

MANAGING AND LEADING MATHEMATICS IMPROVEMENT IN FOUNDATION PHASE

Shauna Pamplin and Nicky Roberts

Capricorn Primary School, University of Witwatersrand School of Education

This paper draws on our attempts to shift performance of mathematics at Foundation phase level in a township primary school over two years, as part of a three year research and development project. It is written from the perspective of the deputy principal of a primary school (the first author) in a challenging social context. While she does not teach directly in classrooms; she has been instrumental in shifting the way mathematics is taught in this school. The paper reports on the deputy principal's roles in procuring and managing mathematics related equipment; making mathematics visible throughout the school environment; involving parents; interventions for supporting under-performing learners and extending learners who are meeting expectations; and motivating and encouraging teachers to undertake professional development to improve their own mathematics.

INTRODUCTION

Shifting mathematics learning in a school is difficult and involves effort from a range of different role players in a schools community: school leadership; teachers; learners and parents. In this primary school we are seeing some positive shifts at Grade 3 level with improvements in both the Annual National Assessment results, and the Western Cape Education Department systemic tests. These shifts, we believe, are a combination of various efforts; with most of the acknowledgement for improvements vesting with the teachers who have each worked hard to better support their learners. At the same time we are aware of the role that school managers can play in supporting teachers in these efforts. As such we think it worth sharing the role of the first author, in her capacity as deputy principal and reporting on what she has done with regarding to leading and managing mathematics at this Foundation Phase level.

Managing and leading mathematics improvements

In this paper we report on the deputy principal's efforts in several spheres of management and leadership for mathematics teaching and learning.

We focus first on procuring and managing mathematics related equipment in a context where teachers do not have much equipment; may not know how to use the equipment that is available; and may resist using equipment as this creates excitement and ill-discipline amongst learners. Here the deputy principal's experience of raising funding and managing the collection of recycled materials for use in mathematics may be of interest.

Secondly we provide a photographic tour of the school to display how the deputy principal has made mathematics visible throughout the school environment. We include descriptions of how this was made possible through innovative management of resources and sponsorship relationships.

Thirdly we report on the design and functioning of a dedicated mathematics hub for Foundation phase mathematics. We explain the rationale for this space, what equipment it includes and how this has been timetabled for mathematics teaching use in this school. This leads us into how the hub is being used in the afternoons for weekly mathematics clubs for grade 2 learners. The focus here is on games and fun mathematics to get children fluent and playful with mental mathematics. The school has recently become a full service school, and as such has the benefit of learning support staff. The deputy principal's role in overseeing these support interventions is therefore commented on. A recent focus has been involving parents, and we report on this engagement process which is in its infancy.

Finally we reflect on what has been done to motivate and support teaching staff in relation to mathematics. We include some description of how the integrated quality management systems function in the school as well as types of professional development offerings which teachers have been encouraged to participate in. In addition, we give insight into how the deputy principal created interest improving teachers mathematical knowledge by publically revealing how own insecurities relating to mathematics and undertaking professional development herself.

CONCLUSION

There is much more which is still to be done to further improve mathematics in this school. There remain problems with learner discipline in the classrooms. Ensuring that all teachers are willing and confident to try new approaches; and balancing the need to "cover the curriculum" while ensuring children make sense of mathematics are areas we are trying to work on. We hope that this short paper provides some possibilities for how a school manager could approach adopting a proactive role in curriculum leadership for mathematics at Foundation Phase. What is being done is far from perfect, and much that has been implemented may not be feasible or successful in other primary school contexts. Nevertheless we feel it worth sharing our efforts, and are optimistic about the improvements have started to see in both learner results and teacher professionalism.

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