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## Learning Analytics: Practitioners, Take Note

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# Learning Analytics: Practitioners, Take Note

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## 1. Fostering the Dialogue Between Learning Analytics Researchers and Practitioners

From its early days, the Learning Analytics community has dedicated considerable efforts to opening communication avenues between researchers and practitioners. As early as 2012, at the Second International Learning Analytics and Knowledge conference (LAK'12), there were Design Briefing submissions dedicated to people who 'spend more time building learning analytics tools than writing about them' ([LAK12 CFP](#)). Since then, at every LAK conference, design briefings have been assigned a variety of different names but have always co-existed with more traditional, research-oriented submissions. In a similar manner, from its inaugural issue, the *Journal of Learning Analytics* has included a section, originally called 'Hot Spots' and now 'Practical Reports', that highlights the work of practitioners in the field.

From the start, the objectives of this deliberate mixture have been to inform researchers of the ideas that are successfully applied in educational institutions, and to provide practitioners with a direct connection to fresh, evidence-supported innovations. To facilitate this two-way communication between researchers and practitioners, since 2018 each research paper published in the journal has included a 'Notes for Practice' section and, similarly, each practical report begins with a 'Notes for Research' section. Within these bullet-pointed sections, authors summarise the main implications of their work for the respective subcommunity, allowing an easier flow of knowledge and ideas between researchers and practitioners.

For this editorial, we analysed all 'Notes for Practice' published in the journal, from the introduction of this section in issue 5(1) to the issue before this one, 9(2). Our goals were to examine critically the ways in which these notes have been used to foster collaboration between researchers and practitioners, and also to summarise key findings that practitioners can use to inform their work.

### 1.1. Results

Our analysis covered 434 Notes for Practice from 130 different papers. The full dataset used for this analysis is provided as a supplementary file on the journal's website. Each of these notes was coded to identify how the authors used this opportunity to present their work to learning analytics practitioners, and what types of information have been included in those notes.

All notes received one of the following six codes (five main codes plus one special code).

**Starting points (STA):** Authors describe what is already known, their study design, definitions, goals, questions, and / or methodology. This information would usually be more appropriately placed in the abstract or main body of a paper than in Notes for Practice. (Note: in some cases, study findings are phrased in a way that makes them indistinguishable from starting points, especially when Notes for Practice are separated from the main body of the paper).

**Notes for educators (EDU):** Authors describe study findings that can be applied in educational settings (often requiring support from a technician or data analyst) to improve or change teaching and learning practice.

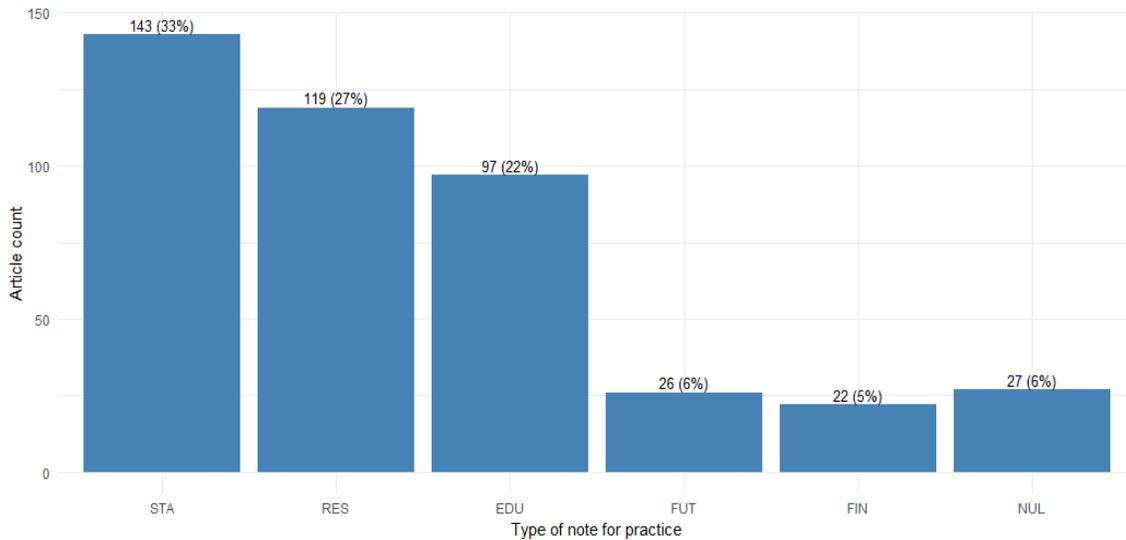
**Descriptions of findings (FIN):** Authors describe findings that apply to their research context, but would require additional investigation to be generalisable or transferable across contexts.

**Notes for other researchers and/or developers (RES):** Authors provide information that will help future researchers. This includes findings to build on, guidance about methodology, or potentially fruitful areas for future research.

**Tentative conclusions (FUT):** Pointers to the need for more work, cases where a lot of work would be needed to implement these ideas, and / or suggestions for things that could happen in the future.

**Papers with no notes (NUL):** This code was applied to papers without Notes for Practice, usually editorials or responses to other papers.

As Figure 1 shows, a third of the Notes for Practice are used to state starting points, thus serving as secondary abstracts in which the context of the research is summarised or re-explained. Around a quarter (22%) of the notes are directed towards practitioners (EDU) and slightly more (27%) include findings of interest mainly to other researchers (RES). The remaining 11% of valid notes are divided almost equally between research findings (FIN) and future research directions (FUT). In summary, these results point towards a general misuse of Notes for Practice, given that *only 22% describe research results or findings that are ready to be exploited in real educational settings*.



**Figure 1.** Distribution of codes in the 434 Notes for Practice published in the *Journal of Learning Analytics*

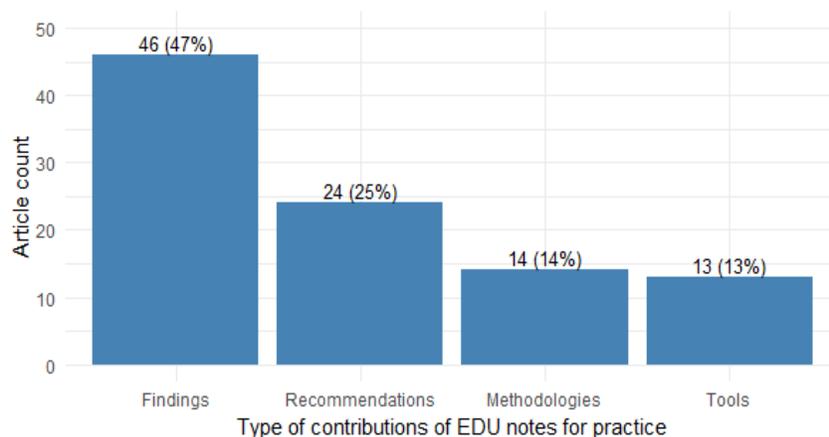
As a follow-up analysis, we examined the 97 Notes for Practice that describe relevant findings for practitioners and educators (EDU), dividing these notes into four groups:

**Findings:** These notes report study results without any clear indication as to how they could be used. For example: ‘Effective online tutors present statistically significantly more frequent appropriate hint provision and proactive planning behaviours in their sessions.’

**Recommendations:** These notes provide hints on how to use research results in practice. For example: ‘Change terminology regarding early identification systems from survive to thrive, to reflect students’ potential realisation’ (Cukurova et al, 2022).

**Methodologies:** Some notes describe methodological contributions of the study so that it can be readily applied in other contexts. For example: ‘In this article, we identify reasons students drop out and map IA [Institutional analytics] solutions that can inform HEIs’ strategic planning’ (De Silva et al, 2022).

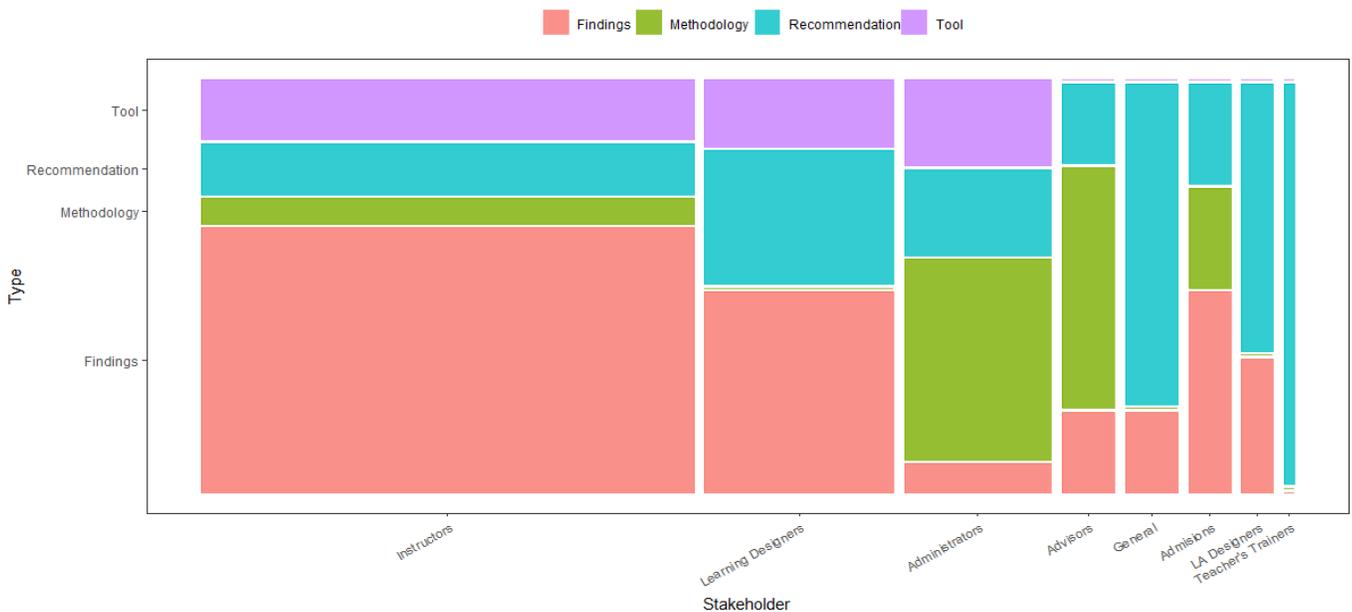
**Tools:** Finally, some of the notes describe a specific tool developed by the researchers that can be used by practitioners. For example: ‘The information mined by the HeuristicsMiner algorithm can be directly used for educational practice (e.g., to script sequences of effective learning activities)’ (Hartmann et al, 2022).



**Figure 2.** Distribution of different types of EDU notes

Figure 2 (above) shows that findings (47%) are the most common type of contribution, followed by recommendations (25%), methodologies (14%) and tools (13%). These results indicate that there is potential for the utility of Notes for Practice to be substantially improved, moving from repetition of findings reported in the paper to making a connection between those findings and the needs of educational practitioners.

We also examined the groups of stakeholders addressed within those notes (Figure 3). Analysis showed that almost half of all EDU notes were directed towards instructors (48%), followed by learning designers (19%) and administrators (14%). Fewer than 5% of notes addressed other stakeholder groups, such as advisors, admissions personnel, learning analytics designers and teacher trainers. The final 5% of the notes did not have a specific target stakeholder and were classified as ‘General’. In the main, instructors were provided with findings, followed by tools and recommendations and, finally, methodologies. A similar pattern was observed for learning designers, except methodological contributions were not provided. This is in clear contrast to administrators, who were mostly provided with methodological contributions, followed by tools and recommendations. Advisors were also mainly provided with methodological contributions, but not with tool contributions. The remaining stakeholder groups and general notes mostly focused on recommendations and, to a lesser extent, study findings.



**Figure 3.** Main stakeholders of Notes for Practice. The width of the bars represents the frequency of each stakeholder, while the colour of bars represents the note type.

Finally, we conducted thematic analysis of Notes for Practice, looking for common topics and themes. Following initial analysis, we consolidated identified topics into known areas of work of Learning Analytics, as shown in Figure 4 (below). We see a wide range of topics discussed, with the key ones being the adoption of learning analytics and identification of students at risk. Other prominent themes include the use of learning analytics for assessment, identification of confusion, video analysis, and learning analytics design.

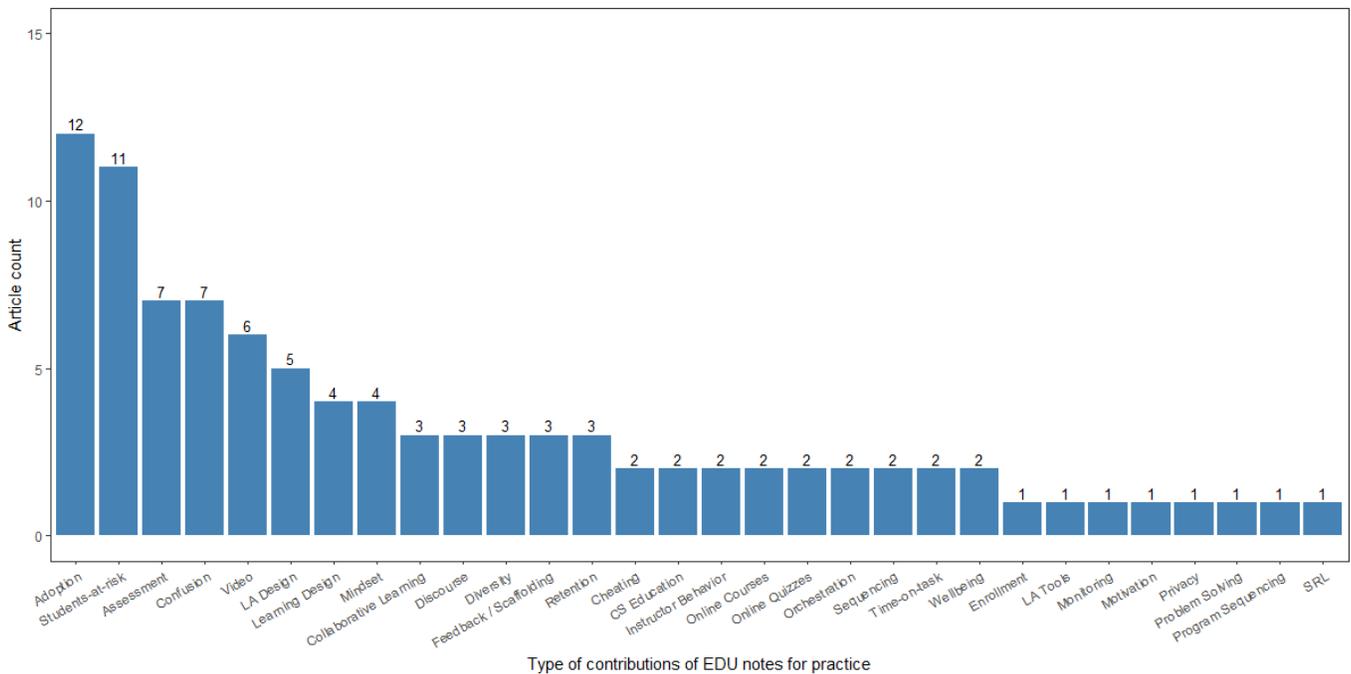


Figure 4. Distribution of themes across the 97 notes in the ‘Notes for educators (EDU)’ group.

## 1.2. Discussion

While the intention of Notes for Practice is to provide practitioners with take-away messages that they can readily adopt, we see that more than half of them are dedicated to stating the current state of research and reporting study findings. Only about a quarter are dedicated to educators and improving their practice. This is likely to be because authors treat Notes for Practice as abridged paper summaries, using them to describe the current state of the literature, provide summaries of findings, and then, depending on the context, provide practical recommendations and / or describe tools and methodologies. With the goal of fostering collaboration between researchers and practitioners within the field of Learning Analytics, it is critical that researchers move to providing summaries of their work that take into account practitioner perspectives, focusing on how this work can contribute to teaching practice.

Within the subset of Notes for Practice that are directed at educators and can be applied in educational settings, over half are directed towards instructors and learning designers, who are also provided with study findings and, to a much lesser extent, recommendations and tools. In contrast, methodologies are by far the most common type of note directed towards administrators and advisors, probably due to their involvement with the institutional adoption of learning analytics. Administrators, but not advisors, are also provided with tool descriptions, which is likely to be due to their involvement in the decision-making processes around tools and digital infrastructures.

Finally, we also see that – while the topics of Learning Analytics papers are very diverse – a significant proportion of papers focus on at-risk prediction and adoption of learning analytics, signaling an early stage of Learning Analytics development in the majority of educational institutions. Interestingly, we also see a strong interest in assessment, detection of student confusion and video analytics. With the rapid changes in educational systems and broader adoption of intelligent technologies, there is an urgent need to re-examine modern assessment practices and the roles such technologies play in modern learning. In this area, learning analytics can help collect relevant data for evaluating student engagement with intelligent technologies, providing novel insights into the ways they interact with those technologies. In the future, we hope to see stronger emphasis on assessment, as well as on learning design studies

## 2. Overview of the Past Year

### 2.1. Changes to the Editorial Team

The past year has been a time of change for the journal, with one set of editors-in-chief replaced by another in a phased transition. One by one, Alyssa Friend Wise, Simon Knight and Xavier Ochoa have stepped back, to be replaced by Rebecca Ferguson, Vitomir Kovanović, and Olga Viberg. Early in 2023, Hassan Khosravi will complete the new editorial team. Our

thanks to the outgoing editors, who have done a marvellous job of establishing the journal as one of the foremost places to publish work on Learning Analytics. One of their achievements has been to meet the demanding criteria for the journal to be indexed. It currently appears on Clarivate Journal Citation Reports with a Journal Citation Indicator (normalised citation count) of 1.90, reaching position 61 of 743 journals indexed in the Education & Educational Research category. In Scopus, the *Journal of Learning Analytics* has a CiteScore (average number of citations per document published) of 6.0 for 2021, and is on track to rise above 8.0 in 2022. The journal is currently in the 93rd percentile in Social Science/Education with a rank of 89 out of 1,406 journals in the category.

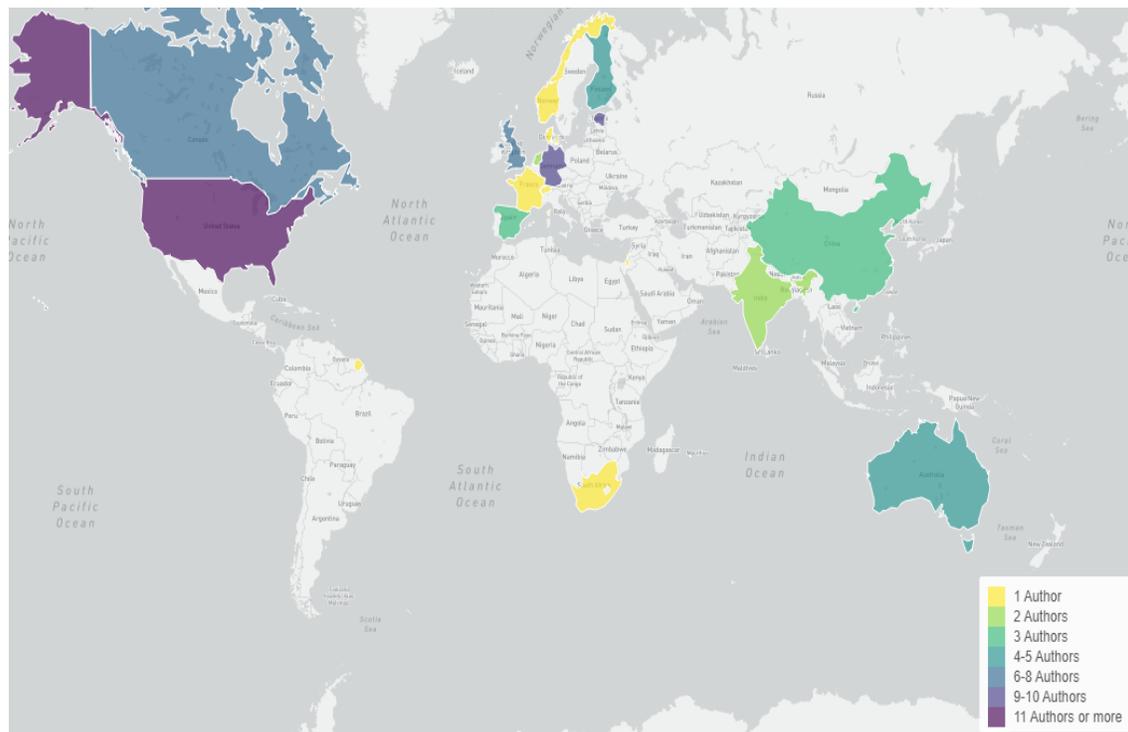
**2.2. Submission Overview**

**Table 1.** Journal publication statistics for the last five years

	2017– 2018	2018– 2019	2019– 2020	2020– 2021	2021– 2022
Received during the year	63	85	82	93	115
Accepted during the year	28	30	19	33	29
Acceptance rate	57%	36%	44%	23%	12%
Declined (desk reject)	1	16	24	56	70
Declined (desk reject) rate	3%	25%	32%	63%	76%
Declined (after review)	23	21	29	22	15
Declined (after review) rate	40%	39%	24%	14%	12%

*Note: Papers received during one calendar year may be accepted or rejected in the following calendar year. Some papers received in 2022 were still under review when these figures were generated (14 December 2022).*

During the last calendar year, the journal received 115 submissions. During the same period, 70 submissions were not sent out for review and instead received a ‘desk reject’ from the journal editors. In most cases, the reason for the desk reject was that the papers did not focus on learning analytics, or did not show awareness of existing learning analytics research in their subject area. While final decisions are pending on several papers currently under review, 15 papers sent out for review were declined and 29 have already been published, with an overall acceptance rate in this calendar year of 12%.



**Figure 5.** Geographical distribution of authors of papers published in the *Journal of Learning Analytics* from 1 January 2022 to 29 November 2022.

The journal has continued its regular cycle of three issues a year, published in spring, late summer, and winter. Volume 9 began with a special issue on Networks in Learning Analytics edited by Bodong Chen and Sasha Poquet. This included eight papers approaching the theme from a variety of perspectives, written by 19 authors based in seven countries in Asia, Europe, and North America. The August issue (9.2) included research papers, practical reports, an extended conference paper and a data/tool report. Its 51 authors came from 14 countries across Africa, Australasia, Europe, and North America. By the end of November, five of the papers for the current issue (9.3) had been published early access, and the 18 authors came from four countries in Asia, Europe, and North America. Three authors were named on more than one paper, meaning the total number of individual authors was 84, based in 18 different countries, which are shown in Figure 5 (above) and Table 2.

**Table 2.** Countries where authors of papers published in the *Journal of Learning Analytics* from 1 January 2022 to 29 November 2022 were based.

Country	Authors	Country	Authors	Country	Authors
Australia	5	France	1	Singapore	1
Canada	7	Germany	9	South Africa	1
China	3	India	2	Spain	3
Denmark	1	Israel	1	Switzerland	1
Estonia	9	Netherlands	2	United Kingdom	7
Finland	5	Norway	1	United States	25

In addition to the outgoing editors-in-chief, thanks go to the others who played key roles in making the journal a success, particularly to the journal’s editorial assistant Sameen Reza, the copy editors and production editors. Thank you to the Society for Learning Analytics Research (SoLAR) for providing the funding to make this a truly open access journal that does not charge for submission, publication, or access. Special thanks go to our reviewers, who have taken on this vital work in a year that has been full of challenges for academics.

### 3. A Look Ahead to Next Year

As the current year comes to an end, we are looking forward to exciting new research. Volume 10 of the journal, to be published in 2023 will begin with a special section on Fairness, Equity and Responsibility in the March issue. The August issue will include extended papers from the learning analytics symposium that took place at the 26<sup>th</sup> International Conference on Information Visualisation (IV22), which was held this year in Vienna.

August will also see the appearance of a new type of paper, the **Open Peer Commentary**. To promote cross-community dialogue on matters of significance within the field of Learning Analytics, the journal now welcomes proposals in the form of abstracts for papers that will be opened for peer commentary. Once an abstract has been accepted, a date will be agreed for submission of a full paper. On submission, these papers will undergo review by the journal editors and light-touch, single-blinded review for relevance and soundness. If accepted, a paper in this category will be shared as a pre-print, together with a call for commentary proposals.

Commentary proposals can be submitted by anyone who reads the preprint. Invitations to comment will also be sent to scholars whose work is discussed in the paper and to commentators suggested by authors and editors. A maximum of ten of these proposals will be accepted, with selection taking into account many factors, including different areas of expertise, different perspectives, and other aspects of academic diversity. Successful proposal authors will be invited to submit a full commentary by an agreed deadline. Paper and commentaries will be published together in the same journal issue. Full details of this process are available in the journal’s [Focus & Scope](#) section. In addition, editors and authors will be running a panel session at LAK23 to introduce this type of paper.

2023 will also be a time for considering the creative commons licence used by the journal. In line with our policy on openness, papers up to this point have been published under a Creative Commons License, Attribution – NonCommercial-NoDerivs 3.0 Unported ([CC BY-NC-ND 3.0](#)). This means anyone is free to copy and redistribute papers published in the journal, as long as they give appropriate credit and provide a link to the full licence. However, if they remix, transform or build upon the paper, they may not distribute the modified material. They are also not permitted to use the paper for commercial purposes. This conflicts with the open access policies of grant-awarding bodies that require a CC-BY licence – for example, the current licence is not compliant with grants from the UK’s Research and Innovation body (UKRI). Horizon Europe funding comes with an explicit obligation to license the publication ‘under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a licence with equivalent rights’ (European Commission, 2022, p. 110). As a result, we shall be looking at the possibility of moving to a CC-BY licence in future.

## 4. Conclusion

2022 marked a new page for JLA: a fresh editorial team has taken the helm; favourable rankings position the journal as a top venue for educational research; the number of submissions and the quality of published papers keep growing. However, this new phase also brings new challenges: to better connect research with practice, to attract quality work from non-traditional research countries, and to expand to accommodate different types of relevant academic conversation. To fully exploit these new opportunities and confront these new challenges, journal editors will turn to the Learning Analytics community for ideas, inspiration, and contributions. Be ready to be part of the future of the JLA.

## Declaration of Conflicting Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, or publication of this paper.

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