18th January 2021

Dear Editor,

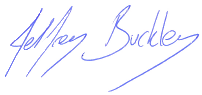
I would like to re-submit a manuscript entitled *Exploring the prototypical definitions of intelligent engineers held by Irish and Swedish higher education engineering students* by myself and co-authors to be considered for publication in *Psychological Reports*.

The manuscript reports the results of an empirical investigation comparing the perceptions held by Swedish and Irish university students of intelligent engineers. The study is framed within the field-specific ability beliefs hypothesis, for which evidence illustrates that practitioner’s opinions of the levels of innate brilliance required within their fields affects the representation of females and minority groups. Swedish and Irish students were selected due to the variance in female representation in high level engineering education between both countries, based on data from the OECD.

The results indicate that a similar factor structure between countries in the definition of an intelligent engineer, however gender × country interaction effects suggest group level differences in the rated importance of each factor, which adds to the pertinent literature in multiple ways. For example, a more fine-grained description of perceived innate intelligence relative to engineering is provided from the samples perspectives which could be used in future investigations relative to student’s self-concepts, and the group differences indicate that further work on the gender gap within engineering education could benefit from explorations into cultural effects on perceptions of engineers.

The study employed a survey methodology first used by Sternberg et al. (1981) in which two surveys were administered to participants sequentially. The first asking for a list of characteristics which describe intelligence in context, and the second asking for each of these to be rated on a Likert scale. The data was analysed using exploratory factor analysis with a parallel analysis adopted as the method for identifying the appropriate number of factors to extract. Non-parametric multivariate and post-hoc tests of comparisons were used to compare rated differences in how important each factor was perceived to be across the four included groups; Irish males, Irish female, Swedish males, and Swedish females.

If you have any further questions please do not hesitate to contact me at [jbuckley@kth.se](mailto:jbuckley@kth.se)

Kind regards,

On behalf of myself and co-authors

Dr Jeffrey Buckley1,2, Mr Tomás Hyland2,3, Dr Lena Gumaelius1, Dr Niall Seery2 and Prof. Arnold Pears1

1KTH Royal Institute of Technology, Stockholm, Sweden.

2Athlone Institute of Technology, Westmeath, Ireland.

3University of Limerick, Limerick, Ireland.