Convenors and/or Presenters

Dr. Rasha Essam

Workshop Title

Data Visualisation: Visualise your data by connecting to the universe

Note: The term "the universe" here is used in order to highlight that the visuals which the attendees will use in order to represent their analysed data are related to the universe/life making it easier for readers to relate and understand, leading to faster and more accurate decisions that can affect their findings and conclusions while doing research studies.

Workshop Description

The planned contents of the workshop and the way participants are intended to engage:

- Data visualisation examples will be presented for asking participants to interpret and draw conclusions from.

- The advantages of data visualisation will be highlighted.

- A comparison between good and bad data visualization will be highlighted.

- Participants can bring their own data to work with, and/or they can work with the presenter's data in order to analyse and represent data in a visual format.

- All participants need to bring with them their laptops and have Microsoft PowerPoint installed on it.

Intended Audience

All researchers who want to analyse and represent their data visually for the ease of processing, understanding, learning, and quick decision making.

Participant Engagement

Participants will be engaged in two types of activities for the interpretation and visualisation of data. That will be done by providing graphically illustrated icons that are designed and developed by the presenter and given for free to all participants to help them in visualising complicated data easily. The icons are related to familiar visuals which they used to see every day in the universe/life, so that when they represent the data through these icons, readers can understand them quickly and relate. These icons are provided by the presenter and will be shared with all attendees for free.

Participant Outcomes

Participants will be able to: 1) interpret different types of visually-represented data; 2) visualize qualitative/quantitative data; and 3) represent data through visual representations using the icons provided by the presenter.

Workshop Alignment with Conference Themes

The connection between the workshop to networked learning relies in the data representation of data collected in the research studies related to networked learning. Data after being analysed are represented visually for the ease of understanding and decision making. The data are represented in the form of different types of networks that can be further analysed for showing transparency in the meaning behind the connection existing in the analysed data elements. In addition, the two themes that are related to the workshop are:

1. Methods, research design, data and analysis in Networked learning (e.g. phenomenography, social network analysis, ANT and post-ANT)

2. Roles of learning analytics, big data, and artificial intelligence in Networked Learning

Workshop Process/Activities (please provide an indication of how long each activity will last)

The workshop will start with the importance of visualising and representing complex data visually for facilitating the learning and decision-making processes in addition to minimising the word count problem while writing any piece of research. Furthermore, the workshop will include two activities as follows:

1. Visual data interpretation (30 minutes) [The presenter will show different models of data analysed in a visual format. In addition, the presenter will show the difference between good and bad data visualisation that can affect their findings and conclusions further.]

2. Visual data representation (60 minutes) [The attendees will be asked to use the provided icons to represent their own data or the data provided by the presenter. The presenter will act at this stage as a facilitator in order to provide feedback and answer questions.]

3. Closure (15 minutes) [All attendees' data representations will be shared among each other for feedback from each other.]

Workshop proposal for Networked Learning Conference

Convenors and/or Presenters
- Dr. Jen Ross, Senior Lecturer in Digital Education, University of Edinburgh
- Dr. George Veletsianos, Professor and Canada Research Chair in Innovative Learning and Technology

Workshop Title
What's the future like? Speculative Methods in Networked Learning

Workshop Description
The goal of this workshop is to introduce participants to speculative methods and explore their application to the field as a way of imagining potential futures and scenarios for learning, design, and technology. We define speculative methods as "research approaches that explore and create possible futures under conditions of complexity and uncertainty" (Ross, 2018). We aim to facilitate a broader conversation regarding the future of technology and networks in education through the exploration of the use of speculative methods as research methodologies.

Recent years have seen increased interest in and discussion of education futures. Some of the emergent discussions include conversations around how technologies manifest themselves in our daily lives and educational experiences (Aagaard, 2018), and what may be appropriate pedagogies to equip learners for the future economy (Facer & Sandford, 2010). As Ross (2017) argues, envisioning futures also "inform[s] us about what matters now in the field, what issues and problems we have inherited and what debates define what can or cannot be currently thought about or imagined" (p. 220).

Considering that the current state of education, at all levels, is situated within a context of ever-evolving social, cultural, political, and technological shifts, there is a need for networked learning scholars and practitioners to explore various ways that they can imagine and design future potentials and realities. The use of speculative methods enables researchers to ascertain and discern between probable, possible, and preferable trajectories (Bell, 2017) to offer evidence-based guidance when making current decisions related to networked learning, and to explore what may or may not be possible in their own contexts. They also give us tools for taking critical perspectives on the nature of the future itself, and how we think about and work towards particular education futures (Facer 2016). In prior iterations of this workshop (Veletsianos, Belikov, Johnson, 2019), participants appreciated being able to think creatively about the future and identify micro, meso, and macro obstacles to reaching them.

Intended Audience
Individuals interested in critically exploring and designing education futures. These include students and academics (who may be interested in applying this method to their scholarship), and practitioners such as learning designers or administrators (who may be interested in using this method in institutional change-making efforts). This workshop is appropriate for anyone with an interest in designing and developing learning environments, creating new learning experiences, exploring the opportunities and challenges created by new or current technologies, leading conversations at their institutions around potential futures for their programs and departments, and exploring a variety of other potential futures for their work and scholarship.

Participant Engagement
The workshop is divided into 3 sections.

The first section will involve a presentation of foundational knowledge necessary for the application of speculative methodologies. Participants will learn about the theoretical background of futures and anticipation studies, types of speculative methods that have been applied to previous studies relevant to educational technologies, and the benefits and limitations of this research approach.

The second section will invite participants to apply speculative methodologies in order to imagine future scenarios for a topic that they are interested in. Participants will be divided in small interest-based groups and will use creative approaches to individually and collaboratively develop and discuss future scenarios. Scenarios may explore educational issues including datafication, privacy, augmentation, presence, interaction, and post-digital networks in the context of global challenges and issues.

The third section is a culminating discussion in which participants will be asked to share what they discovered during the prior activity along with how they could apply speculative methodologies to their research practice based on their current interests. Within this critical discussion we will challenge participants to reflect on their own biases and consider what drives their speculative exploration. We will also invite participants to share any experiences they have had with these methodologies, as well as explore potential difficulties and methodological decisions that may need to be addressed as we implement these technologies.

Participant Outcomes
By the end of the workshop, participants will
- develop a foundational knowledge of speculative methods
- develop a speculative scenario
- investigate how speculative methods apply to their own practice

Workshop Alignment with Conference Themes
The workshop explores the use and application of an emerging research method in networked learning, and aligns with the following conference themes:

- Theories, methodologies, and design for Networked Learning
- Methods, research design, data and analysis in Networked learning (e.g. phenomenography, social network analysis, ANT and post-ANT)
- Philosophy and educational technology
- Networked learning literacy and agency
- Debates and emerging issues in networked learning (e.g. postdigital education, computational thinking, online activism)

Workshop Process/Activities (please provide an indication of how long each activity will last)

Time in minutes	Activity
10	**Welcome & Introductions**

	Round Robin intros
15	**Presentation:** Share foundational knowledge on speculative methods
40	**Small-group discussions and activities**
10	**Break**
30	**Large-group discussions**
5	**Closing**

References

Aagaard, J. (2018). Magnetic and multistable: Reinterpreting the affordances of educational technology. *International Journal of Educational Technology in Higher Education, 15*(1), 4.

Bell, W. (2017). *Foundations of futures studies: History, purposes, and knowledge* (Vol. 1). New York: Routledge.

Facer, K. (2016). 'Using the Future in Education: Creating Space for Openness, Hope and Novelty', in Lees, H. E. and Noddings, N. (eds) *The Palgrave International Handbook of Alternative Education*. London: Palgrave Macmillan UK, pp. 63–78.

Facer, K. & Sandford, R. (2010). The next 25 years?: Future scenarios and future directions for education and technology. *Journal of Computer Assisted Learning, 26*, 74-93.

Ross, J. (2017). Speculative method in digital education research. *Learning, Media and Technology, 42*(2), 214-229, DOI: 10.1080/17439884.2016.1160927

Ross, J (2018). Speculative Method as an Approach to Researching Emerging Educational Issues and Technologies. In L Hamilton and J Ravenscroft (eds) *Building Research Design in Education.* London: Bloomsbury.

Veletsianos, G., Belikov, O., Johnson, N. (2019). Speculative Methods in Learning, Design, and Technology. Association for Educational Communications and Technology International Convention (AECT), October 2019, Las Vegas, NV.