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Perceived Parental Influence On Students' Dispositions To Study Further Mathematics And The Mediation Of Family Capital

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Background

There is a growing concern about students' enrollment in mathematically demanding courses in Higher Education (HE). Students' dispositions towards mathematics influence their decisions to choose advanced mathematics at school and to pursue further studies in mathematically demanding courses in HE. The present study aims to investigate which factors affect students' dispositions to study further mathematics and the role of parental aspirations in particular.

Research Questions

This study involves an exploration of the way parental aspirations are perceived by students and their parents, through a diverse set of individual students' interviews and a parent's interview of each student. We sought to explore how parents use their economic, social and cultural capital for their children's education and what are the parenting practices through which they transfer different forms of capital to their children.

Methods

This study explores perceived parental influence on students' dispositions to study further mathematics in HE through a multiple case studies methodology. Six adolescent students who are attending public upper secondary schools (lyceums) in Cyprus were interviewed twice and one of the parents of each student was interviewed once. The students' interviews were triangulated against their parent's interviews; this provided a basis for grounding the interpretation of students' perceptions of parental influence and dispositions to study further mathematics and allowed us to explore how parental aspirations were mediated by the family's capital. A cross-cases analysis was carried out to identify common themes and patterns in the data. Various categories of perceived parental influence have been identified which align with the existing literature on parental influence.

In a comparative study of Asian and Caucasian Americans parents, Campbell and Mandel (1990) divided parental influence into four elements: parental pressure, psychological support, parental help and parental monitoring. Furthermore Cao, Bishop and Forgasz (2006) distinguish between direct and indirect parental influence. They argue that direct parental influence, such as helping children with mathematics difficulties, has a less important impact on students' mathematics performance. Indirect parental influence such as parental encouragement, parental expectation and parents' attitudes towards mathematics have been identified as having a significant impact on students' attitudes towards mathematics.

Frame

We conceptualise students' dispositions towards mathematics as part of their habitus and apparently parental influence on habitus is largely subconscious. According to Bourdieu and Passeron (1990) parental influence on habitus is the pedagogic work accomplished by the family. "Pedagogic work accomplished by the family is a function of the distance between the habitus it tends to inculcate, and the habitus inculcated by all previous forms of pedagogic work" (ibid, p.72). Bourdieu (1977) argues that a person's individual history is constitutive of habitus, but so also is the whole collective history of family and class that the individual is a member of. "The habitus acquired in the family is at the basis of the structuring of school experiences" (Bourdieu, 1977). We therefore sought to explore if students' dispositions towards mathematics were informed by the habitus their family has inculcated.

It could be argued that parental influence is mediated by the economic, social and cultural capital of the family. Bourdieu (1986) had defined capital as those resources whose distributions define the social structure and whose deployment figures centrally in the reproduction of that structure. Such resources are not just economic, but also social and cultural. 'Economic' capital consists of financial stock and income and may be institutionalized in forms of inheritance. 'Social' capital includes social networks and identities of individuals as member of social groups, which provide 'connections' as assets. 'Cultural' capital consists of a large number of types of cultural knowledge and possessions including educational credentials. Even though in introducing the concept of capital, Bourdieu did not focus on school-family interactions, he points out the importance of class and social reproduction through the educational system (Bourdieu & Passeron, 1990). The analysis and interpretation of the data relies heavily on Bourdieu's theoretical framework. In particular, we utilise his concepts of habitus, economic, social and cultural to explore parental influence on students' dispositions towards mathematics.

Research findings

Preliminary data analysis indicates that students 'deny' their parents' influence on their dispositions towards mathematics. The majority of students who participated in this study claim "It's my choice" and deny their parents' influence on their dispositions to study further mathematics in HE, nevertheless they draw on their parents' capital to form their dispositions towards mathematics. They benefit from expensive private tutorials (economic capital) and visit their parents' workplace before making their career choice (social capital). Most of them are preparing for university by acquiring educational credentials e.g. GSE in mathematics (cultural capital). We argue that these are instances of the economic, social and cultural capital offered by the parents.

Although perceived parental influence on students' dispositions towards mathematics is mainly subconscious for the students, their parents appear to be more aware of their parenting practices and utilization of their economic, social and cultural capital for the enhancement of their children's education. They explicitly refer to supporting financially their children's future studies in HE (economic capital), asking people they know about certain courses (social capital) and helping their children make the right choice of university (cultural capital). However the parents also 'denied' their influence on their children's decision making about future studies in mathematically demanding courses in HE.

We conceptualise parental influence as 'symbolic violence' and the denial of parental influence by the students and their parents as 'misrecognition'. According to Bourdieu "symbolic violence is the violence which is exercised upon a social agent with his or her complicity [...] I call misrecognition the fact of recognizing a violence which is wielded precisely inasmuch as one does not perceive it as such" (Bourdieu & Wacquant, 1996: p.167-168). Thus students' perceptions of parental influence might not correspond to their parents' actual aspirations or influence, which remain hidden but are all the more powerful because they are relatively invisible. How parental influence is mediated by the economic and socio-cultural capital of the family and the ways parents communicate their aspirations to their children still deserves to be further investigated.

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