VISLA15: 1st international workshop on Visual Aspects of Learning Analytics

organized at the 5th international Learning Analytics and Knowledge conference (LAK15)

The use of visualization techniques for learning is not new. For instance, visualizations have been used in maps and drawings for thousands of years. In a learning analytics context, the application of information visualization techniques can help both teachers and learners to explore and understand relevant user traces that are collected in various (online) environments and to improve (human) learning. The goal of our workshop is to build a strong research capacity around visual approaches to learning analytics. The longer term goal is to improve the quality of learning analytics research that relies on information visualization techniques.

Each contribution to the workshop explicitly addressed the following items:

1. What kind of data is being visualized? What tools were used to clean up the data (if any)?
2. For whom are the visualizations intended (learner, teacher, manager, researcher, other)?
3. How is data visualized? Which interaction techniques are applied? What tools, libraries, data formats, etc. are used for the technical implementations? What workflow and recipe was used to develop the visualization?
4. Why are the chosen visual approaches applied (i.e. rationale behind the application of a visualization)?
5. How has the approach been evaluated or how could it be evaluated?
6. What were the encountered problems and pitfalls during the visualization process?

The workshop is intended for anyone who is using, or is interested in visualization techniques to support learning analytics. The goal of our workshop is to build a strong research capacity around visual approaches to learning analytics. The longer term goal is to improve the quality of learning analytics research that relies on information visualization techniques.

During our 1-day workshop, we aimed to facilitate a very interactive and engaging event where we wanted to avoid death by powerpoint by all means and promote discussion activities over presentational ones. In the first half of the workshop, we therefore asked participants to shortly present the work of another submission and to relate it back to their own work.

During the second half of the workshop, we invited the participants to share their tools, workflows and recipes in a hands-on discussion session so that they could benefit from

each others' knowledge, apply their visual approaches on either their own dataset or on a dataset that we provided.

Finally, we moved the discussion to the final topic of the workshop, which is the development of the equivalent of the VAST challenge for learning[1], which was linked back with the LAK14 and LAK15[2] data challenge:

"The annual Visual Analytics Science and Technology (VAST) challenge provides Visual Analytics researchers, developers, and designers an opportunity to apply their best tools and techniques against invented problems that include a realistic scenario, data, tasks, and questions to be answered. Submissions are processed much like conference papers, contestants are provided reviewer feedback, and excellence is recognized with awards. A day-long VAST Challenge workshop takes place each year at the IEEE VAST conference to share results and recognize outstanding submissions."

The VISLA15 organizers
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Martin Wolpers, Fraunhofer-Institute for Applied Information Technology FIT, Germany
Abelardo Pardo, University of Sydney, Australia
Sten Govaerts & Denis Gillet, EPFL, Switzerland
Xavier Ochoa, ESPOL, Ecuador
Denis Parra, PUC, Chile

[1] K. Cook, G. Grinstein, and M. Whiting. The vast challenge: history, scope, and outcomes: An introduction to the special issue. Information Visualization, 13(4):301–312, 2014.

[2] H . Drachsler, S. Dietze, E. Herder, M. d'Aquin, and D. Taibi. The learning analytics & knowledge (lak) data challenge 2014. In Proceedings of the Fourth International Conference on Learning Analytics And Knowledge, LAK '14, pages 289–290, New York, NY, USA, 2014. ACM

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