

**THE SOCIAL CONSTRUCTION OF FEMALE ENGINEERS:
A QUALITATIVE CASE STUDY OF
ENGINEERING EDUCATION**

A Dissertation
Submitted to the College of
Graduate Studies and Research
in Partial Fulfilment of the Requirements
for the Degree of Doctor of Philosophy
in the Department of Sociology
University of Saskatchewan

by
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Spring, 2002

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ABSTRACT

This research is a case study of three important phases of engineering education: the social factors influencing young women and men in choosing engineering as a profession, what causes students to discontinue their studies, and the students' educational, social and cultural experiences during their education. The study is within the framework of feminist standpoint epistemology and uses both qualitative and quantitative methods, giving the study both depth and breadth. The data derive from a demographic survey of one first-year cohort in an engineering college, from non-participant observations in first, third, and fourth-year engineering classes, but primarily from in-depth, tape-recorded interviews with male and female students at the first and fourth year levels of study and with students who transferred to other disciplines. Data collection took place between September, 1996 and April, 1998.

Major findings point to a chilly climate in the college of engineering where a masculine culture tends to exclude the female students from equal and equitable educational experiences. This culture, which in addition to exclusionary features includes a heavy workload with little time left for outside activities, was a major reason for attrition from the engineering program. There are also indications of an environment where male harassment of female students cause significant discomfort to women. However, women's attempts to voice their objection to such treatment are met with further exaggeration of the problem. The women are also labelled as troublemakers, poor sports, poor team-players, and lacking a sense of humour.

The college exploited a committee of female students as volunteers in its recruitment strategy. This committee earned high praise from the administrative level, having raised the ratio of first-year female students from 5% to 22% at the same time as the college increased enrollment limit from 300 to 410 students. However, it had low prestige among the students.

This research is significant in its use of feminist theory and methodology and using a qualitative method that allows the students own words and voices to express their day-to-day, lived experiences in the college.

ACKNOWLEDGMENTS

I wish to express my appreciation to Dr. Lesley Biggs for her supervision of this work, especially during the period of revision. I am grateful to the other members of my Advisory Committee, Dr. Alan Anderson, Dr. Lillian Dyck, Dr. Robert Gander, Dr. David Hay, and Dr. Werner Stephan for their suggestions and input. A special "Thank You" to my external examiner, Dr. Gillian Ranson, who directed me to very useful literature.

This work would not have been possible without the interest, support and permission of Dean Peter Nikiforuk and his successor, Dean Franco Berruti, in the College of Engineering. The staff in the Dean's Office, especially Mrs. Brenda Rowe and Mrs. Brenda (Bergen) Bitner, were always accommodating, assisting me with documents and information necessary for my research. I appreciate the willingness of the many professors who allowed me to audit and observe the interactions in their classrooms, as well as the Assistant Deans who provided factual information. I am especially grateful to the 54 engineering students who volunteered their time and offered their insights into engineering education. I admire and respect them all, but particularly the women, whether they completed their B.E. degree or transferred to other disciplines, and I wish them success in their future endeavours.

This project has been supported by three years of graduate scholarships and travel assistance from the College of Graduate Studies and Research. I have also received travel assistance from The President's Fund and the College of Engineering, which made it possible to present parts of my research at conferences from coast to coast. All have been greatly appreciated.

I have been blessed with a supportive family, Dean and Terri Anderson and Troy and Darcie Anderson, and with friends in the College of Education and the Women's Studies Research Unit. The last few months would have been impossible to endure without my special friends, Georgina Taylor and Jan Schmitz, who kept me 'on track' when I was derailed and the chips were down. I am also grateful to my many other friends, especially the 'theatre friends' who sustained me with both food and laughter over the years.

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