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Early Mathematics Learning. Selected Papers of the POEM 2012 Conference.

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Review

Kortenkapm, U., Brandt, B., Benz, C., Krummheuer, G., Ladel, S. & Vogel, R. (eds.) (2014). *Early Mathematics Learning. Selected papers of the POEM 2012 Conference*. Dordrecht: Springer
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Seeing how children discover the numbers existing in their everyday lives is a magic moment. Suddenly they raise their hands with their little fingers up to claim “I am 2 years old.” They look to us full of proud because they know exactly what does it mean having “two”; and then “three”; and then “four.” Numbers become the more and more meaningful for them. Every single achievement turns into a bright look full of satisfaction in their eyes. Step by step they learn to put together, to add, to split, to take out, to deduce, to plan in ahead. This is an amazing process that occurs in front of us in an almost miraculous way. Every single interaction that children have with other people around them (potentially) becomes a new insight, a new knowledge, a new cognitive structure learnt.

In which way –and how much- should children be “educated” in mathematics before entering primary school? This is the main question that we can read at the beginning of this book. Through the whole book the reader may find some interesting methodological and theoretical tools to understand how this process works, in order to make decisions in terms of curriculum design [in early childhood education]. The reference to Bruner (2009), Anghileri (2006), Shulman (1986), Super and Karkness (1986),

among other researchers, provide us with a set of concepts such as “scaffolding”, “developmental niche in the development of mathematical thinking”, “zone of proximal development”, “intersubjectivity”, “pedagogical content knowledge”, among others, suggesting that we should take advantage of children’ early years, because those ones are really crucial in terms of learning. The examples introduced along the book provide solid evidence for this claim.

Interaction appears always as a key element, in all its forms: gestural, orally, symbolic. Thus, what is the role for pre-K and kindergarten’ teachers? This book provides a great argument encouraging stimulation, interactions oriented to incite cognitive development, based on solid mathematical claims and contents. Children who are lucky to be in such type of contexts reach happier up to elementary school than those who lack a meaningful and high stimulating learning context. As Presmeg claims *instruction* and *construction* are two processes mixed in an exquisite dance: the learning dance. The steps of this rhythm are subtle, but of course, it is not possible to dance if we miss neither *instruction* nor *construction*. Hence, do we must to allow our children to lose their time just painting in the Pre-K classroom? To organize the “green-day” or the “yellow-day” maybe could be fun experience for children. However, in addition to dress different colours every day, it is also very important to expend this time providing children with an excellent and high quality curriculum, based on scientific evidence, like the one facilitated by this book; evidence allowing us to think critically, to design and implement lessons very simulative for encourage children to develop their great [potential] mathematical reasoning.

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