

Alexander Whitelock-Wainwright

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Education and Qualifications

2019-

Research Fellow, Monash University

Working with Monash Education Innovation to implement learning analytics at an institutional level:

- Created an R package to improve access to University database systems.
- Supported the implementation of On-Task personalised feedback system across the University:
 - o Created a pipeline to extract data to inform feedback rules
 - o Communicated with stakeholders to setup workshops to support software system
- Analysed University activity offerings to identify changes in learning activities offered to students.
- Analysed survey data and log data to provide an evidence based to evaluate University implementations.
- Created Shiny apps to streamline data processing.

2015 – 2018

PhD student in Psychology, University of Liverpool

Supervisor: Professor Dragan Gasevic

Thesis Title: *What do students want? Towards the Development and validation of an Instrument to Measure Student Expectations of Learning Analytics*

Synopsis of Research:

The overarching aim of my PhD project is to develop and validate an instrument to measure student expectations of learning analytics services. This initially involved a comprehensive review of the learning analytics literature to identify themes from which items for the instrument could be based upon. After this step, the instrument was subject to peer review from experts in learning analytics, piloted, and then distributed at six universities in Europe. A further four institutions from Latin America intend have distributed this survey in their pursuit of implementing learning analytics, with another four to five institutions seeking to use the survey elsewhere. The data collected has been subject to exploratory factor analysis, confirmatory factor analysis, exploratory structural equation modelling, and factor mixture modelling. This was undertaken with the intention of refining the instrument to a small number of reliable items, assessing the scale validity across cultures, and identifying possible sub-groups based on the propensity to endorse the questionnaire items.

2012-2015

Psychology BSc, University of Liverpool (1st class degree with honours)

Several modules which include Personality and Social Psychology, Professional Skills in Psychology, Perception and Memory, and Behavioural Neuroscience.

Final year Qualitative Research Project: *'An exploration of the effects of widowhood on familial relationships.'*

Synopsis of Research:

The aim of the research project was to understand how familial relationships change as a result of bereavement. Research shows that within the immediate months that follow the loss of a spouse, family members become highly involved in the widow/widower's life. This usually involves the family member (son or daughter) taking on those responsibilities normally undertaken by the now deceased spouse (e.g., cleaning, gardening, etc.). With time, these family members become less involved as the widow/widower places greater emphasis on relationships with friends and associates. The work I carried out found support for the above changes in relationships following loss. In order to do this, I adopted a qualitative approach (grounded theory), which involved the creation of an interview protocol, recruitment of respondents in the wider community, and coding of transcripts. This was then written in the form of an academic journal, which was awarded a first.

Employment History

2018	Research intern for Itza Media, London <ul style="list-style-type: none"> Developed an instrument to measure parent beliefs towards educational technology. Fed back findings obtained from the instrument to key stakeholders. Conducted a literature review of children's use of technology for education purposes
2015-Present	Learning Analytics Research Consultant, University of Edinburgh <ul style="list-style-type: none"> Developed and validated a staff and student survey for European funded SHEILA (Supporting Higher Education to Integrate Learning Analytics) and LALA (Latin America Learning Analytics) projects. Collaborated as a team in arranging distributions and translations of the survey. Interacted with partners and various stakeholders to provide a survey that met the requirements of the project. Undertook an exploratory sequence analysis of trace data to assess the relationship between psychological variables and learning behaviour.
2015-2018	Monitor, Laureate, University of Liverpool <ul style="list-style-type: none"> Assess the quality of the modules for the online Psychology postgraduate course. Read student feedback for the module and fed back any issues to the director of studies.
2015-2018	Lecturer and Marker, University of Liverpool <ul style="list-style-type: none"> Lectured on the Applying Psychology to the Real World undergraduate module. Lectured on the Health and Ageing undergraduate module. Marker for both undergraduate and postgraduate courses for a variety of modules. Marked Academic posters, and poster presentations
2015	Bank Worker, Five Boroughs, NHS England <ul style="list-style-type: none"> Supported nursing staff on various mental health wards. Communicated with service users.
2014	Research Assistant, Health & Ageing, University of Liverpool <ul style="list-style-type: none"> Working with Dr Kate Bennett. Involved in a qualitative research project exploring changes in relationships (friends and family) following bereavement. Used NVivo to code interview transcripts.

Presentations and Invited Talks

- **Whitelock-Wainwright, A. Learning Analytics: An Overview** – Presented at the Learning and Teaching conference, University of Liverpool (20th June 2016)
- **Whitelock-Wainwright, A. Students' intentions to use technology in their learning: The effects of internal and external conditions** – Presented at the Learning Analytics and Knowledge Conference 2017 Doctoral Consortium (14th March 2017)
- **Whitelock-Wainwright, A., Gasevic, D., & Tejeiro, R. 'What do students want? Towards the development of an instrument to measure student expectations of learning analytics'** – Presented at the Learning Analytics and Knowledge Conference 2017, Vancouver (17th March 2017)
- **Whitelock-Wainwright, A., Gasevic, D., & Tejeiro, R. Student Expectations of Learning Analytics** – Presented at the Association for Learning and Technology conference, University of Liverpool (7th September 2017)
- **Gasevic, D., Tsai, Y., Whitelock-Wainwright, A., Drachsler, H., Maren, S., Muñoz-Merino, P., Tammets, K., & Delgado, C. SHEILA Project** – Presented at the Conference on Supporting Higher Education to Integrate Learning Analytics, Brussels (5th June 2018).
- **Whitelock-Wainwright, A., Tsai, Y., Lyons, K., Kaliff, S., Bryant, M., Ryan, K., & Gasevic, D. Disciplinary Differences in Blended Learning Design: A Network Analytic Study.** Presented at the Learning Analytics and Knowledge Conference 2020, Frankfurt (27th March 2020)

Papers in Journals and Conference Proceedings

- **Whitelock-Wainwright, A., Gasevic, D., & Tejeiro, R. (2017). What do students want? Towards an instrument for students' evaluation of quality of learning analytics services.** Proceedings of the 7th International Conference on Learning Analytics & Knowledge. 368-372.
- **Tejeiro, R., Whitelock-Wainwright, A., Perez, A., & Urbina-Garcia, M.A. (2018).** The best-achieving Online Students are overrepresented in Course Ratings. European Journal of Open Education and E-Learning Studies. 3(2).
- **Lim, L., Gentili, S., Pardo, A., Kovanović, V., Whitelock-Wainwright, A., Gasevic, D., & Dawson, S. (2019).** What changes, and for whom? A study of the impact of personalised learning analytics-based feedback in a large course. Learning and Instruction.
- **Fincham, E., Whitelock-Wainwright, A., Kovanović, V., Joksimović, S., van Staaldin, J-P., & Gasevic, D. (2019).** Counting clicks is not enough: Validating a theorized model of engagement in learning analytics. Proceedings of the 9th International Conference on Learning Analytics & Knowledge. 501-510.
- **Whitelock-Wainwright, A., Gasevic, D., Tejeiro, R, Tsai, Y, & Bennett, K. (2019)** The student expectations of learning analytics questionnaire. Journal of Computer Assisted Learning, 35(5), 633-666.
- **Jovanović, J., Gasevic, D., Pardo, A., Dawson, S., & Whitelock-Wainwright, A. (2019).** Introducing meaning to clicks: Towards traced-measures of self-efficacy and cognitive load. Proceedings of the 9th International Conference on Learning Analytics & Knowledge. 511-520.

- **Whitelock-Wainwright, A., Laan, N., Wen, D., & Gasevic, D. (2020).** Exploring student information problem solving behaviour using fine-grained concept map and search tool data. *Computers & Education*. 145.
- **Whitelock-Wainwright, A., Gasevic, D., Tsai, Y., Drachsler, H., Maren, S., Muñoz-Merino, P., Tammets, K., & Delgado, C. (2020).** Assessing the validity of a learning analytics expectation instrument: A multinational study. *Journal of Computer Assisted Learning*.
- **Hilliger, I., Ortiz, M., Pesantez, P., Scheihing, E., Tsai, Y., Munoz-Merino, P. J., Broos, T., Whitelock-Wainwright, A., Perez-Sanagustin, M., (2020).** Identifying needs for learning analytics adoption in Latin American universities: A mixed-methods approach. *The Internet and Higher Education*.
- **Tsai, Y., Whitelock-Wainwright, A., & Gasevic, D. (2020).** The privacy paradox in learning analytics - a case study of student perceptions of privacy and expectations of data usage. *Proceedings of the 10th International Conference on Learning Analytics & Knowledge*.
- **Whitelock-Wainwright, A., Tsai, Y., Lyons, K., Kaliff, S., Bryant, M., Ryan, K., & Gasevic, D.** Disciplinary Differences in Blended Learning Design: A Network Analytic Study. *Proceedings of the 10th International Conference on Learning Analytics & Knowledge*.
- **Whitelock-Wainwright, A., Gasevic, D., Tsai, Y., Drachsler, H., & Maren, S.** Investigating heterogeneity in student expectations towards learning analytics: A factor mixture modelling approach. *Internet and Higher Education*. (Manuscript under review)

Other Skills

- Advanced statistical knowledge including ANCOVA, mixed effects models, and event sequence analysis (Traminer).
- LaTeX
- R programming for data analysis and RMarkdown for communicating findings.
- MPLUS for psychometric analyses
- Factor analysis (exploratory and confirmatory)
- Structural equation modelling (Including exploratory structural equation modelling)
- Latent class analysis
- Latent growth curve analysis
- General mixture modelling
- Alignment method (Measurement invariance)
- NVivo for qualitative data analysis.
- Lecturing experience with undergraduate students.
- Helped set up the first educational psychology journal club in the department.
- Provided drop-in classes for undergraduate students.
- Co-ordinated with members of a research team in the development and distribution of the questionnaire across institutions.
- Knowledge of Python programming language.