

# FACTORS AFFECTING STUDENT MOTIVATION FOR STEM STUDY

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**KEYWORDS:** STEM, aspiration, participation

## BACKGROUND

The decrease in student participation in STEM at a tertiary level has been acknowledged across Australia and is most marked in rural and regional areas. One attempt to understand this trend is to explore the motivations of students who have chosen to study science and engineering at a tertiary level.

## AIMS

This project aims to determine what factors influenced student choice to undertake science or engineering in a small regional university. The outcomes from this study will help regional universities to design targeted outreach activities and to identify who to target in these interventions (students/parents/teachers).

## DESIGN AND METHODS

Students enrolled in science and engineering courses at the Gippsland campus of Federation University Australia took part in a study to explore what influenced their choice to study science or engineering. 80 undergraduate and post-graduate students were surveyed during semester 2, 2014 about the importance of specific experiences and people in influencing their choice of study STEM, both within the school environment, at home and cultural factors. Student experiences in school and how they impacted on their perceptions of science and likelihood to continue studying in a STEM discipline were further explored in focus groups.

## RESULTS

Students identified a number of key factors which influenced their choice to study science or engineering at FedUni Gippsland campus, including the geographic location, their interest in science, success in science subjects at school, and influence of others including teachers and parents. Parents had the greatest influence on students' choices, and interest in science and future employment were also very important factors in their choice to continue studying STEM disciplines. Students identified factors such as inspirational teachers, university open days, outreach activities and work experience as positive influences on their choice to study STEM at university.

## CONCLUSIONS

This presentation will give an overview of the results of this study and highlight the role of school, family and cultural factors in students' choices to study STEM at university. As a corollary to these key findings, recommendations will be made regarding the focus of university outreach.

Proceedings of the Australian Conference on Science and Mathematics Education, Curtin University, Sept 30<sup>th</sup> to Oct 1<sup>st</sup>, 2015, page 53, ISBN Number 978-0-9871834-4-6.