

## Chapter 9

# Homeschooling Meets Virtual Schools: Students and Parent Perceptions of Online Mathematics Classes

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### **EXECUTIVE SUMMARY**

*This study explores the experiences of homeschooling families with online mathematics instruction. It aims to provide useful information for researchers of distance education, designers of online mathematics instruction, and online educators to improve learning via virtual schools. The data was collected through interviews with parents and their homeschooled children as well as through observation of one of the children. The findings suggest that, even though there are some technical problems concerning the use of online instruction, virtual schools enable homeschooled students to gain responsibility and advance their grade level.*

### **BACKGROUND OF THE STUDY**

Homeschooled students are increasingly turning to virtual schools (Roblyer, 2006). Virtual schools offer homeschooling families several advantages, including “greater attention to the individual needs of their children, more power, significant academic rigor, and a way to express their values within the traditional school curriculum” (Marsh, Carr-Chellman, & Sockman, 2009, p. 36). Virtual schools can save time and

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money that normally is spent for facilities, books, and transportation. About 60% of all students who were enrolled in Pennsylvania cyber charter schools in 2001, and about 50% of the students who were enrolled in California's cyber charter schools in 2004 were formerly homeschooled students (Huerta, d'Entremont, & González, 2006; Marsh, Carr-Chellman, & Sockman, 2009). From 2002 to 2009, the number of students attending virtual schools in Ohio grew five times larger (Ohio Department of Education, 2009a). In 2005, the National Center for Education Statistics (NCES) reported that about one-third of all public school districts had students enrolled in distance education courses.

In spite of this growing trend, there is little information on the perspectives of families who are using virtual schools. Hence, the level of satisfaction with the quality and effectiveness of online mathematics instruction is not well known. One reason for this lack of research is that virtual schools are relatively new. A second reason is the difficulty of getting a representative sample due to the vast diversity (Collom, 2005; Cooper & Sureau, 2007; Isenberg, 2007). Statewide data sets and national cross-sectional surveys, particularly the National Household Education Survey (NHES), are the principal sources of data for studying the homeschooling choice (Isenberg, 2007).

Therefore, there is a need to understand the viewpoints of the families who use virtual schools in order to provide sources for online educators and instructional designers to improve education obtained through these schools. The purpose of this study was to explore the experiences of homeschooling families with online mathematics instruction. In order to serve this purpose, the following questions were addressed in the research:

1. Do homeschooled students and their parents perceive online mathematics instruction to be effective in virtual schools?
2. What are the perceived benefits and disadvantages of taking online courses through virtual schools?

## **Virtual Schools**

For-profit companies have an important role in the development of virtual schools. In addition, states, school districts, and individual state schools operate many virtual schools (Hadderman, 2002). According to a recent survey, virtual schooling has become much more available to the public (NCES, 2005). Many schools provide distance-learning options for their students (Morabito, 1997) because such learning “offers administrators a way to address problems such as chronic teacher shortages, increasing regulations, and increasing demands from students and parents for inno-

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