

## Submissions Abstract Book - All Papers (Included Submissions)

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Gender and STEM in HE and Employment: Experiences from Rwanda

Jane Umutoni<sup>1</sup>, Marie Chantal Cyulinyana<sup>1</sup>, Bonnie L. Slade<sup>2</sup>

<sup>1</sup>*University of Rwanda, Kigali, Rwanda* <sup>2</sup>*University of Glasgow, Glasgow, United Kingdom*

**Research Domain:** International contexts and perspectives (ICP)

**Abstract:** This paper explores the gendered experiences of female students in STEM at HE and into employment in Rwanda. We present new empirical data gathered through an innovative mixed-methods research project involving a large-scale online standardised survey, in-depth qualitative interviews and focus groups with 20 undergraduate students from purposively sampled public and private HLLs across the country, and class observations. Rwanda's effort to promote gender equality and women's empowerment has been widely acknowledged. Commendable achievements have been registered in different sectors including education, which is recognized as the key to sustainable development. The country has thus prioritized a gender inclusive education system as a pathway to boosting its human capital and key to its economic growth and sustainability. Nonetheless, despite advances made at primary and secondary levels of education, access to higher education for females continues to be a challenge. Moreover, even for females who make it to tertiary education, there are gaps in terms of the programmes they enroll into, with most opting for areas traditionally known as female domains, obviously non-STEM fields. Our project seeks to understand why, and when gendered patterns occur in these transitions, and contribute to new knowledge in this under-researched area.

**Paper:**

Categorised amongst the 'least developed' countries in OECD's DAC list of ODA recipients, Rwanda is a small and densely populated country that has made great progress in the last two decades in relation to gender inequality and poverty reduction. Its 'Vision 2050' development strategy, which aims for the country achieve upper-middle income status by 2035, includes key priorities in relation to "bolstering gender equality through greater economic inclusion" (IMF, 2017, p. 4) and in greater inclusion in education. Education and training are also singled out as a key priority in order to meet growing demands for a skilled workforce, in a population that has 4% more women than men, a legacy of the genocide in 1994 (Hafkin, 2016). Moreover, NST1 (2017/2024), is yet another key strategy in place to lay the foundations for decades of sustained growth and transformation that will accelerate the move towards achieving high standards of living for all Rwandans. Here too, education is a key priority under one of the 3 NST1 pillars. It is worth noting that Rwanda's achievements in promoting gender equality and women's empowerment so far, come as a result of a gender responsive legal, policy and institutional framework, that is continually reviewed. For instance, a new

National Gender Policy (2021) is in place, with newly set priorities and objectives. According to the most recent WEF Report (2021), Rwanda is currently ranked 7<sup>th</sup> in closing the gender gap at 80.5%. However, despite these efforts and achievements, key gender gaps persist, not only in education but also in other priority areas.

In the recent past, Rwanda has achieved a stable gender parity in primary and secondary education with current girl's enrollment at 49.7% and 53.2% in 2018 respectively due to various initiatives promoting girls' education such as 12YBE and other affirmative actions. Nevertheless, despite positive trends, female's representation in ICT Education (41.8% in 2017), tertiary education (38%), TVET program (43.8% in 2018) and the number of girls enrolled in Science, Technology, Engineering and Math (STEM, 45.6% in 2018), remains relatively low compared to their male counterparts. Correspondingly, WEF report (2016) highlighted the same trend where women were underrepresented among STEM graduates for which the global gender gap stood at 47 percent, with 30 percent of all male students graduating from STEM subjects

Retention research in HE stresses the importance of conceptions of belonging at university and supportive social connections, between students, students and their families, with local communities and, importantly, between students and university staff (Thomas, 2012; see also Tinto 2006). Whilst a feeling of 'belonging' might be important for all students, they are especially crucial for those viewed as 'other' to the traditional conceptions of the student. Students who are from more financially disadvantaged backgrounds, those who have had a break in education, and/or those with family/caring commitments (the majority of whom will be women) are more likely to face greater degrees of challenge accessing university (Lestrade, 2012, Atuaheni, 2013, University of Rwanda, 2017), especially as strategies to widen access are increasingly undermined by neoliberal imperatives (Ogachi, 2014). A study conducted by the University of Rwanda (2017) found that, next to performance, funding also plays a key role in determining students' entry into higher education in Rwanda. As well as socio-economic background and age/maturity, other aspects of identity and social positioning can also work intersectionally with gender to further complicate a student's likelihood of accessing and succeeding at university. Research is also limited in global South contexts as to the experience of those who do successfully transition to a skilled occupation in a STEM field, including the impact of gendered workplace cultures and practices on their sense of belonging and success within their new fields.

Our project seeks to understand *why, and when* gendered patterns occur in these transitions and contribute to new knowledge in this under-researched area. This mixed-methods project involves both quantitative (a large-scale online standardised survey) and qualitative (interviews with undergraduate male and female students). This innovative methodological approach is explored in another paper in this symposium by our colleagues Dr. Emma Seddon and Prof. Catherine Lido. At the time of writing (July 21) we are rolling out the survey, and we will also be reporting preliminary findings from the Rwandan context, supplemented by preliminary findings from 20 in-depth interviews with undergraduate students.

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