# An Analysis of Georgia Hybrid Program Characteristics and Hybrid Homeschool Student Academic Achievement

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Sharon Masinelli

M.C.M.S., Barry University, 2003 B.S., University of South Florida, 2000 © Copyright 2024 Sharon Masinelli All Rights Reserved This dissertation, "An Analysis of Georgia Hybrid Program Characteristics and Hybrid Homeschool Student Academic Achievement," by Sharon Masinelli, is approved by:

Dissertation Committee Chair Michael J. Bochenko. Ed.D.

Associate Professor

Leadership, Technology, & Workforce Development

Dissertation Committee Research Member

April L. Strevig, Ed.D. Assistant Professor

Leadership, Technology, & Workforce Development

Committee Member

Kathy D. Nobles, Ed.D.,

Assistant Professor

Leadership, Technology, & Workforce Development

Committee Member

Eric S. Wearne, Ph.D. Assistant Professor

Coles College of Business / Kennesaw State University

Associate Provost for Graduate Studies and Research

Becky K. da Cruz, J.D., Ph.D.

Associate Provost for Graduate Studies & Research

Professor of Criminal Justice

**Defense Date:** 

October 23, 2024

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## **ABSTRACT**

As homeschooling numbers rose following the COVID-19 pandemic, nontraditional education such as hybrid homeschooling was reported as a desirable option by parents. This dissertation examines the academic outcomes of homeschool and hybrid homeschool students in Georgia following the rise of post-COVID nontraditional education. Hybrid homeschooling, a blend of homeschooling and private education, has grown in popularity and yet the impact on student achievement remains largely unexplored. This study analyzes SAT performance among homeschool and hybrid homeschool students, comparing it to public and private school averages using a quantitative methodology. A series of t-tests, ANOVAs, and ultimately a multiple regression analysis was performed after administering an anonymous survey to Georgia hybrid homeschool families and homeschool families. Results indicate both homeschool and hybrid homeschool students scored significantly higher on the SAT than their public and private school counterparts. However, no significant difference was found between homeschool and hybrid homeschool students' SAT scores. Further analysis of factors such as set schedules, parental assistance, days attended in hybrid programs, and hybrid program characteristics aligned to Epstein's Theory of Parental Involvement revealed no significant predictive relationship with SAT scores.

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# Chapter I

## INTRODUCTION

#### Overview

With the increased popularity of home education since the COVID-19 pandemic, both homeschool and hybrid homeschool options have become arguably more well-known than ever before (Eggleston & Fields, 2021). In Georgia, the number of homeschool students increased 50% between 2015 and 2022 (White, 2023). Hybrid homeschooling was a desirable option reported by more than 40% of families in the post-pandemic period (McShane, 2021). Hybrid homeschool programs are educational programs in which students attend traditional classes several days a week at a brick-and-mortar institution while homeschooling on the remaining days (Wearne, 2016). Hybrid homeschooling is not a new phenomenon, yet there is limited research to describe this alternative education (Brobst, 2014; Herndon, 2019; Wearne, 2016, 2017, 2019a, 2019b, 2020, 2021). While the size of the hybrid population is unknown, hybrid homeschooling is an alternative education which may have grown more popular due to COVID-19 school shutdowns (McShane, 2021).

All hybrid homeschool options inherently require more parental involvement than comparable five-day programs (McShane, 2021). Parents are required to assume the responsibility of a primary educator on the days when a student does not attend classes. Hybrid homeschool programs have a range of homeschool days and program characteristics. The in-person days for a hybrid homeschool program could be as little as

one day a week or as many as four days a week. Some program characteristics may result in additional parental involvement, even when comparing very similar hybrid homeschool programs.

As research is so limited for hybrid homeschooling, large-scale studies on the academic outcomes of these programs have not yet been reported (Wearne, 2020). Epstein's (1995) Model of Parental Involvement theorized students are more successful when there is a collaboration between parents and schools. Hybrid homeschool programs are potentially a prime example of collaboration between home and school. The purpose of this study is to examine hybrid homeschool student academic achievement in terms of Georgia hybrid homeschool program characteristics. Hybrid program characteristics included program accreditation, the number of days on-site, involvement of parents in decision-making, support for parents from the program, and parent-teacher communication.

A survey distributed to 11th and 12th grade hybrid homeschool families provided data to reveal how various Georgia hybrid programs function and how these program characteristics may predict academic outcomes. Four levels of Epstein's model, parenting, communication, learning at home, and decision-making, link directly to questions on the survey. A deeper look into the varying levels of hybrid homeschool program characteristics and subsequent SAT and ACT scores may demonstrate the effectiveness of Epstein's model as implemented within a hybrid homeschool setting.

### **Problem Statement**

A new alternative education concept termed hybrid homeschooling was introduced into the journal literature in 2016 (Wearne, 2016). Wearne (2016) described

hybrid homeschools as "schools in which students attend school with other students for two or three days per week in traditional classroom settings and are homeschooled the balance of the week" (p. 1). Homeschooling is a nontraditional educational method where students "receive instruction at home instead of at a public or private school" (NCES, 2018, para. 2). The trend for homeschool education is on the rise, with the percentage of homeschool students increasing significantly from 1999 (1.7% of schoolage students) and remained steady at 3% in 2016 (Grady, 2017). Due to the COVID-19 pandemic, 13% of parents chose to homeschool their children in Fall 2020 (Diperna, Catt, & Shaw, 2020). Nearly 60% of parents surveyed by EdChoice in 2023 stated they preferred their child have at least one day a week of learning at home.

The academic achievement of hybrid homeschool students alongside the hybrid homeschool program characteristics has minimal research addressing the two. Academic achievement, measured through standardized testing, is the preferred method of predicting college success for homeschool students (Yu, Sackett & Kuncel, 2016) and is the chosen method for the hybrid homeschool students in this study as well. This study provides a foundation for establishing hybrid homeschool student academic achievement in terms of the basic characteristics of a standard hybrid homeschool program in Georgia. Hybrid program characteristics included in this study were program accreditation, the number of days on-site, involvement of parents in decision-making, support for parents from the program, and parent-teacher communication. The survey implemented in this study gave hybrid homeschool families the opportunity to reveal how the hybrid programs function and routines implemented while learning at home.

# **Purpose of the Study**

This study aimed to examine Georgia's hybrid homeschool program characteristics and discover possible predictors in student achievement. In pursuit of the research goals, this study required a review of Georgia hybrid homeschool program characteristics such as parent-teacher communication, support for parents from the program, involvement in decision-making, program accreditation, the number of days on-site, and hybrid homeschool student practices while learning at home in addition to standardized test scores. The definition of hybrid homeschool student is any student who attends a program in the state of Georgia advertised as a "hybrid" or "university model" program. Students who attend a homeschool cooperative or take classes a la carte were also identified in the survey. A la carte classes, classes taken as needed and offered exclusively by some groups, are described in the National Hybrid Schools Project as an indicator of a homeschool cooperative (Wearne & Thompson, 2022).

A survey inquiring about hybrid homeschool program characteristics and homeschool learning routines was the primary source of data collection. Multiple aspects of Epstein's Theory were tested with four research questions providing a foundation for this study. The first research question focuses on a comparison of the academic achievement of Georgia hybrid homeschool students, homeschool students, private school students, and students who attend public schools. The second and third questions focus on learning at home routines for Georgia hybrid homeschool students compared to homeschool students. The fourth question focuses on predictors for standardized test scores when reviewing Georgia hybrid homeschool program characteristics.

## **Research Questions**

Research Question 1 - Is there a significant difference between 11th and 12th Georgia students in homeschool, hybrid homeschool, public high school, and private high school on SAT and ACT scores?

Research Question 2 - Is there a significant difference between 11th and 12th Georgia students' levels of homeschooling and levels of set homeschool day schedules on SAT and ACT scores?

Research Question 3 - Is there a significant difference between 11th and 12th Georgia students' levels of homeschooling and levels of parental assistance on SAT and ACT scores?

Research Question 4 - Are Georgia hybrid homeschool program characteristics (program accreditation; number of days on-site; involvement of parents in decision-making; parental support from the program; parent-teacher communication; use of set schedule; and levels of parental assistance) significant predictors of Georgia hybrid homeschool students' performances on the SAT and ACT?

The first research question for this inquiry provides a basis for how Georgia hybrid homeschool students compare to other students in terms of academic achievement. This provided a baseline prior to analysis of other variables affecting standardized test scores. The data required to answer this research question originates from the College Board, ACT, and the surveys to both hybrid homeschool parents and homeschool parents. The survey allows hybrid homeschool and homeschool parents to report their student's standardized test scores.

Research Question 2 seeks to determine the typical practices of Georgia hybrid homeschool students and homeschool students in the process of *learning at home*. The data collected for this question also originate from the survey. The survey includes questions about the standard homeschool practices such as the number of hours spent on school assignments and the use of daily schoolwork schedules on homeschool days.

Research Question 3 pursues the level of parental assistance of Georgia hybrid homeschool students and homeschool students in the process of *learning at home*. The data collected for this question originates from the parent survey. The survey includes questions about the number of hours per day spent with parents completing schoolwork during a typical homeschool day.

The third of the four research questions worked towards identifying predictors of Georgia hybrid homeschool students' performances on a standardized test while *learning at home* as well as Georgia hybrid homeschool program characteristics. The data required for this question originates from the survey questions regarding hybrid homeschool program characteristics and standardized test scores. The core concept involved in this study is standardized test scores with influencing factors of hybrid homeschool program characteristics and *learning at home* (Figure 1).

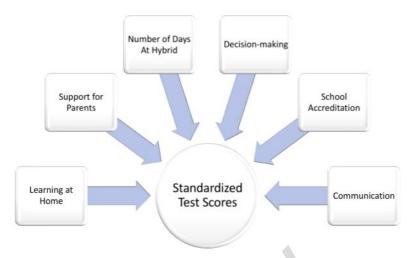


Figure 1. Concept map of standardized test scores as influenced by hybrid homeschool program characteristics and homeschool day routines

Research Question 4 directly links to the core concept found on the concept map. Research questions one, two, and three must be answered to provide the foundation for appropriately answering research question four. Research question one establishes if there is a difference in academic achievement between Georgia hybrid homeschool students and students in other forms of education, as previously implied by the works of Brobst (2014) and Herndon (2019). Research questions two and three identify the commonalities for homeschool and hybrid homeschool students' at-home learning which is a vital part of the theoretical framework. Research question four assists in determining how individual Georgia hybrid homeschool program characteristics play a role in the theoretical framework.

#### Theoretical Framework

The theoretical framework chosen for this study is Epstein's Model of Parental Involvement (Epstein, 1995). Joyce Epstein developed a theory with three spheres of influence and six levels of parental involvement designed to create a partnership between

parents and schools and maximize learning. These levels include *parenting*, *communication*, *volunteering*, *learning at home*, *decision-making*, and *collaboration with the community*. Four of these levels, *parenting*, *communication*, *learning at home*, *and decision-making* link directly to this hybrid homeschool study and theoretically influences standardized test scores as displayed earlier in the concept map (Figure 1). From a hybrid homeschool program perspective, the schools participate in Epstein's Model by collaborating with the parents as "partners" (Legacy Classical Christian Academy, 2017, para. 1). Epstein stated, "Partnerships are important for helping students succeed" (Epstein, 1995, p. 3).

Epstein's Theory provides the most comprehensive model for this study through the use of four concepts involved in this inquiry (Epstein, 1995). Epstein's (1995) parenting level includes support for parents which is a hybrid homeschool program characteristic. Communication, learning at home, and decision-making were also directly investigated through the intended survey. Per the concept map, influential concepts for standardized test scores were support for parents, decision-making, communication, and learning at home.

Multiple school districts support Epstein's Theory and distribute literature regarding Epstein's theoretical levels on their websites (Boise School District, 2019; Francis Howell School District, 2015; State of New Jersey DOE, n.d.). The description of Epstein's theoretical *parenting* level involves school support for a nurturing home environment (Epstein, 1995). Hybrid homeschool programs work to provide a support system, sometimes with workshops and most often with teacher guidance (Legacy Classical Christian Academy, 2017; UMSI, 2020a). Epstein's *learning at home level* 

(Epstein, 1995) requires parents to fulfill their role in the hybrid homeschool model as the teacher in the home (UMSI, 2020a). Communication is also a crucial part of Epstein's Theory (Epstein, 1995). Hybrid homeschool programs seek to provide "optimum teacher-parent communication" (Legacy Classical Christian Academy, 2017, para. 2).

School accreditation and the number of days at the hybrid homeschool program are not addressed by Epstein's Theory, but the hybrid homeschool parent survey questions address these concepts for this study. While the number of days at school were not directly found within Epstein's Theory, the concept is indirectly tested by placing more emphasis on the *learning at home* portion of her theory, although likely a disproportionate amount to what Epstein originally intended. While some concepts of Epstein's Theory were modified for this study, it remains a solid theoretical foundation for testing hybrid homeschool programs as demonstrated in Table 1. The study's research questions ultimately test Epstein's Theory of *support for parents, decision-making, communication,* and *learning at home* in a variety of Georgia hybrid homeschool programs. Aligning Epstein's Theory to this study allows the researcher to fulfill many of the needs of the intended study's objectives. Theoretically, hybrid homeschool program students may perform better on the standardized tests based on hybrid homeschool program characteristics supporting increased parental involvement.

Table 1
Research Question Alignment with Epstein's Theory

Research Question	Variable	Theory Concept/Purpose
1 - Is there a significant difference between 11th and 12th Georgia students in homeschool, hybrid homeschool, public high school, and private high school on SAT and ACT scores?	Dependent variable: standardized test scores Independent variable: method of schooling	Determines how Georgia hybrid homeschool students compare academically to other types of students
2 - Is there a significant difference between 11th and 12th Georgia students' levels of homeschooling and levels of set homeschool day schedules on SAT and ACT scores?	Dependent variable: standardized test scores Independent variables: method of schooling (homeschooling vs hybrid homeschooling), the use of a specific schedule for homeschooling	Determines level of homeschooling to test theoretical concept of <i>learning</i> at home
3 - Is there a significant difference between 11th and 12th Georgia students' levels of homeschooling and levels of parental assistance on SAT and ACT scores?	Dependent variable: standardized test scores Independent variables: method of schooling (homeschooling vs hybrid homeschooling) and level of parental assistance in homeschooling	Determines level of parental assistance to test theoretical concept of <i>learning</i> at home
4 - Are Georgia hybrid homeschool program characteristics (program accreditation; number of days on-site; involvement of parents in decision-making; parental support from the program; parent-teacher communication; use of set schedule; and levels of parental assistance) significant predictors of Georgia hybrid homeschool students' performances on the SAT and ACT?	Dependent variable: standardized test scores Independent variables: program accreditation; number of days on-site; involvement of parents in decision-making; parental support from the program; parent-teacher communication; use of set schedule; and levels of parental assistance	Tests the theory concepts of support for parents, communication, learning at home, and decision-making

### Literature Review

There are only two formally published studies regarding the academic achievement of hybrid homeschool students. Brobst (2014) and Herndon (2019) studied the academic achievement of University Model School (UMS) students. Brobst (2014) studied 156 traditional private high school students and 90 hybrid homeschool students within several University Model Schools in Texas. Both groups were predominantly White yet the UMS sample was more ethnically diverse than the traditional high school sample. The UMS group was 2.22% African-American, 1.1% Bi-racial, 4.04% Hispanic, 3.33% Unknown, and 88.89% White. Comparatively, the traditional high school group was 1.94% African-American, 1.94% Pacific-Islander, and 96.77% White. Brobst (2014) found UMS students attending school two to three days a week averaged SAT composite scores 32.081 points higher (95% confidence intervals from -63.665 to -1.937) than students who attended five-day Christian schools. However, UMS students did not score significantly higher than the traditional students on the SAT Writing section ( $\beta = -.046$ ). In terms of ACT scores, initially Brobst concluded the UMS students scored significantly higher than the traditional students (F (10, 132) = 17.268; p < .001). She contradicted that conclusion when she found the  $\beta$  value for school type was -.026. Therefore, her final conclusions demonstrated the hybrid homeschool student group scored better than the traditional students only on the SAT composite test but not on the SAT Writing or ACT.

Herndon (2019) similarly found UMS students averaged a higher ACT score than all other students combined. The UMS participants in his study who graduated in 2017

reported a mean ACT score of 26.45 which was significantly higher than the mean of all ACT test takers in 2017.

Reviewing many types of homeschool studies over a 20 year period has resulted in a mix of results that likely included hybrid homeschool students (Qaqish, 2007, Ray & Eagleson, 2008, Rudner, 1999). Hybrid homeschool families frequently view themselves as homeschool families (Wearne 2020), allowing for participation in homeschool studies. Rudner (1999) reported results which included 7.7% of homeschool students enrolled in a full-service curriculum. Ray and Eagleson (2008) studied any families identified as homeschoolers. With a significant gap in the research regarding academic achievement and hybrid homeschool students, it is ideal to expand the search and increase the overall insight into the mixed homeschool/hybrid homeschool population. These unique studies also assist with creating a standard of academic achievement for the homeschool community.

Ray and Eagleson (2008) published a large-scale study of homeschool students solely for the purpose of determining academic achievement in relation to individual state regulations. There is a high level of variation between all 50 states in terms of homeschool regulation. Ray and Eagleson rated the regulations on a scale from low to high. As the level of regulation increases, hybrid homeschool students were more likely to be required to register as a homeschooler (Wixom, 2015). With over 6,000 participants in their study, it is quite probable Ray and Eagleson (2008) included hybrid homeschool students who registered as a homeschool student in their state. Comparing their results to the NCES (2019) national averages, the homeschool population scored an average verbal SAT score (582.4) higher than the traditional school students (502). The

average math score of the homeschool students (538) was also slightly higher than the traditional student scores (515).

Qaqish (2007) reviewed the academic achievement of students who classified themselves as homeschool. His research focused on the ACT mathematics score. His work suggested students who identified as homeschooled scored more poorly than the non-homeschooled students. There were over 1,000 students in this study and the homeschool students missed two additional questions out of 60 compared to traditional students.

Rudner (1999) researched standardized test scores for over 20,000 students, some of which used a full-service curriculum. Rudner's study was distributed directly by the testing provider and the test scores came directly from the testing company. The average homeschool student enrolled in the study scored in the 70th-80th percentile.

Comparatively, public or private school students scored in the 65th-75th percentile.

Rudner also reviewed his data for score differences between homeschool students and the students who were using a full-service curriculum. There were no significant differences in their test scores (F enrollment = .24; df = 1,9750).

## **Research Design**

This was a nonexperimental survey design with group comparisons and correlational methods. Examination of the relationship between hybrid homeschool program characteristics and standardized test scores were reported. Through distribution of a survey, families could respond anonymously. The data obtained from the survey was analyzed with no manipulation of the variables.

## **Population**

The hybrid homeschool population is essentially unknown. There are no consistent registries for homeschoolers on a national level (Coalition for Responsible Home Education, 2017). The National Hybrid Schools Survey (Wearne & Thompson, 2022) is the only annual survey designed to target hybrid homeschool programs and is limited to volunteer responses. The Hybrid Schools Report does not include an estimate of the overall population. The intended sample consisted of hybrid homeschool programs only within the state of Georgia. Georgia reported 74,066 homeschool students in 2019 (International Center for Home Education Research, 2023). Extrapolating from national statistics of students attending school part-time, Georgia may have approximately 13,000 hybrid homeschool students.

# **Data Collection Methods**

This study used purposeful selection of programs identified as "hybrid" within Georgia. A cross-sectional online survey was employed in an attempt to generalize the Georgia hybrid homeschool program population (Creswell, 2015). An email sent to all identified hybrid program administrators requested participation from their 11<sup>th</sup> and 12<sup>th</sup> grade families. Willing participants were given a Qualtrics survey link and responses were collected for twelve weeks.

Other data required for this study was collected through websites which report the average private and public school test scores in Georgia. Responses from the homeschool survey gave the average homeschool SAT and ACT scores. The public school Georgia scores are published and readily available on the Georgia Department of Education website.