What Aurora Reveals About the Physics Study and STEM Career Choices Among Schoolgirls

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The Aurora Science Photo contest aims to inspire women into science and encourage them to consider undertaking STEM studies. The author devised this contest as an enabler to get girls thinking about the wonders of science by recognising the science they see every day, through photography. The annual contest with the theme "Science is Everywhere" is organised through Flinders University. It has been open to female students in years 7-12 across South Australia since its inception in 2016, and to students in the Northern Territory for the first time in 2021.

The contest is growing the bigger, with a record-breaking 100 entries received in 2021, many from regional areas in South Australia and the Northern Territory, including Indigenous students. The data is gathered on the entrant's favourite subjects at school, together with careers of interest. The data shows a shift in how girls in competition since 2020 were connecting future careers to subjects they liked, preferring subjects like maths or physics, matched with careers in engineering, computer science or astrophysics. This was not so evident in previous years and shows that girls are making a connection with STEM career knowledge acquired recently [1].

It is found that as the years progress, entries are supported by more teachers. For example, in 2021 a record number of supporting teachers were named, 58 different teachers in total. The contest has attracted some past winners to join STEM courses at Flinders University in particular, Engineering Honours, Combined STEM degrees, Optometry and this trend continues. I seek to discuss the insights from 6 years of data to understand the extent to which this contest and outreach activities can shape the STEM study and career choices among girls.

[1] Blotnicky, K. A., Franz-Odendaal, T., French, F., & Joy, P. (2018). A study of the correlation between STEM career knowledge, mathematics self-efficacy, career interests, and career activities on the likelihood of pursuing a STEM career among middle school students. International journal of STEM education, 5(1), 22