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CULTURALLY RESPONSIVE TEACHER ACTIONS TO SUPPORT PĀSIFIKA STUDENTS IN MATHEMATICAL DISCOURSE

A thesis presented in partial fulfilment of the requirements for the degree of Master of Education at Massey University, Palmerston North, New Zealand

Ingrid Cheung

2015
ABSTRACT

This study examines culturally responsive teaching to support a group of Pāsifika students aged 11-13 years old in mathematical discourse. It builds on previous work which has advocated culturally responsive practices where students learn mathematics through collaborative interaction that fosters greater student participation, engagement, and potentially better achievement in mathematics. In this study, the teacher’s actions drew on Pāsifika cultural practices and the value of the family, respect, and collectivism. This was significant in the establishment of social and mathematical behaviours which were important in supporting the development of productive mathematical discourse. In addition, the communicative and participation structures within the classroom that lead to mathematics learning are also considered.

This study was situated in an inquiry classroom. A socio-cultural perspective provided the framework for analysing the classroom context. A case study approach drawing on a qualitative design was implemented. Data was collected through teacher and student interviews, classroom audio and video-recorded observations, and students’ written work. Detailed retrospective analysis of the data was undertaken to develop the findings of this classroom case study.

Significant changes were revealed in the shifts of student discourse from long silences and hesitation to asking valid questions and developing mathematical justification with appropriate language and specific terms. The explicit instructional practices developed and implemented by the teacher fostered greater collaborative communication and interaction between group members and this was important in how they made mathematical meaning. The findings provide insights into the multi-dimensional ways that teachers can draw on students’ cultural strengths, values, and practices as invaluable resources which potentially will make a difference in students’ mathematical learning.
ACKNOWLEDGEMENTS

This study has been a collective endeavour. I would like to acknowledge and thank the many people who made this study possible. Most importantly, I wish to thank the teacher for his generosity and willingness to allow me to enter into his teaching world. His teaching beliefs and collaborative spirit contributed greatly to this project and were truly inspirational for me. I would also like to thank the students in his classroom for their amiable humour and keen participation in sharing their mathematics learning with me.

I am extremely grateful for the assistance, advice and guidance of my three supervisors: Dr Jodie Hunter, Associate Professor Roberta Hunter and Professor Glenda Anthony. It has been a long journey for me and I would like to thank my main supervisor, Dr Jodie Hunter for her continuous support and encouragement with my research and for giving me the confidence to persevere with this study. I am especially indebted to the help of Associate Professor Roberta Hunter who so willingly gave her time and important professional insights and support.

In particular, I wish to gratefully acknowledge the generosity of the following funding agencies for making this project possible: Ministry of Education, Graduate Women Manawatu Postgraduate Scholarship, and Graduate Research Fund at Massey University Institute of Education.

Finally, I must acknowledge and thank my husband for his unwavering support and encouragement and my children for their forbearance throughout this long process.
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