

Northumbria Research Link

[Home](#) [About](#) [Browse](#) [Statistics](#) [Contact Us](#)

Using deception to measure the psychophysiology of information literacy

Walton, Geoff, Barker, Jamie, Pointon, Matthew, Turner, Martin and Wilkinson, Andy (2018) *Using deception to measure the psychophysiology of information literacy*. In: LILAC 2018 - 14th Librarian's Information Literacy Annual Conference, 4th - 6th April 2018, Liverpool, UK.

Full text not available from this repository.

Abstract

Deception is often used to great effect in psychology experiments but is not often used in the study of information literacy. This paper describes an experiment involving deception to test 18-24 year old males reactions to mis-information. People aged 18-24 are the most likely users of the Internet (ONS, 2015) and therefore are exposed to mis-information and as a result may develop ill-being, especially via social media use (Booker, 2016). For this reason it was thought appropriate to target this group. Males only were chosen (n=50) because we needed to control for the variability in the ways that males and females use ICT (Ford, 2004).

It is not known to what extent mis-information (e.g., religious extremism) affects the well-being (including psychophysiological responses) of young males" aged 18-24 and to what extent information discernment (i.e., the ability to make complex judgments about information, Walton (2017)) is a protecting factor against ill-being. By employing this "proof-of-concept" experiment it was envisaged that the research team could ascertain whether information discernment moderates the relationship between mis-information and cardiovascular reactivity in stressful social situation(s).

The experiment involved deceiving participants into believing they were taking part in a study where they were helping a fellow student to win a prize. In fact they were given a task that was impossible to complete (to create mild stress) with a fellow student (an actor). Participants filled in a pre-test questionnaire which measured their self-efficacy, information discernment and religiosity. Two physiological measures were taken, eye-tracking to monitor eye movements and cardiovascular responses to monitor heart response using a Finometer. Participants were randomly assigned to one of two conditions (control) or (experimental). In the experimental group participants where further deceived into believing that they were working with someone with extreme religious views (mis-information). The expectation (ie the working hypothesis) was that those who scored highly on the information discernment questionnaire would experience less psychophysiological stress whilst doing the task than those with low information discernment scores.

Results indicate that the working hypothesis is upheld in that there is a strong relationship between information literacy (information discernment in particular), mis-information and cardiovascular responses. In other words between information literacy and psychophysiological well-being in 18-24 year old males. These results have implications for policy makers, educators, the media and society in general especially in the context of the growth in mis-information such as "fake news", especially because it is already known that information discernment can be boosted with appropriate learning and teaching interventions (e.g., Walton, 2017).

For librarians involved in teaching, these results can be used to argue that there is clear evidence for the cognitive and physiological benefits in teaching information literacy. An information literacy teaching intervention and associated assessment rubric that have been shown to improve information discernment will also be presented.

The research group believe that the next step is to involve female participants in order to determine whether information discernment has the same beneficial outcome on females as well as males.

Item Type: Conference or Workshop Item (Paper)

Subjects: [C800 Psychology](#)
[P100 Information Services](#)
[P900 Others in Mass Communications and Documentation](#)

Department: [Faculties > Engineering and Environment > Computer and Information Sciences](#)

Related URLs:

- <https://www.lilacconference.com/events/2...>

Depositing User: [Paul Burns](#)

Date Deposited: 04 Dec 2018 12:37

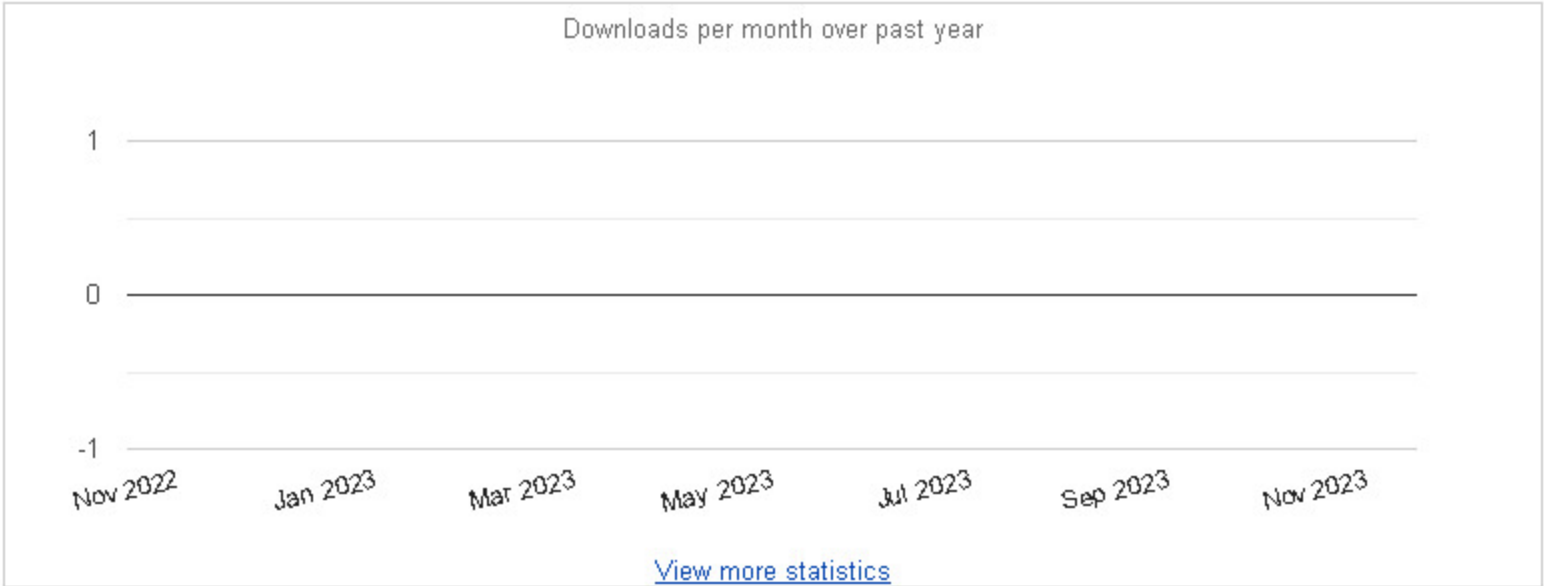
Last Modified: 11 Oct 2019 18:17

URI: <http://nrl.northumbria.ac.uk/id/eprint/37073>

Actions (login required)

 View Item

Downloads



Study

[Undergraduate Study](#)
[Postgraduate Study](#)
[International](#)
[Accommodation](#)
[University Library](#)
[Academic Departments](#)
[Handbook of Student Regulations](#)

About Northumbria

[Research](#)
[Business](#)
[Leadership & Governance](#)
[Charitable Status](#)
[Freedom of information](#)
[Privacy Policy](#)
[Disclaimer](#)
[Work For Northumbria University](#)
[Modern Slavery Statement](#)

Useful links

[Contact Us](#)
[Library Search](#)
[Skills Plus](#)
[Northumbria Research Link](#)
[Referencing](#)
[Library Feedback](#)