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Parent Engagement in Mathematics Education

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Abstract

While parents can partner with schools in many ways, research in both the New Zealand and international contexts draws attention to need for schools to further consider how they can more effectively engage with parents to achieve positive outcomes on learning (Robinson, Hohepa & Lloyd, 2009). This study, grounded in a sociocultural perspective and drawing on ‘funds of knowledge’ ideas, seeks to better understand ways in which home-school partnerships that respect the needs and contributions of all participants—students, parents/whanau and teachers—might be developed in the area of mathematics. Of particular interest are the everyday activities in which families are involved and how improved parent awareness of the mathematical opportunities presented in these activities might increase parent confidence to participate in mathematical discussions with their children at home and in their community setting.

A review of the literature identifies; parents’ beliefs regarding their role in the learning, parents’ sense of personal efficacy in relation to their ability to effectively help their child, the relationship between teacher and parent, and parents’ life context, all as impacting the development of effective home-school partnerships. In addition, the historical positioning of parent’s is also recognised as playing a part in determining parents expectations for involvement and the way in which they relate to their children’s teachers and school leadership.

This study draws on qualitative research methods and uses a Design Based Research approach. Sixteen parents along with their students ranging from year five to year eight from a New Zealand primary school participated in a series of six mathematics workshops aimed at exploring the research question:

In what ways can parents’ confidence to engage in mathematics learning be better supported?
A secondary question considered is, how might the increased awareness of opportunities connected to everyday experiences/activities support parent confidence to engage in mathematical discussions at home and in their community setting?

Semi-structured interviews, were conducted both before and after the workshops to gain information as to what parents saw as being necessary supports to facilitate their engagement in mathematics learning, and what activities from the workshops had been effective in achieving these aims. A researcher reflective journal was also used to gather data and monitor the success of the workshops as they progressed.

The study revealed that shared learning opportunities—involveing both parents/whanau, students and teachers—can provide an effective means for: supporting parent understanding of current
approaches to teaching and learning in mathematics, provide better understanding of the language associated with the Numeracy Development Project and facilitate positive relationships between teachers and parents. Furthermore, adopting activities which model mathematics in everyday activities, similar to those in which families are involved, can act as an effective scaffold for parents to engage more effectively in mathematical discussions with their children in their own home and everyday setting. In addition, opportunities to watch teachers interact with students was found to be a powerful mechanism for parents to develop more productive communication strategies through which they could better support their children’s learning.
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Table of Contents

Abstract i
Acknowledgments iii
List of Contents iv
List of Figures and Tables viii

Chapter One - Introduction
  1.1 Introduction 1
  1.2 Context 1
  1.3 My interest in this research 2
  1.4 Aims of the study 3
  1.5 Overview of the Chapters 4

Chapter Two – Literature Review
  2.1 Introduction 6
  2.2 Forming partnerships with parents 7
  2.3 Factors influencing parent involvement 8
    2.3.1 Role construction and parent expectations 9
    2.3.2 Self efficacy 10
    2.3.3 Invitations from the school and parent/teacher relationships 11
  2.4 Historical approaches to parental engagement 13
  2.5 Links to identity 14
  2.6 Models of engagement 17
    2.6.1 Extending ideas about partnership – funds of knowledge 19
  2.7 Summary 21

Chapter Three - Methodology
  3.1 Introduction and overview 22
  3.2 Qualitative Research 22
    3.2.1 Educational Design Based Research 23
  3.3 Researcher positioning 25
  3.4 Participants and setting 28
3.5 Ethical considerations
3.6 Privacy and confidentiality
3.7 Data collection methods
  3.7.1 Surveys
  3.7.2 Interviews
  3.7.3 Researcher reflective journal writing
3.8 Data analysis
3.9 Trustworthiness
4.0 Summary

Chapter Four – Designing and enacting the workshops
4.1 Introduction

Preparing for the workshops
4.2 Barriers to participation
4.3 Motivation to participate in the workshops
  4.3.1 Sense of Responsibility
  4.3.2 Knowledge about expectations for achievement
  4.3.3 Understanding of current approaches in teaching and learning mathematics
  4.3.4 An opportunity to upskill
4.4 Summary

The Workshop Programme
4.5 Aims of the workshop programme
  4.5.1 Getting underway – workshop one
4.6 Overview of the workshop programme, researcher reflections and design modifications
  4.6.1 Design of problem solving activities
4.7 Supporting parents awareness of mathematics in everyday activities
  4.7.1 ‘Maths in my Week’
  4.7.2 Sharing opportunities for mathematics via Facebook
4.8 Summary

Chapter Five – Impact of the Workshop Programme
5.1 Introduction
5.2 A new relationship with mathematics
5.3 Gaining confidence through understanding current approaches to teaching and learning
5.4 Supporting student learning through increased awareness of opportunities for mathematics in everyday activities
5.5 Supporting student learning through improved parent teaching capacity
5.6 Overall impact of the workshops in supporting parents’ confidence to participate in mathematics learning
5.7 Parent-school partnerships
5.8 Summary

Chapter Six
6.1 Introduction
6.2 Understanding barriers to participation
6.3 Motivation for participation
6.4 Increasing parent confidence – a new relationship with mathematics
6.5 Supporting learning through greater awareness of opportunities in everyday contexts
6.6 Parent perspective on opportunities for schools to provide support
6.7 Key findings
6.8 Limitations of the study and opportunities for further research
6.9 Concluding thoughts.

References

Appendices
Appendix A: Pre-workshop questionnaire
Appendix B: Post-workshop questionnaire
Appendix C: Pre-workshop interview questions
Appendix D: Post-workshop interview questions
Appendix E: Information Sheet for parents’
Appendix F: Workshop Reflections
Appendix G: Information letter and consent
List of Tables and Figures

| Table 4.1 | Overview of the workshops and summary of researcher reflections | 48 |
| Figure 4.1 | Basketball Problem – Workshop 3 | 52 |
| Figure 4.2 | At the Lotto Shop – Workshop 4 | 53 |
| Figure 4.3 | How big is the Giant? – Workshop 6 | 54 |
| Figure 4.4 | The BFG – Workshop 6 | 54 |
| Figure 4.5 | Maths in my week – Workshop 2 | 56 |
| Figure 4.6 | Maths in my week – Workshop 2 | 57 |
| Table 4.2 | Parent references to everyday activities | 58 |
| Table 5.1 | Response to questionnaire item: to what extend do you feel you understand current ways of teaching and learning in mathematics? | 63 |
| Table 5.2 | Response to questionnaire item: I use everyday experiences to talk about mathematics with my child | 68 |
| Table 5.3 | Response to questionnaire item: how much do you feel you are a part of your child’s mathematics learning? | 68 |
| Table 5.4 | Usefulness of workshop activities | 69 |
| Table 5.5 | Response to questionnaire item: I know how I can help my child with mathematics | 71 |
| Table 5.6 | Response to questionnaire item: I feel confident about participating in mathematics activities with my child | 71 |
| Table 5.7 | Response to questionnaire item: how important do you think your role is in your child’s mathematics learning? | 72 |
| Table 5.8 | Response to questionnaire item: I think my helping makes a positive difference for my child | 72 |