



FALSE ICONS: Are we betraying our future female engineers?

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Methodology and Methods

- The methodology employed in this small-scale study adopts a constructivist-interpretive approach to the research

Methods include:

- Audit and analysis of visual data (document and artefact analysis)
- Focus groups that include quantitative and qualitative analysis
- Case study.
- Ethical Considerations (BERA) and GDPR are adhered to.

Key Literature

Berger, J. (2008). *Ways of Seeing*. London: British Broadcasting Corporation.

Metcalf, A. in Manning, K. and Stage, F. (2016). *Research in the College context: Approaches and methods*. 2nd ed. Routledge.

Sennett, R. (2009). *The Craftsman*. London: Penguin.

Introduction

It is widely accepted that FE Colleges in the UK need to attract more women to study in Science, Technology, Engineering and Mathematics (STEM) subjects.

This small-scale mixed-method research is informed by discourses surrounding the under-representation of women in STEM subjects

It focuses on visual marketing images of women in Engineering used within my FE College setting. It argues that the pedagogical power of visual image is often overlooked in educational research.

Headline Data

19% of images are women and this suggests that Equality and Diversity issues in the marketing materials is in urgent need of attention.

76% rating was recorded in the study by participants when asked to if images are important when choosing a career.

Images of more mature white males scored highest in images irrespective of the gender or the position of participants in the research.

Key Findings

Images employed in the promotion of Engineering Education are disproportionate in terms of the representation of gender and in the multitude of ways they reflect the nature of engineering practice. This suggests there is a bigger diversity and misrepresentation issue than is currently widely assumed.

Images play an important part in how we see ourselves in the world. Cultural constructs continue to affect our views of ourselves and our views of the world.

The voices of women engineers in the study are important and add to the much underrepresented voice of engineers.

Overuse of stock images that are not representative of female engineers is widespread in the promoting of Engineering Education.

Cohorts of engineering students in our colleges are often more diverse than generally promoted and there are Inconsistencies between print and web material.

Recommendations

Revisit the marketing processes used to promote Engineering Education in college.

Female students need to see themselves represented visually (Berger, 2008)

The BRIDGE project (2019) indicates that more gender neutral and inclusive marketing materials in the construction sector encouraged more women (8% increase) to apply. This approach would be beneficial.

Stereotypes still play a part of our culture and there is work to be done in giving consideration into the images we employ.

Conclusion

Analysis of visual images is an often overlooked method in educational research

Visual images are powerful devices in promoting Equality and Diversity,

Cultural conditioning and the ways in which images are viewed are high impact factors in addressing the gender imbalance in STEM in engagement in Engineering Education