

Chapter 12

The Socioeconomic Status Label Associated With Mathematics

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ABSTRACT

The socioeconomic status of learners has implications for research and the provision of mathematics education. Literature has shown that learners from a disadvantaged socioeconomic background begin their education with a gap. Hence, a lot of research advocates for quality early childhood stimulation, aiming to close such gaps. The South African government-commissioned reviews which discovered that the challenges faced by ECD provision are inequities and poor quality education in some schools. Furthermore, mathematics assessment studies' results point to poor foundational knowledge of learners, especially those from low socioeconomic backgrounds. However, little is known about the level of numeracy knowledge possessed by these learners before they enter the reception class. Interviews with 26 reception class learners conducted at the beginning of the year revealed that they demonstrate numeracy knowledge and skills that are above the curriculum expectations which shows a challenge to the kind of educator these learners are exposed to as they do not have formal teacher training.

INTRODUCTION

Young children are learners. They learn in different situations about different things. They learn from parents and from other children. They learn by interacting with things. They learn by helping others (Fuson et al, 2015:63).

Fuson et al (2015) highlight the important components in education: the learner, the abilities and the elasticity that only belong to young learners when it comes to learning. Hence, discussions that label learners without empirical evidence might mislead practice. This quote, therefore, questions practice and research on what happens to these learners when they enter school. What happens to the learners who cannot solve problems efficiently in higher grades, such as the findings of the Southern and Eastern African Consortium for Monitoring Educational Quality (SACMEQ) that indicate that Grade 6 learners

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of South Africa use strokes (ones) when solving problems (Venkat & Spaull, 2015). Jung et al (2007, 50) confirm that “mathematics is a science of patterns and relationships and young children have far more ability to see those patterns than we may think.” All these researchers ignore what socioeconomic variable researchers discovered: that preschool learner and those learners entering school for the first time demonstrate sound reasoning abilities on quantitative concepts (Nunes et al, 2015, Schalk et al., 2016). With such evidence of young learners’ abilities before entering school, is it their low socioeconomic status that prevents extension of their prior learning and knowledge? Is their background an excuse for poor provision?

The socioeconomic status variable in learning has become a labelling obstacle in allowing and acknowledging young children’s ability to learn and do mathematics. Inequities experienced globally have influenced investigations focusing on this variable. Van der Berg (2008) and Spaull and Kotze (2015) suggest that the socioeconomic status of a home and a school has a significant influence on performance. Spaull (2011) also highlights the gap caused by coming from a poor home, schooling in a poor school using the SACMEQ results to support this argument. However, South African national certificate results have indicated continuously the ability shown by children from poor homes attending poorly resourced schools. Several studies have also revealed innate abilities as universal (Duncan et al, 2007, Clements & Sarama, 2009, Lee & Ginsburg, 2010; Feza, 2012). Furthermore, Borman and Overman (2004) argue for schools that promote resiliency among learners from deprived socioeconomic backgrounds. In their paper, they revealed that resilient learners are those who are actively engaged in their academic activities, enjoy school, have a positive self-concept, and show mathematics efficacy. Reflecting on Borman and Overman’s list of characteristics, it can be deduced that school plays a significant role in either developing or suppressing learners. The literature on early years of learning shows that young learners learn effectively through play, learner-directed activities, using their senses, the extension of learner curiosity and intuitive ideas. These aspects link very well with the characteristics of resilient learners mentioned by Borman and Overman (2004). It challenges schooling, as Sarama and Clements (2015) indicate that young children’s transition to school has an impact on their success. This claim points to the school’s capabilities in developing the child, extending what the child brings with to school. Visser et al (2015) add to this literature by indicating that the resiliency of learners defeats the low socioeconomic variable.

In support of this argument, there is an abundance of literature that has proved the positive influence that quality early learning experiences have on school and career success. Starkey et al (2007) have shown how both literacy and mathematics stimulation in early years eliminated grant-seekers, school dropouts and decreased numbers of offenders. In layman terms, this literature argues that one’s background does not determine one’s future. Hence, this chapter, therefore, aims to critically scrutinise the socioeconomic variable by investigating mathematical abilities showed by young children before formal schooling and aligning these abilities with curriculum expectations. The main questions this chapter responds to are: (1) Do learners from socioeconomically deprived homes lag the curriculum expectations in mathematics when they enter formal school? (2) How do these young children perceive themselves socioeconomically?

BACKGROUND

All schools participating in this study are no-fee schools or quintile 1 schools. In the South African context, this means that these schools service only learners from poor homes and those with parents who

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