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Driving Force?

**Motivations of Senior Mathematics Students enrolled in
National Certificate of Educational Achievement (NCEA)
Level III Statistics & Modelling.**

A thesis presented in partial fulfilment of

the requirements for the degree of:

Master of Education

Massey University,

Palmerston North, New Zealand.

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Abstract

The objective of this study was to explore how senior mathematical students made sense of their mathematical experience through the New Zealand National Certificate of Educational Achievement (NCEA) qualifications system, and from that exploration to understand what factors motivated these students and to which factors these students attributed their mathematical success.

The research is based on Constructivist Theory, with ethnomethodology as the methodological approach. The methodological tool utilised in the study was an online questionnaire. The students who completed the questionnaire attended an urban, co-educational, decile 8 secondary school in New Zealand. The participants were students aged 16 years old and over, enrolled in a full year NCEA Level 3 Statistics and Modelling Achievement Standards programme in 2013.

The students in the sample were aware that there were set criteria within each grade for NCEA Level 3 Statistics and Modelling assessment tasks. The students were mindful that achievement was measured in discrete units. Evidence from the research suggests that to maximise student learning within the NCEA qualifications system, Level 3 Statistics and Modelling needs to be taught as a collective, cohesive statistics curriculum.

The students in the sample attributed their highest mathematical outcomes to ability, effort and the teacher and their lowest mathematical outcomes to lack of ability, lack of effort and the level of difficulty of the assessment. The findings highlighted the importance of prioritising the teacher and student relationship. In the study, only 12% of students were convinced that their teacher was interested in them at an individual level. NCEA Level 3 Statistics and Modelling teachers need to be aware of the influence of the teacher and student relationship on student achievement.

The findings from the research have implications for teaching and learning. The research evidence indicates a need for NCEA Level 3 Statistics and Modelling students to be aware of the non-numerical content and grade criteria expectations of the Statistics and Modelling Achievement Standards prior to committing to the course.

Candidate's Statement

I certify that the research project entitled:

Driving Force?

Motivations of Senior Mathematics Students enrolled in National Certificate of Educational Achievement (NCEA) Level III Statistics & Modelling.

and submitted as part of the Master of Education, is the result of my own work except where otherwise acknowledged and that this research project (or any part of the same) has not been submitted for any other degree to any other university or institution.

Signed: _____

Jackie Fraser Webb

Date: _____

Acknowledgements

"I can do all things through Christ which strengtheneth me."

Philippians 4:13, King James Version

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