Writing Analytics Workshop

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Abstract

Critical and reflective writing is not only central to education and the workplace, but also a lifelong citizenship skill necessary for effectively engaging with society. A large majority of academic disciplines focus on the development of learners' skills in critical review, conceptual synthesis, reasoning, and disciplinary/professional reflection. In these subjects, writing arguably serves as the primary window into the mind of the learner. Huge effort is invested in literacy from the earliest schooling, extending into higher education. Yet educators and employers alike recognize the challenge of cultivating this ability, with poor written communication skills a common cause of complaint.

Extending beyond scholarly academic writing, many educators also have a keen interest in disciplined, autobiographical, reflective writing as a way for students to review and consolidate their learning, thus providing a means for assessing the deepest kinds of shifts that can occur in learner agency. Such approaches are also common in the training and development of professional reflective practitioners. Writing is, however, time consuming, labor-intensive to assess, difficult for students to learn, and not something that all educators can coach well, or even consider to be their job.

It is in addressing these systemic limitations that Writing Analytics is attracting significant educational interest and commercial investment. Broadly defined, writing analytics involves the measurement and analysis of written texts for the purpose of understanding writing processes and products, in their educational contexts. Writing analytics are ultimately aimed at improving the educational contexts in which writing is most prominent.

Format

This is an introductory workshop for a general audience, using a combination of briefings on the current state of the art, examples of how such tools are being used, live demos of some tools, and hands-on experience using examples of writing that participants bring, to provoke reflection and discussion on how such tools can be deployed effectively in different contexts.

Audience

This workshop will be of interest to ALASI delegates including: researchers actively engaged in text analytics of some form, or writing analytics specifically; educators in schools, universities and businesses; leaders and policymakers; and companies active or potentially active in the field.

As the first workshop devoted to this topic at ALASI, it will also serve as a community-building event. Participants should leave with a clearer sense of the range of purposes for which Writing Analytics may be deployed, the state of the art in what is possible, criteria and methods for evaluation, and organizational adoption issues.

Workshop chairs

Simon Buckingham Shum is Professor of Learning Informatics at the University of Technology Sydney, where he directs the Connected Intelligence Centre. His research focuses on learning analytics for higher order competencies such as academic writing, argumentation and learning-to-learn. He served as LAK12 Program Co-Chair, and co-chaired the LAK13/14 workshops on Discourse-Centred Learning Analytics.

Simon Knight is a Research Fellow in Writing Analytics at the Connected Intelligence Centre, University of Technology Sydney. His research focuses on the relationship of analytics to epistemology, pedagogy and assessment, discourse analytics, and epistemic cognition, particularly around information seeking, work which has been presented at LAK and ICLS. He co-chaired the ICLS14 Workshop on Learning Analytics for Learning and Becoming in Practice and LAK15 Workshop on Temporal Analyses of Learning Data.

Andrew Gibson is a doctoral candidate and sessional academic in the Information Systems School at the Queensland University of Technology (QUT), Brisbane. His research focuses on reflective writing analytics for psychosocial meaning, and he has written software that utilise a range of natural language processing and machine learning techniques for this purpose. With an additional interest in transdisciplinarity, he works across both educational and computational domains. His work has been presented at LAK14 and LAK15 as well as local educational conferences.

Philippa Ryan is a Barrister, and Lecturer at the University of Technology Sydney, bringing expertise in commercial equity, in particular the liability of third parties to a breach of trust. She has a keen interest in improving the learning experience of Law students, particularly the quality of their writing, and has been piloting the UTS writing analytics tool.

What to bring with you

You will need your own laptop which can access the higher education EDUROAM network, else own network, plus one or more samples of writing you would like to analyse for reflection and discussion. This may be conventional academic writing (3rd person, critical, scholarly tone), or reflective writing (more autobiographical, professional reflection on self and subject). It might writing from a student at any level of interest to you, from undergraduate to PhD. And/or it might be your own writing.

Background resources

A blog post from LAK15 reflecting on the emergence of writing analytics:

http://simon.buckinghamshum.net/2015/03/writing-analytics-lak15-panel

The following represent the organisers' research in this field:

Gibson, A. and K. Kitto (2015). Analysing reflective text for learning analytics: an approach using anomaly recontextualisation. *Proceedings of the Fifth International Conference on Learning Analytics And Knowledge*, Poughkeepsie, New York, ACM. http://dx.doi.org/10.1145/2723576.2723635

Knight, S. and K. Littleton (2015). Discourse-centric learning analytics: mapping the terrain. *Journal of Learning Analytics*, 2 (1), pp. 185-209. https://epress.lib.uts.edu.au/journals/index.php/JLA/article/view/4043

Simsek, D., Á. Sándor, S. Buckingham Shum, R. Ferguson, A. D. Liddo and D. Whitelock (2015). Correlations between automated rhetorical analysis and tutors' grades on student essays. *Proceedings of the Fifth International Conference on Learning Analytics And Knowledge*, Poughkeepsie, New York, ACM. http://dx.doi.org/10.1145/2723576.2723603. Open Access Eprint: http://oro.open.ac.uk/42042

Knight, S., S. Buckingham Shum and K. Littleton (2014). Epistemology, assessment, pedagogy: where learning meets analytics in the middle space. *Journal of Learning Analytics*, 1, (2), pp. 23-47. https://epress.lib.uts.edu.au/journals/index.php/JLA/article/view/3538

Simsek, D., S. Buckingham Shum, Á. Sándor, A. De Liddo and R. Ferguson (2013). XIP Dashboard: Visual Analytics from Automated Rhetorical Parsing of Scientific Metadiscourse. *1st International Workshop on Discourse-Centric Learning Analytics, at 3rd International Conference on Learning Analytics & Knowledge*, Leuven, BE (Apr. 8-12, 2013). Open Access Eprint: http://oro.open.ac.uk/37391