 (23%)  | 57 (34%)  | 22 (18%)  |
| Declined (either at editorial screening or following peer review, percentage of total submissions) | 655 (93%) | 703 (92%) | 597 (96%) |
| Accepted (percentage of total submissions)   | 48 (7%)   | 57 (8%)   | 22 (4%)   |

<sup>\*</sup> These figures are calculated from 1st December 2021 to the 30th November 2022 - the new reporting period

In Table 4 the most frequently downloaded articles for each issue of 2022 are presented. This year's list represents a diverse range of topics from design thinking in instructional design through to inclusive education. New trends such as the Metaverse are featured from the special issue on the new digital learning worlds. Interestingly, there was strong performance again by AJET editorials - this year on the importance of keywords and the persistence of weird ideas in educational technology. Both of these articles were picked up by academic media in Australia (e.g. Campus Morning Mail) which may have contributed in part to their popularity.

Table 4
Top 2022 AJET Articles per Issue by Full Article Downloads to 22/12/2022

| Issue        | Article Authors   |  | Downloads |
|--------------|---|--|-----------|
| Vol 38, No 1 | Integrating design thinking into instructional design: The #OpenTeach case study  | Ní Shé, C., Farrell, O., Brunton, J., & Costello, E. | 1,777     |
| Vol 38, No 2 | The importance of choosing the right keywords for educational technology publications ( <i>Editorial</i> )  |  | 949       |
| Vol 38, No 3 | The concerning persistence of weird ideas about learning and educational technology and their influence on the future directions of higher education ( <i>Editorial</i> ) |  | 1,401     |
| Vol 38, No 4 | What is the metaverse? Definitions, technologies and the community of inquiry   | Ng, D. T. K.   | 1.057     |
| Vol 38, No 5 | University students with special needs:<br>Investigating factors influencing e-<br>learning adoption  | ,              | 287       |

In 2022 AJET published a special issue on "Achieving lasting education in the new digital learning world", guest edited by Dr Filia Garivaldis (Monash University, Australia), Dr Stephen McKenzie (University of Melbourne, Australia), Dr Danah Henriksen (Arizona State University, United States), and Dr Sylvie Studente (Regent's University London, United Kingdom). This issue covered a diverse range of topics including mobile, flexible, and flipped classrooms; the use of video; and the role of cognitive presence in learning. There was an interesting focus on the affective side of learning and learning design with articles on emotional intelligence, care-centred pedagogies, and safe spaces for educators to network together to learn more about creativity in the curriculum.



The 2023 special issue will focus on "Technology-enabled Support for Undergraduate and Postgraduate Research Supervision". The issue will cover research about how technology can be used to better support research supervision in tertiary environments, including ways to align online and in-person approaches for supervisors and students. The guest editors for this issue include Dr Kwong Nui Sim (International College of Management, Sydney), Professor Maria Northcote (Avondale University), and Professor Cher Ping Lim (The Education University of Hong Kong, China).

AJET has continued to perform strongly in the various journal ranking scales in 2022 (see Table 4 below). The JCR impact factor rose 22% to 3.73 with a five year impact factor of 3.865 which elevated AJET to Q1 status for the first time for this ranking scheme. The H5 index for AJET according to Google Scholar rose from 39 to 49, and AJET regained 13th place on Google's top 20 educational technology journal list. Scopus has rolled out a new method of calculating the CiteScore this year, and AJET has risen from 5.5 to 5.9 for this measure.

Table 4 *AJET Bibliometrics* 

| AJET Bibliometrics |  | 2019     | 2020    | 2021*   |
|--------------------|--|----------|---------|---------|
| JCR                | JCR Impact Factor                      | 1.96     | 3.067   | 3.73    |
|                    | JCR 5-year Impact Factor               | 2.08     | 3.507   | 3.865   |
|                    | JCR journal ranking in Education       | 95/263   | 77/265  | 58/270  |
|                    | category based on 5-year Impact Factor | Q2       | Q2      | Q1      |
| Scimago            | SJR Impact Factor                      | 0.91     | 1.397   | 1.249   |
|                    | SJR ranking in Education               | Q1       | Q1      | Q1      |
| Google Scholar     | H5 index                               | 35       | 39      | 49      |
|                    | H5 ranking within Educational          | 13/20    | 15/20   | 13/20   |
|                    | Technology category                    |          |         |         |
| Scopus             | CiteScore                              | 3.5      | 5.5     | 5.9     |
|                    | Journal ranking in Education           | 138/1254 | 69/1319 | 92/1406 |
|                    |  | Q1       | Q1      | Q1      |
|                    | SNIP                                   | 1.56     | 1.95    | 1.948   |

<sup>\* 2022</sup> bibliometric data will be available in 2023

The strong performance of the journal in these international bibliometrics is a credit to the authors, reviewers, and whole editorial team of AJET. The ability of AJET to improve in these bibliometrics in 2022, in spite of the challenges to research that arose during the pandemic, shows that the journal continues to meet the needs of the community.

#### The AJET team in 2022

The team of Associate Editors, copyeditors, and reviewers continue to be central to the ongoing success of AJET. These experts, from all around the world, provide their time and expertise to ensure that the quality of AJET is maintained and that the articles published in the journal make an important contribution to the field of educational technology research.

Throughout 2022 we have been supported by the following outstanding team of Associate Editors:

- Dr Thomas Chiu, The Chinese University of Hong Kong
- Dr Simon K. S. Cheung, The Open University of Hong Kong
- Associate Professor Thomas Donald Cochrane, The University of Melbourne, Australia
- Associate Professor Teresa S Foulger, Arizona State University, United States
- Dr Feifei Han, Australian Catholic University, Australia
- Associate Professor Henk Huijser, Queensland University of Technology, Australia
- Associate Professor Matthew Kearney, University of Technology Sydney, Australia
- Dr Chien-Ching Lee, Singapore Institute of Technology, Singapore
- Professor Stephen Marshall, Victoria University of Wellington, New Zealand
- Dr Kwong Nui Sim, Auckland University of Technology, New Zealand
- Professor Jerry Chih-Yuan Sun, National Chiao Tung University, Taiwan



 Professor Joke Voogt, University of Amsterdam/ Windesheim University of Applied Sciences, Netherlands

We have also welcomed two new Associate Editors to the team:

- Associate Professor Chris Deneen, University of South Australia, Australia
- Dr Rachel Fitzgerald, University of Queensland, Australia

We would also like to thank the following Associate Editors who ended their term with AJET during 2022:

- Dr Christopher E Dann, University of Southern Queensland, Australia
- Professor Judi Harris, William and Mary School of Education, United States
- Associate Professor Michael Phillips, Monash University, Australia
- Associate Professor Haoron Xie, Lingnan University, Hong Kong
- Associate Professor Lanqin Zheng, Beijing Normal University, Beijing, China
- Assistant Professor, Di Zou, The Education University of Hong Kong

Our AJET copyeditors, Antonina Petrolito and Kayleen Wood, have continued to bring their attention to detail to their work to ensure the high quality of our published articles. We sincerely thank them for this work. We also acknowledge the contribution of Professor Gwo-Jen Hwang who was a member of the lead editor team from January 2021 to July 2022.

# New developments for AJET in 2022

In 2022 the lead editor team has continued to focus on improving processes for the journal to ensure the quality, impactfulness, and integrity of what is published. Some of this work has related to the review and publication workflows, with a refinement of the new initial editorial review process introduced in 2021. An update to the OJS system that AJET uses to facilitate the review and publication process was undertaken early in the year and a review of the AJET website conducted. In parallel, the lead editor team undertook a review of all AJET policies and procedures to ensure that these align with national and international quality and integrity guidelines (e.g., Committee of Publication Ethics (COPE)) and reflect the current practices of the journal.

In bringing the journal into line with international standards the lead editorial team have also been working on the development of an article template which aims to increase the accessibility of our published articles. The new template includes built-in formatting styles and layout, the use of a sans-serif font, alt text for images, and left justification of paragraphs. These changes have been made to increase the ability for our diverse audiences to engage with AJET articles, especially when using a range of assistive technologies. The template also reduces the burden on all prospective authors to set up a document with the required AJET formatting. This is intended to reduce the burden on the Associate Editors, Copyeditors and Authors to ensure appropriate formatting prior to publication. All articles published from the start of 2023 will use the new accessible layout and formatting.

The editorials published in 2022 were a continuation of the series started in 2021 focusing on the enhancement of quality and impact in educational technology publishing. The first addressed the issue of authorship practices and resulted in the inclusion of a 'Contributions of authors' section in all AJET articles going forward using the Contributor Roles Taxonomy (CRediT) (Allen et al., 2019; NISO, 2022). The second looked at how to optimise the choice of keywords to increase the discoverability of articles by the research community. In the third editorial, the Lead Editors explored the reasons why weird ideas persist in educational technology and put out a call to action for more evidence-informed approaches. The fifth editorial focused on the translation of research to practice, including the importance of the 'Implications for practice or policy' section included at the start of every AJET article. The lead editors plan to continue this series into 2023 to explore other topics of relevance to publishing in educational technology and to serve as a way to build academic capacity in research and publishing more broadly.



# The opportunities and challenges in the future of academic publishing in educational technology

It is clear from the bibliometrics presented in this editorial that AJET is a well respected and impactful journal in the field of educational technology research. To remain current and relevant within the broader academic publishing environment it is important that the editorial team observe and engage with the trends that are emerging across the field. Some of these trends provide great opportunities to improve the reach, accessibility, and impact of the research that AJET publishes, while others could threaten the quality and integrity of journals such as AJET in their goal of providing new and innovative research to the community.

The number of journals publishing in the field of educational technology has continued to increase over time. Table 4, above, shows that there has recently been between a 5% and 6.5% increase each year in indexed journals. While this provides authors with a wider range of outlets to share their research findings, it also puts pressure on editorial teams to find reviewers for the increasing number of papers submitted for consideration (Peterson et al., 2022). This is an issue that has impacted AJET in recent times and the Lead Editor team have been working on ways to encourage reviewers to continue their participation in this process. In 2022, the process by which reviewers are recruited to AJET was refined, and future plans include expansion of recognition of review contributions to the journal.

This increase in journals and submissions, and corresponding decrease in available reviewers, is situated within an environment in which multiple models of peer review are emerging and being implemented across different academic publications (Gonzalaz et al., 2022; Kaltenbrunner, et al., 2022). One model is open peer review where reviews are published alongside articles in the interest of transparency and professional development. There is an ongoing debate about whether this approach could undermine the validity of review outcomes in academic journals, especially if reviewers are uncertain about including negative comments in a review that is to be made public (Bianchi & Squazzoni, 2022). However, in a recent study it was found that while these open reviews tended to be slightly longer than anonymous reviews (approx. 15%), the outcomes for authors were generally the same (Thelwall, 2022). Other journals such as the Advancing Scholarship and Research in Higher Education journal (owned by one of ASCILITE's partnership organisations - the Higher Education Research and Development Society of Australasia (HERDSA)) offer a group-based review process. In this model, reviewers work together in teams to review an article and provide constructive feedback to authors. The AJET Lead Editors maintain a watchful eye on these developments in the field and, while there are not any immediate plans to change the peer review approach of AJET, will continue to evaluate the value of new approaches to the community that AJET serves.

A worrying trend emerging in academic publishing involves unethical and unsettling practices becoming more common. Driven by an increasing emphasis by institutions on metrics to measure the impact of research, there has been a rise in practices such as ghostwriting, coercive citation, and self-plagiarism (Oravec, 2019). There has also been a rise in predatory journals that take advantage of the pressure on many academics to publish quickly by offering a quick turnaround time for review, often in return for payment. There is evidence that the reviews offered by these journals may sometimes be superficial or non-existent in order for the process to be made as 'efficient' as possible (Teixeira da Silva, 2020). The AJET editorial team are well aware of these concerning practices and are improving processes in order to reduce the risk of unethical research getting through the AJET review process. These include the new requirement for contribution to authorship to be clearly stated (Thompson et al., 2022), the inclusion of details of research ethics obtained for empirical studies involving human participants, and the introduction in 2023 of the CrossRef system to check for academic integrity issues in submissions.

AJET has always prided itself on being an open access journal, which means that authors do not have to pay any fees in order for their research to be published in a way that is accessible to everyone. The rise in the number of journals now implementing an article processing charge (APC) is having an impact on the academic publishing field (Zhang et al., 2022). Large publishers are now offering differentiated fees on the basis of how long an author is willing to wait for a review. APCs are problematic for many researchers who may not have access to the funds necessary to finance such a service, especially those from developing



countries where the cost of an APC could outweigh a team's entire research budget (Taubert et al., 2021). The generous support from the professional society that oversees AJET (ASCILITE) means that the journal can currently sustain its operation without the need for APCs, however, as these become more prevalent in other journals it will be important to consider the impact this may have on the timelines for article review and the availability and willingness of reviewers.

Another important trend for the AJET editorial team to watch closely is the improvement in the ability for artificial intelligence (AI) to play a role in academic publishing. AI can be used to improve processes associated with journal review including the initial triaging of articles to check for scope, the selection of appropriate reviewers for the topic/methodology of the research, and the performance of copyediting checks to ensure that articles contain all required information for publication (Burley, 2021). There have even been suggestions that AI could generate reviews for papers, which would substantially reduce the time articles would spend in the review process. However, at the same time, concerns are surfacing about the gradual removal of people from the journal review process and the impact this may have on the quality and validity of research being published (Gendron et al., 2022). In parallel with the discussions currently underway in relation to the academic integrity issues of students usings AI to generate their assessments (e.g., Kovanovic, 2022; Roe & Perkins, 2022), there are questions being raised about the use of AI in the research process. For example, is it ethical for AI to be used to generate the text for academic articles? The AJET editorial team will continue to monitor questions like this to determine the role AI may have in relation to the journal in the future.

The academic publishing environment is evolving and the AJET editorial team are keen to track these changes so that the journal can adapt. In 2022 the team has focused on improving internal processes to better align the journal with international standards for quality and integrity. In 2023 we will continue to work on ensuring that the review process can respond to the increase in unethical practices by some authors, and work to help Associate Editors and reviewers to identify matters of concern. We continue our commitment to open access and to open science, and will work with the community to ensure that AJET remains relevant, useful, and a key resource for the development of research expertise in the field of educational technology.

#### **Author contributions**

**Linda Corrin**: Conceptualisation, Writing - original draft, Writing - review and editing; **Jason Lodge**: Writing - review and editing; **Kate Thompson**: Writing – review and editing.

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