

British Early Childhood Education Research Association CONFERENCE (BECERA),  
Birmingham, 15<sup>th</sup> and 16<sup>th</sup> February 2012: *Evidencing Practice through Professional Inquiry*

### **Title of Proposal**

Using community action research to improve early mathematical outcomes

### **Author of Proposal**

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### **Theme of Proposal**

Methods: How systematic and rigorous research processes create knowledge

### **Research Aims**

The aim is to improve early mathematical outcomes through the provision of an integrated programme of activities, training and support.

### **Relationship to other research:**

Internationally, research findings highlight early learning as being the foundation for all subsequent learning (Allen 2011) and the importance of early numeracy, in particular, as an indicator of future academic success (Every Child a Chance Trust 2009; National Academy of Science 2009). This research adheres to the ecological approach of Vygotsky (1978) and Bronfenbrenner (1979).

### **Theoretical Framework:**

A community action research approach was used to create a collaborative learning community that works together to improve the numeracy outcomes for children (Senge and Scharmer 2001). The focus was on changing practice, understanding of practice and the conditions of practice (Kemmis 2009).

### **Paradigms and Methods**

The action reflection cycle (McNiff and Whitehead 2006) informed the development and implementation of the programme. Building a learning community has required the development of trusted relationships (Herr and Anderson 2005) and the creation of safe, yet challenging opportunities (Li 2008) for purposeful interactions.

### **Ethical Considerations:**

The National College of Ireland's Code of Conduct for Researchers was observed. Good practice in relation to action research was followed.

### **Main Findings:**

Awareness of the importance of early mathematical learning in the community has been heightened. The inclusive social networks established through this project have made it easier for participants to create and share knowledge, thereby improving their skills and practice.

### **Implications and Practice:**

This collaborative process supports implementation in a way that enhances participants' capabilities, both individually and collectively, to produce results they truly care about (Senge and Scharmer 2001).

**Keywords:** Action Research, Mathematics, Multiprofessional Collaboration, Learning, Outcomes, Practice based inquiry, Knowledge, Leadership