

# **Gender Dynamics in an Engineering Classroom: Engineering Students' Perspectives**

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I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to any other University or Institution.

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## **Dedication**

I dedicate this thesis to Sebastian Lagerdahl who passed away earlier this year. Sebastian was an inspirational person and engineer who I owe much to for his encouragement in supporting my decision in pursuing an engineering career.

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## DEDICATION

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## **Abstract**

This research is an exploratory study into gender dynamics in an engineering classroom in a Faculty of Engineering at an Australian University. It has concentrated on understanding and presenting students' perceptions of their learning environment in an engineering classroom and their experiences within it to determine the extent to which gender affects different classroom experiences. A first year engineering subject 'Introduction to Engineering Computing' was the environment used for this study. The research employed an ethnographic research methodology drawing on semi-structured interviews and observations. It also used surveys to triangulate the data for improved reliability and validity.

Gender has clearly been highlighted as a determinant of students' experiences from a students' perspective in an engineering classroom. The most noticeable differences between female and male student experiences found in this study stemmed from four factors: their previous experiences; their learning approaches; the language used within the classroom and the lack of role models. In these areas there were found to be various levels of advantage and disadvantage experienced by women and men. These are presented in Chapter 5 & 6 of this thesis. The resulting understanding begins the process of providing a framework in which strategies can be developed to more effectively engage female and male students in engineering education.