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**SUPPORTS AND BARRIERS TO ACHIEVEMENT
IN SECONDARY SCHOOL CHEMISTRY:
EXPLORING THE TEACHING AND LEARNING
OF YEAR 12 CHEMISTRY IN SAMOA**

A thesis presented in partial fulfilment of the requirements for the
degree of Doctor of Philosophy in Education

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Abstract

Within the Samoan context, education is seen as critical to furthering the national goal of have sufficient qualified citizens who can create opportunities within an increasingly more technical and market-orientated economy. Science education is seen as playing an important role in this, yet despite significant government investment students' achievement in science has continued to be a concern.

This research focused on exploring the supports for and barriers to students' achievements in Year 12 chemistry in Samoa. The study involved students and teachers from one chemistry classroom from each of three government co-educational secondary schools: two from urban areas and one from a rural area in Upolu, the main island of Samoa.

Using participants' interviews, classroom observations, and samples of students' work, case study methodology was used to investigate participants' perspectives of supports and barriers to learning and teaching senior chemistry in Samoa. Analysis of both common and distinctive ideas across the three case studies revealed the ways in which factors that relate to Samoan cultural values, the institution, and the classroom could act as barriers or supports to students' chemistry achievement. This happened in complex ways. While some factors were considered by both teachers and students to be either a barrier or a support to chemistry learning, others were perceived differently by teachers and students, and depended on context. Implications for practice include: the use of *fa'a-Samoa* to support learning, the need for professional development around teachers' beliefs and classroom practice, the need to take into account students' perceptions of meaningful learning in chemistry, and the role of Samoan language in the learning and assessment in chemistry in Samoa.

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