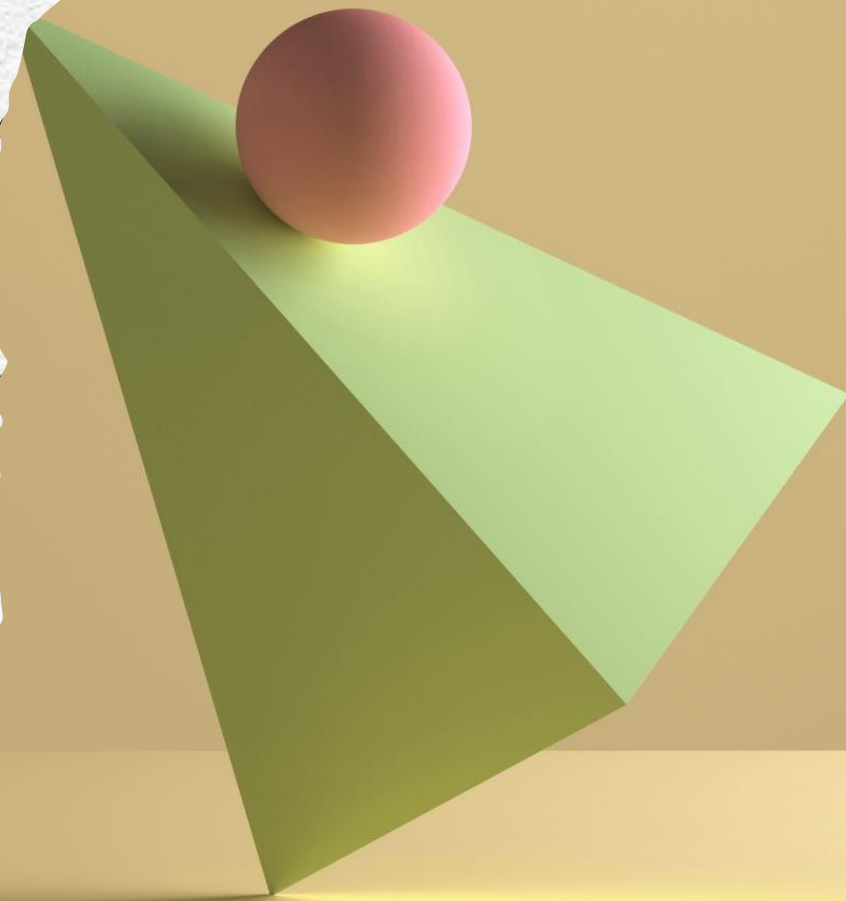


**One mother's engagement in her
daughter's self-initiated
mathematical activity at home:
A case study**

EDCP 590

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What am I looking for?

In this present case study, I (as a researcher and mother) seek to examine my engagement in my daughter's self-initiated activities in the home context to understand ways in which I facilitate her mathematical learning on such occasions. Such a case study of the daughter of a mathematics educator- I argue, provides a unique opportunity for us to get an 'insider' perspective of parent-child interactions surrounding children's mathematical instincts. By sharing my experiences as the mother in this case study, I will look at how parents perceive and engage in their young children's self-initiated activities during everyday practices.

Research Focus:

In literature reviewed to date, it appears studies of young children's self-initiated activities have been mainly conducted in formal contexts of learning, such as preschools, child care facilities or primary school classrooms. Hence, there is a need to explore how young children explore such everyday mathematics during their own self-initiated activities in informal contexts, such as the home, the playground, and other out-of-school experiences.

Accordingly, the research focus of the proposed study is on child-initiated activities arising in the home environment, whereby everyday mathematics and the child's mathematical development is evident. However, the main focus of the proposed study is on how I (as a parent and a math educator) engaged in my daughter's self-initiated activities?



Real life experience of doing mathematics



Methodology:

For the proposed study, I will do the secondary analysis of the data which were collected at the time of my class project EDCP 580. It was in the spring & summer (2021)- prior to Noor's (pseudonym of my daughter) start in kindergarten, when I observed her activities for a directed studies course (EDCP 580) to come to know her mathematical development through daily routine activities. In my EDCP 580 paper, I explored what kind of mathematical thinking originates in young ones if parents and early educators trust in their children's attempts at self-initiated, math-related everyday tasks.

How was the primary analysis of the study?

In my EDCP 580 paper, I explored what kind of mathematical thinking originates in young ones if parents and early educators trust in their children's attempts at self-initiated, math-related everyday tasks. For that previous study, I collected data in the form of field notes, pictures, and video recordings (with the help of Noor's father), of the naturally occurring activity within our home and out of home settings. The episodes I observed were then discussed with my supervisor, during semi-structured interviews held every two weeks to reflect on and analyse the data corpus in a mathematical way. The descriptions and recollections voiced in these audio-taped sessions were treated as an additional data source. I received the permission of Noor (Verbal assent) and her father (Written Consent) prior to documenting her play and everyday activities (as per BREB certificate H17-03557). For primary analysis of data for EDCP 580, I reported on our (my daughter and I) shared experiences during three episodes that stood out, and were analysed, for the mathematical aspects within Noor's self-initiated activities. In that previous study, I also shed some light on my scaffoldings (as parent) to encourage her math learnings during these three specific episodes.

How will secondary analysis proceed?

In the proposed study, I will also explore my intentions and characteristics as a mother, a researcher, and a math educator to describe my child's daily routine activities in the informal context. As an insider, I will analyse how my characteristics and beliefs may have influenced my types of engagements with my daughter's self-initiated activities. For this secondary analysis, I will consider my proximity and activities when Noor initiated her activities, whether my activity is parallel to her activities or unrelated, and whether Noor invited me to participate in her activities or I responded to those situations myself. In addition, I will analyse what happened after my engagement in her self-initiated activities, paying particular attention to, whether she proceeded in her own original way or changed as per my responses.

Conclusion:

The results of my proposed study are not intended to be generalized to all parents and children, but serve to convey a close and in-depth knowledge about one parent's engagement with her daughter's innate mathematics within one child's self-initiated activities in everyday life. The proposed study could in turn give teachers and parents a sense of young children's potentially rich engagement with mathematics and a broader view of how children develop mathematical learning with minimal, at times no, adult intervention. The proposed study could promote the positive view of everyday mathematics which young children explore through their self-initiated activities that helps to promote effective and productive mathematical learning among them.

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Thank you