



Muslim, female, teacher of science and changemaker

● Pete Robinson

Abstract

This article summarises the session presented by Dr. Nasima Hassan, Maaria Ahmad and Romaiza Nassim at the 2021 ASE Futures Conference in July. It relates experiences and feelings that young Muslim women have encountered within their education and training to possible actions to enable teacher educators to become changemakers.

This session complemented a research paper written by Dr. Nasima Hassan, which was published in *Science Teacher Education* issue 89. Nasima's work stemmed from a gap in research on the lived experiences of Muslim women who have entered the traditionally male-dominated world of STEM. Her research centred around the experiences of six current and former trainee and apprentice science teachers in the Star Academies SCITT programme. Star Academies is a mixed multi-academy trust, with 19 Muslim faith schools and 12 sponsored academies.

To begin the session, Nasima outlined her research in the context of international research by others. It identified a general under-representation of women in STEM careers in general, and Muslim women in particular. It considered how the young women contributing to the research were confident and enthusiastic about the study and how none subscribed to the cultural gender stereotype associated with Muslim women. Rather, the research identified and celebrated the extent to which the participants' self-identity and emerging teacher identity was shaped by their strong faith identity. Within the case studies provided, some young women spoke of 'not belonging' and 'being excluded' in the higher education setting. Some

were able to reflect on the compelling impact of a positive female role model in their secondary education, which nurtured not only a passion for science but also for teaching as a profession.

Maaria, the subject of one of the case studies, spoke about how she was diagnosed with Nystagmus aged 15 and how that influenced her passion for science and her choice of degree – pharmacology. As Head Girl in Years 12 and 13 (ages 17-18) at a majority Muslim college, she had many duties and regularly spoke on stage and in assemblies. Faith, identity and the spoken word boosted her confidence and helped her to overcome setbacks. She spoke about how her confidence dropped going from college to university; on her course, she was the only Muslim female, it was difficult for her mentally and socially and so she stopped performing her spoken word on stage. Teaching Islamic Studies alongside doing her degree work helped her to regain her confidence and inspired her to train as a teacher.

Maaria went on to perform a spoken word rap, which was very moving. She concluded with the words, '*Do I look like a scientist? Do I look like a spoken word artist? Do I look like an entrepreneur? Do I look like a painter and most importantly does every scientist in this world look like a man with lab coat and a pen in his pocket?*'

Romaiza spoke of how her uncle, a nuclear physicist, inspired her to become a scientist as a child. Although she did not know what career she wanted, she enjoyed chemistry and went to Bangor to read chemistry. '*When I stood in the Great Hall of Bangor University enrolling for my degree during Freshers Week, I was the solitary Muslim south Asian girl standing in the line for chemistry admissions; there may have been others, but no one else's identity stood out like mine. It wasn't the first time that my hijab and Muslim identity were something I had to be confident about.*'





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She also spoke about how she worked as an intern at a local paper recycling mill each summer vacation, *'dressed as a Muslim woman in a boiler suit and hard hat, walking between silos taking samples, as the only female in an all-male workplace'*. She also worked as a research chemist in the automotive industry, again, a male-dominated workplace with challenges for her. After having children, Romaiza became a primary Teaching Assistant (TA) and then Higher Level TA, fuelling a passion for teaching and leading her to become an apprentice teacher through Star.

The session was both informative and moving, leading to questions about unconscious bias, stereotyping and actions that teachers and teacher educators can take; for example, by decolonising the curriculum and ensuring an inclusive

philosophy within teaching, we can encourage trainees to choose scientists from different cultures and ethnicities to illustrate cutting-edge science. We can also influence how scientists are portrayed in classroom media and, by supporting our teachers, inspire all children to consider science-related careers in science, regardless of their gender or ethnicity. As Maaria and Romaiza put it, *'Change the narrative and become a changemaker'*.

Maaria and Romaiza are inspirational and passionate early career teachers, and we wish them every happiness and success in their careers.

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