

Research in Our Schools



**Duke University
School Research Partnership Office**

**Research Studies
2007-2008**

Table of Contents

Introduction	3
Research Abstracts, by category:	
I. <i>Developing and Evaluating Programs to Enhance Student Performance</i>	
The AAKOMA Project	5
Project AIM (Adult Identity Mentoring)	6
Promoting Positive Youth Development: A Comprehensive After-School Program for Middle and High School Youth at Risk of Dropping Out	7
Creative Spelling	8
High School Illicit Drug Use Onset and Early School Dropout: A Survival Analysis Using Fast Track Data	9
Organization Time Management and Planning Study for Children with ADHD	10
Project CLASS (Children Learning Academic Success Skills)	11
The North Carolina Child and Family Support Team (CFST) Initiative	12
Evaluation of the School-wide Positive Behavioral Support Program in Eight North Carolina Elementary Schools	13
II. <i>Peer Influence on Adolescents</i> <i>(Research Studies from the Transdisciplinary Prevention Research Center (TPRC), funded by the National Institute on Drug Abuse)</i>	
Social Network and Leadership Status: Links with Susceptibility to Deviant Peer Influence	14
Stability of Social Standing in the Peer Group in Early Adolescence ..	15
Early Adolescent Dating Relationships, Peer Standing and Risk-Taking Behaviors and the Role of Gender	16
The Social World of the Gifted Adolescent	17

III. Teacher Characteristics, Retention and Professional Development

Are Teacher Absences Worth Worrying About in the U.S.?	18
Teacher Mobility – Enemy of Equity?	19
Teacher Credentials and Student Achievement in High School: A Cross-Subject Analysis with Student Fixed Effects	20
An Initiative to Help North Carolina Enhance its System of Professional Development for PreK-12 Teachers	21
Internationalizing Teacher Education at Duke University: A Case Study	22
Beginning Teacher Retention and the Importance of Mentoring, School Climate, and Principal Leadership in a Professional Learning Communities Framework	23

IV. Race, Ethnicity and Culture

School Segregation under Color-Blind Jurisprudence: The Case of North Carolina	24
Parent Behavior and Child Adjustment Across Cultures	25
The Enduring Impact of Race: Understanding Disparities in Student Achievement	26

V. Educational Policy Influences on Student Outcomes

Reflections on Equity, Adequacy, and Weighted Student Funding	27
School Policies and the Black-White Test Score Gap	28

On the cover: Ina Nyko, assistant principal of Wake Forest-Rolesville Middle School, meets with high school volunteers who will be mentoring middle school students through a comprehensive after-school program that incorporates Project AIM. The program is a targeted intervention to help middle school students develop academic and other skills necessary for current and future school success. Nyko and Research Scientist Ann Brewster co-wrote the grant for implementing the program at Wake Forest-Rolesville Middle School.

Introduction

Overview:

The Duke University School Research Partnership (SRP) Office facilitates collaborations between Duke researchers and area school districts to create and maintain mutually beneficial relationships.

The ideal is for the SRP Office to serve as a portal between Duke and area school districts. This function streamlines processes and maximizes the mutual benefits of the research conducted so that school districts, schools, students and Duke researchers all benefit from the collaboration. Duke researchers include staff and faculty from the university, as well as from Duke Medical Center and from other organizations collaborating with Duke on specific research projects.

Some of the services of the SRP Office:

- Facilitating the planning and placement of school-based research projects.
- Promoting research collaborations between schools and Duke researchers by awarding research grants and fellowships to faculty and graduate students.
- Disseminating research findings via an annual research conference, annual research summaries and other print or online publications.

Services for Duke researchers:

- Provide information about protocols for area public schools (and nonpublic and other schools with which the SRP Office works).
- Provide consultation on the best way to present research projects to schools to maximize mutual benefit for the researcher and the school.
- Provide review of research proposals.
- Provide assistance with proposal submissions to area school districts.

Services for school districts:

- Oversee the annual Duke University School Research Fellowship Grant to address priorities and research questions of schools.
- Hold an annual, half-day research conference to present and discuss research findings of interest to school representatives and Duke researchers.
- Provide school districts with an annual summary of research projects and findings.
- Identify experts among Duke faculty and researchers to provide consultation to schools and school districts, upon request.
- Disseminate research findings via print and online publications.

History:

The Duke University School Research Partnership Office was developed with support from the Office of the Provost and the Center for Child and Family Policy. Begun in 2006 as the Duke Office for Research in Schools (DORIS), the SRP Office is an integral part of the work of the Center for Child and Family Policy.

Contact:

Ann B. Brewster, Ph.D., MSW

Research Scientist, Center for Child and Family Policy
School Liaison, Duke University School Research Partnership Office
Rubenstein Hall, 302 Towerview Road
Durham, NC 27708-0545
ann.brewster@duke.edu
(919) 613-9299
www.childandfamilypolicy.duke.edu
www.duke.edu/schoolresearch

Faculty Advisory Committee:

Steven Asher, Ph.D.

Professor, Department of Psychology and Neuroscience

Kenneth Dodge, Ph.D.

William McDougall Professor of Public Policy Studies
Professor of Psychology
Director, Center for Child and Family Policy

Gary Feng, Ph.D.

Assistant Professor, Department of Psychology and Neuroscience

Gavan Fitzsimons, Ph.D.

Professor of Marketing and Psychology, The Fuqua School of Business

Marie Lynn Miranda, Ph.D.

Associate Research Professor, Nicholas School of the Environment and Earth Sciences

Susan Wynn, Ed.D.

Assistant Professor of the Practice, The Program in Education
Director, Secondary Teacher Preparation Program

I. Developing and Evaluating Programs to Enhance Student Performance

The AAKOMA Project (African American Knowledge Organized for Mindfully Healthy Adolescents)

The AAKOMA Project seeks to determine how black adolescents and their families identify and deal with emotional and behavioral concerns.

The research agenda consists of three aims:

- to solicit an in-depth understanding of African-Americans' perceptions of barriers to engagement in psychiatric treatment and research utilizing a focus group approach;
- to develop and pilot test materials for training clinicians to conduct a new intervention, "Improving Readiness to Change for African American Adolescents and Families"; and
- to conduct a pilot trial of "Improving Readiness to Change for African American Adolescents and Families."

We are conducting the research in three phases, including:

- 1) focus group data collection and analysis;
- 2) manual and treatment development; and
- 3) a pilot randomized controlled trial.

We have received approval from Durham Public Schools for phase one of the study.

Investigator: **Alflee M. Breland-Noble, Ph.D.**

Contact:

Alflee M. Breland-Noble, Ph.D.

Assistant Professor, Department of Psychiatry and Behavioral Sciences
Duke University Medical Center
abreland@psych.duhs.duke.edu
(919) 416-2432

Project AIM (Adult Identity Mentoring)

Project AIM (Adult Identity Mentoring), developed by Clark and colleagues (Clark et al., 2005), is a brief, evidence-based, culturally-sensitive, structured intervention to help middle and high school students avoid risky behaviors by focusing on positive academic, personal and career aspirations. This intervention works by helping students to elaborate their personal goals and to obtain the skills they need to reach those goals. Students discover for themselves that some behaviors, such as substance use, are incompatible with their goals, while others, such as attending school and putting effort into their classes, will help them attain their goals.

The AIM curriculum involves 10, 45-minute sessions, typically delivered once or twice per week, and is fully flexible in how it is delivered: via classroom activities that can be seamlessly integrated into a health, vocation-oriented, CIS, AVID or other elective; through an additional class curriculum; or in an after-school or community setting. It involves student participation, role-playing and discussion and, thus, is active and fun, as well as a valuable, skills-based learning experience for students.

Duke University's Transdisciplinary Prevention Research Center (TPRC) has been studying the effectiveness of Project AIM for reducing risky behaviors (particularly alcohol and substance use) and enhancing students' academic achievement and preventing school dropout. Our evaluations indicate that middle school students exposed to AIM show a range of benefits, including significant reductions in risky behaviors and a stronger orientation toward academic achievement.

The Centers for Disease Control and Prevention is already considering Project AIM as one of its "model programs." The most recent version of Project AIM includes parental involvement, with homework that students have to discuss with their parents each week. We are currently interested in testing the effects of greater inclusion of parents within Project AIM, based on research that points to the importance of parental involvement in the lives of middle and high school youth as they discern their futures.

Investigators for the Transdisciplinary Prevention Research Center (TPRC):
Timothy J. Strauman, Ph.D., Department of Psychology and Neuroscience; Rick H. Hoyle, Ph.D., Center for Child and Family Policy; and Ann B. Brewster, Ph.D.

Contact:

Ann B. Brewster, Ph.D., MSW

Research Scientist, Center for Child and Family Policy

ann.brewster@duke.edu

(919) 613-9299

*Promoting Positive Youth Development:
A Comprehensive After-School Program for Middle
and High School Youth at Risk of Dropping Out*

Wake Forest-Rolesville Middle School is currently collaborating with its two feeder high schools, Wake Forest-Rolesville High School and Wakefield High School, as well as with parents and other community resources, to provide a comprehensive after-school program that has rigor, relevance and relationships to students who are reluctant learners. The main goal is to increase positive behaviors of students, such as academic achievement, career identification, making positive choices, addressing peer pressure and developing concrete steps for future higher education and career planning.

Specific objectives for this initiative are based on factors in middle school and high school students' lives that have proved to be most highly correlated with academic achievement, prosocial behavior and high school educational attainment. These objectives fall into seven categories: 1) rigorous academic preparation; 2) reduction in risky behaviors; 3) increased pro-social skills development in the form of goal-setting, skills in communicating with peers, skills in identifying potential pitfalls and consequences of unhealthy decisions, and clearer career identification; 4) recreation and physical activity opportunities; 5) collaboration with high schools, universities and local community members; 6) increased parental involvement; and 7) indicating overall effectiveness of middle school after-school programs to positively affect factors that are shown to impact high school graduation.

One hundred fifty middle school students were identified for inclusion in this initiative; they have the following characteristics: scored a 1, 2 or low 3 on end-of-grade reading and math exams; a history of suspensions and discipline referrals; a history of grade retention; and parents who gave permission for participation. Twenty high school students were identified as High School Peer Mentors; the mentors have these characteristics: GPA of 2.5 or higher; considered by their teachers and other school staff members as being good role models for middle school youth; and interested in being tutors, mentors and leaders.

Investigator: **Ann B. Brewster, Ph.D.**

Contact:

Ann B. Brewster, Ph.D., MSW

Research Scientist, Center for Child and Family Policy

ann.brewster@duke.edu

(919) 613-9299

Creative Spelling

Learning to spell is a process in which a child discovers the world of print. Children's idiosyncratic spelling reflects their understanding of how the language and writing system work.

The Creative Spelling project aims to explicate the linguistic and cognitive principles in beginning readers' unconventional spelling.

With the support of Durham Public Schools and principals, we have worked with six classrooms (approximately 80 kindergarten and first-grade students) at Club Boulevard Humanities Magnet and Hillandale Elementary School. Every several weeks, we visited the classrooms and copied students' writing samples from their portfolios. We have collected more than 5,000 records.

This longitudinal dataset is being used to study the relationship between phonemic awareness and orthographic knowledge. The data collection phase of the project has concluded. We are in the process of transcribing and coding the thousands of student writings in our lab. We reported preliminary findings at the 2007 Society for Research on Child Development conference.

Investigators: **Gary Feng, Ph.D.; and Tanya Kaefer, Department of Psychology and Neuroscience.**

Contact:

Gary Feng, Ph.D.

Assistant Professor, Department of Psychology and Neuroscience
garyfeng@duke.edu
(919) 660-5646

High School Illicit Drug Use Onset and Early School Dropout: A Survival Analysis Using Fast Track Data

Adolescent illicit substance use, specifically early onset, is associated with a greater likelihood of school dropout; dropping out of high school, in turn, is associated with a host of negative consequences, including substance use. Research is needed to better understand the relations between school dropout and illicit substance use in order to better tailor prevention strategies, especially for those who are likely to be early illicit substance users.

We used Fast Track data to test a novel mediation modeling approach in the context of prediction of dropout and initiation of illicit substance use. Each of these variables is amenable to survival, or time-to-event, analysis. Earlier predictors may predict the likelihood of either dropout or illegal drug use at any given time. We know of no strategies to date, however, that model the survival process for two interdependent processes.

To return to the specific case, initiating illegal drug use is hypothesized to predict subsequent or concurrent high school dropout. The possibility that high school dropout predicts initiation of illegal drug use is also modeled. In the mediation model, earlier variables, such as middle school parental monitoring and association with drug-using or delinquent peers, are predictors of both processes. We hypothesize that these variables predict onset of illegal drug use, which onset mediates their prediction of dropping out of high school. The indirect effect would be the effect of the predictor on the hazard probability of drug use, multiplied by the effect of onset of illegal drug use on the hazard probability of dropping out. This model is also extensible to moderating processes—e.g., parental monitoring may also weaken the link between illegal drug use and high school dropout.

Results of this study have implications for the development of prevention programs that simultaneously address multiple predictors and several related outcomes.

***Investigators:* Ann B. Brewster, Ph.D.; Patrick S. Malone, Ph.D.; and Katherine E. Masyn, Ph.D., University of California, Davis.**

Contact:

Patrick S. Malone, Ph.D.

Associate Professor, Department of Psychology
University of South Carolina
malone@sc.edu
(803) 777-2700

Organization Time Management and Planning Study for Children with ADHD

The purpose of this study is to evaluate and compare treatment programs for children with ADHD who have problems with organizational skills. Both treatments include 20 clinic sessions involving parents and children over a 12-week period, for which families are compensated. Teacher consultation is provided to encourage implementation of organizational strategies and systems at school. All children who participate receive treatment, although 20% serve as wait-list controls for two to three months before starting. We will evaluate the effects of the treatments on students' academic performance, homework behaviors, attitude toward school and family relationships at the end of treatment and will conduct follow-up evaluations at one month and six months post-treatment.

Children in grades 3 to 5 who meet study criteria for ADHD and have organizational difficulties at school or at home are eligible to participate. Children do not need to be previously diagnosed and may be medicated or not. Teacher participation is required for the child to participate.

We are completing our second year of a five-year National Institute of Mental Health award (through 2010). We have recruited approximately half of our targeted 100 subjects. We have received approval to conduct this study in Durham Public Schools and have worked with 14 students from this district.

Our study provides direct services to children with academic performance problems and to their teachers. Results may help to increase the number of treatment options available for young children with ADHD.

***Investigators:* Karen Wells, Ph.D., Department of Psychiatry, Duke Medical Center, (Principal Investigator); and Desiree W. Murray, Ph.D.**

Contact:

Desiree W. Murray, Ph.D.

Assistant Clinical Professor and Associate Director, Duke ADHD
Program, Department of Psychiatry
Duke Medical Center
dwmurray@duke.edu
(919) 416-2082

Project CLASS
(Children Learning Academic Success Skills)

Even when attention problems are not severe enough to warrant a formal diagnosis of ADHD, they are still strongly associated with academic achievement difficulties. Each year, many students fail to achieve to their potential because of attention problems, and there are currently no interventions that have been clearly shown to enhance academic achievement for inattentive students.

Project CLASS (Children Learning Academic Success Skills) is a study funded by the U.S. Department of Education to test whether or not two different computer interventions help children with attention difficulties perform better in school. First-graders rated as highly inattentive by their teachers were randomly assigned to receive computerized attention training (CAT), computer-assisted instruction (CAI), or to a wait-list control condition. The CAT software was intended to help students develop their attention skills, while students in the CAI group were presented with grade-level material in reading and math via the computer. Students worked on these programs two afternoons per week for approximately 60 minutes over a 14-week period.

Compared to students in the control group, students in both computer interventions were more likely to show a reduction in attention problems during the school year. Students in the CAI group were also more likely to show gains in reading fluency and in teachers' reports that they approached their school work in a less impulsive manner. Significant gains in broad reading and broad math as assessed by the Woodcock-Johnson III were not found, however. Results also replicated prior findings that attention difficulties during first grade significantly interfere with the development of children's early reading skills. Analyses of other data collected in the study are ongoing.

Investigators: **David Rabiner, Ph.D.; and Desiree W. Murray, Ph.D.,
Department of Psychiatry, Duke Medical Center.**

Contact:
David Rabiner, Ph.D.

Director of Undergraduate Studies, Department of Psychology and
Neuroscience
Senior Research Scientist and Associate Director for Program Evaluation
Services, Center for Child and Family Policy
drabiner@duke.edu
(919) 613-9304

The North Carolina Child and Family Support Team (CFST) Initiative

The North Carolina Child and Family Support Team (CFST) initiative, developed by Governor Mike Easley, was designed to improve academic performance in 100 school districts that have large populations of at-risk students. The initiative, begun in 2006, allocated funds to create 100 teams made up of licensed school social workers and licensed school nurses to work with parents using a child-and-family team model. Seven of those schools are in Durham County.

The development of the model was influenced by Durham's efforts to create a system of care for all children. The theory is that the CFST nurses and social workers, who are being hired in addition to existing nurses and social workers, will use child-and-family teams to engage with the highest risk families to help those families access the services they need to help their children succeed.

The Center for Child and Family Policy at Duke University is evaluating the CFST program. The evaluation will use the North Carolina Education Research Data Center (NCERDC); information from a Web-based case management system that tracks information on individual student referrals, parent contacts, case plans, team meetings and intervention outcomes; and from school, agency, parent and student surveys conducted once a year. The case management system not only has information on each child served by the program, but also contains rich systematic information on parent engagement, as well as detailed information on child-and-family team meetings, service planning, barriers to service and intervention outcomes.

The results of the evaluation will be made available to state, as well as local, leaders. We believe that this information will help local and state leaders work together to improve outcomes for all children in our public schools.

***Investigators:* Elizabeth Gifford, Ph.D., Center for Child and Family Policy; Joel Rosch, Ph.D.; and Audrey Foster, Center for Child and Family Policy.**

Contact:

Joel Rosch, Ph.D.

Senior Research Scholar, Center For Child and Family Policy
jbrosc@duke.edu
(919) 613-9291

Evaluation of the School-wide Positive Behavioral Support Program in Eight North Carolina Elementary Schools

A Web-based survey of teachers at eight elementary schools implementing schoolwide Positive Behavioral Support (PBS) according to national criteria was administered. Data from the North Carolina Education Research Data Center (NCERDC) was used to assess student outcomes related to academic performance, school suspensions and teacher turnover rates in the eight study schools as compared to 264 North Carolina elementary schools that had started schoolwide PBS.

Key findings from the Web-based teacher survey:

1. Only 92% of teachers reported that PBS is *currently in place*.
2. Schoolwide behavioral supports are mostly in place, although there were statistically significant differences across study schools.
3. Classroomwide behavior supports are mostly in place; 90% reported that classroomwide behavioral supports improved student behavior *somewhat to a lot*.
4. Targeted interventions to support students who engage in problem behaviors are only somewhat in place.
5. A positive association between the level of implementation of schoolwide PBS and school climate exists (may be the first study to prove association).

Key findings from analyses of NCERDC data:

1. There were no statistically significant changes in any of the outcomes of interest in the eight schools, based on the power to detect differences.
2. There were statistically significant increases in composite performance, fifth-grade promotion and short-term suspensions in the broader sample of all PBS-adopting schools.
3. There were no statistically significant differences in study outcomes from baseline years to having schoolwide PBS for more than one year.

Recommendations include:

1. Efforts should be made at the state, district and school level to increase the level of implementation of schoolwide PBS in North Carolina elementary schools (Scales, 1999).
2. More time and resources should be allocated for monitoring students' behaviors and providing feedback to teachers.
3. Strategies and resources should be developed to train parents of at-risk students in positive behavioral support and positive discipline skills.

***Investigators:* Yvonne Wasilewski, Ph.D., M.P.H.; Elizabeth Gifford, Ph.D., Center for Child and Family Policy; and Kara Bonneau, M.S., Center for Child and Family Policy.**

Contact:

Yvonne Wasilewski, Ph.D.

Research Scientist, Center for Child and Family Policy
ywasilew@duke.edu
(919) 668-3290

II. Peer Influence on Adolescents: Abstracts for Research Studies from the Transdisciplinary Prevention Research Center

Social Network and Leadership Status: Links with Susceptibility to Deviant Peer Influence

Seventh-grade students (N = 324) completed social cognitive maps to identify peer groups and peer group leaders, sociometric nominations to describe their peers' behaviors, and questionnaires to assess their own behaviors.

Peer group members resembled one another in levels of direct and indirect aggression and substance use; girls' cliques were more behaviorally homogenous than were boys' cliques. On average, leaders (especially if they were boys) were perceived as engaging in more problem behaviors than were nonleaders. In girls' cliques, peripheral group members were more similar to their group leaders on indirect aggression than were girls who were more central to the clique. Peer leaders perceived themselves as being more able to influence peers, but did not differ from nonleaders in their perceived susceptibility to peer influence.

The findings contribute to our understanding of processes through which influence may occur in adolescent peer groups.

Lansford, J.E., Miller-Johnson, S., Malone, P.S., Costanzo, P.R., Grimes, C., & Putallaz, M. (in press). *Social Network and Leadership Status: Links with susceptibility to deviant peer influence*. *Merrill-Palmer Quarterly*.

Stability of Social Standing in the Peer Group in Early Adolescence

Sociometric nominations, social cognitive maps and self-report questionnaires were completed in consecutive years by 327 students followed longitudinally from grade 7 to grade 8 to examine stability of social standing in the peer group and correlates of changes in social standing.

Social preference, perceived popularity, network centrality and leadership were moderately stable from grade 7 to grade 8. Alcohol use and relational aggression in grade 7 predicted changes in social preference and centrality, respectively, between grade 7 and grade 8. Changes in social standing from grade 7 to grade 8 were unrelated to grade 8 physical aggression, relational aggression and alcohol use after controlling for the grade 7 corollaries of these behaviors.

Lansford, J.E., Killea-Jones, L.A., Miller-Johnson, S., & Costanzo, P.R. (2008, March). *Stability of Social Standing in the Peer Group in Early Adolescence*. Poster presented at the biennial meeting of the Society for Research on Adolescence, Chicago, Ill.

Early Adolescent Dating Relationships, Peer Standing and Risk-Taking Behaviors and the Role of Gender

This study examined associations among early adolescent romantic relationships, peer standing, and problem behaviors and gender as a moderator of these associations, in a sample of 320 seventh-grade students.

In comparison with average-status youth, popular- and controversial- status youth were more likely to have romantic partners, whereas neglected-status youth were less likely to have romantic partners. Similarly, youth perceived as conventional and unconventional leaders were also more likely to have romantic partners than were nonleaders. Youth who had romantic partners drank more alcohol and were described by their peers as being more aggressive than were youth who did not have romantic partners. Among those youth who had romantic partners, those who reported having more deviance-prone partners were themselves more likely to use alcohol and to be more aggressive, and those who engaged in deviant behavior with their partners used more alcohol. However, these associations varied somewhat by gender.

These findings underscore the salience of early romantic partner relationships in the overall adjustment of early adolescents.

Miller-Johnson, S., Lansford, J.E., Costanzo, P., Malone, P.S., Golonka, M., & Killeya-Jones, L. (manuscript under review). *Early Adolescent Dating Relationships, Peer Standing, and Risk-Taking Behaviors and the Role of Gender*.

Contact for TPRC research:

Jennifer Lansford, Ph.D.

Research Scientist, Center for Child and Family Policy
lansford@duke.edu
(217) 586-2870 or (217) 722-0965

The Duke University Transdisciplinary Prevention Research Center (TPRC) is funded by a grant from National Institute on Drug Abuse (NIDA).

The Social World of the Gifted Adolescent

The goals of the study: 1) to better understand gifted adolescents' status in the social world compared to their nongifted peers; and 2) to explore whether or not the behavioral profiles and correlates typically associated with different social status categories are moderated by giftedness.

The study included 327 seventh-graders (44% male, 46% African-American) from two cohorts involved in an ongoing longitudinal study of social influence processes affecting substance use beliefs and behaviors. Forty-two percent of the participants were identified by their schools as academically gifted. Using an unlimited nomination procedure, students indicated all peers in their grade who:

- they like the most; they like the least; are leaders and good to have in charge (prosocial leadership);
- who fight a lot, hit others, or say mean things to them (overt aggression);
- who leave other kids out on purpose or talk about them behind their backs (relational aggression); and
- who get picked on and teased, have mean things said about them behind their backs, or who get left out of things on purpose (victimization).

Students also answered questions about their friendships and about their involvement in dating.

Chi-square analyses of the distribution of social status categories revealed a marginally significant difference for gifted vs. nongifted students [$X^2(4) = 8.36, p = .08$]. Compared to their nongifted peers, gifted youth were less likely to be controversial (3.5% vs. 10.2%) or rejected (10.8% vs. 14%), and more likely to be popular (15.1% vs. 10.2%) or neglected (19.4% vs. 14%). A series of giftedness \times status analyses using MANCOVA (multiple analysis of covariance), controlling for socioeconomic status, provided preliminary evidence that giftedness does moderate the relationship between social status and behavioral profile. While gifted students were more likely to be nominated as prosocial leaders, this was especially true of popular gifted students. Gifted students were also less overtly and relationally aggressive than their peers, but there was an interaction with status in that this difference was significant only among those who were controversial or rejected. Whereas the gifted were marginally less victimized than their peers ($p = .07$), rejected gifted students were actually more victimized than all other students.

Investigators: Kristen Foster; Martha Putallaz, Ph.D., Department of Psychology and Neuroscience; and Christina Grimes, Ph.D., Department of Psychology and Neuroscience.

Contact:

Kristen Foster

Doctoral student, Department of Psychology and Neuroscience
kf2@duke.edu
(919) 660-5632

III. Teacher Characteristics, Retention and Professional Development

Are Teacher Absences Worth Worrying About in the U.S.?

Using detailed data from the North Carolina Education Research Data Center (NCERDC), we examine the frequency, incidence and consequences of teacher absences in public schools, as well as the impact of an absence-disincentive policy.

The incidence of teacher absences is regressive: schools in the poorest quartile averaged almost one extra sick day per teacher than schools in the highest income quartile, and schools with persistently high rates of teacher absence were much more likely to serve low-income than high-income students. In regression models incorporating teacher-fixed effects, absences are associated with lower student achievement in elementary grades.

Finally, we present evidence that the demand for discretionary absences is price-elastic. Our estimates suggest that a policy intervention that simultaneously raised teacher base salaries and broadened financial penalties for absences could both raise teachers' expected income and lower districts' expected costs.

Investigators: **Charles T. Clotfelter, Ph.D.; Helen F. Ladd, Ph.D., Terry Sanford Institute of Public Policy; and Jacob L. Vigdor, Ph.D., Sanford Institute.**

Contact:

Charles T. Clotfelter, Ph.D.

Z. Smith Reynolds Professor of Public Policy Studies and Director, Center of the Study of Philanthropy & Voluntarism, Terry Sanford Institute of Public Policy
Professor of Economics and Law
charles.clotfelter@duke.edu
(919) 613-7361

Teacher Mobility – Enemy of Equity?

Previous studies have documented (using a variety of indicators) that the teachers assigned to schools enrolling low-income students are, on average, less well-qualified than those teachers assigned to more affluent schools. This paper explores the role of teacher mobility in contributing to this persistent dimension of inequality.

Using detailed administrative data from the North Carolina Education Research Data Center (NCERDC), the study examines patterns of teacher mobility and attrition in North Carolina, noting the effect of mobility both within and across school districts. It presents a competing-risk model of teacher movement designed to assess the influences of teacher characteristics, district teaching salaries, nonteaching salaries, nonpecuniary aspects of schools and several policies designed to encourage teachers to work in hard-to-staff schools.

Investigators: **Charles T. Clotfelter, Ph.D.; Helen F. Ladd, Ph.D., Terry Sanford Institute of Public Policy; and Jacob L. Vigdor, Ph.D., Sanford Institute.**

Contact:

Charles T. Clotfelter, Ph.D.

Z. Smith Reynolds Professor of Public Policy Studies and Director, Center of the Study of Philanthropy & Voluntarism, Terry Sanford Institute of Public Policy
Professor of Economics and Law
charles.clotfelter@duke.edu
(919) 613-7361

*Teacher Credentials and Student Achievement
in High School: A Cross-Subject Analysis with
Student Fixed Effects*

We use data on statewide end-of-course tests in North Carolina to examine the relationship between teacher credentials and student achievement at the high school level. The availability of test scores in multiple subjects for each student permits us to estimate a model with student-fixed effects, which helps minimize any bias associated with the nonrandom distribution of teachers and students among classrooms within schools.

We find compelling evidence that teacher credentials affect student achievement in systematic ways and that the magnitudes are large enough to be policy-relevant. As a result, the uneven distribution of teacher credentials by race and socioeconomic status of high school students – a pattern we also document – contributes to achievement gaps in high school.

Investigators: **Charles T. Clotfelter, Ph.D.; Helen F. Ladd, Ph.D., Terry Sanford Institute of Public Policy; and Jacob L. Vigdor, Ph.D., Sanford Institute.**

Contact:

Charles T. Clotfelter, Ph.D.

Z. Smith Reynolds Professor of Public Policy Studies and Director, Center of the Study of Philanthropy & Voluntarism, Terry Sanford Institute of Public Policy
Professor of Economics and Law
charles.clotfelter@duke.edu
(919) 613-7361

An Initiative to Help North Carolina Enhance its System of Professional Development for PreK-12 Teachers

In late 2003, with the support of the North Carolina Education Cabinet, the Z. Smith Reynolds Foundation launched the Professional Development Initiative to help the state enhance its system of professional development for preK-12 teachers. The initiative's Implementation Work Group developed a Proposal for Action that outlined specific components of an enhanced professional development system for North Carolina. The effort drew from related work already carried out by state and school district stakeholders and supplemented that work with new research and additional stakeholder input. The Proposal for Action is available in its entirety at <http://www.pubpol.duke.edu/centers/child/publications/reports/PDI-Proposal%20for%20Action.pdf>.

The Proposal for Action calls for the following system enhancements, which are at various stages of implementation:

1. Dissemination of and training on North Carolina's professional development standards. *This has occurred and is ongoing.*
2. Professional development data collection. *This is pending the Department of Public Instruction's determination of next steps.*
3. A "funding map" of sources and uses of funds for professional development. *This is complete.*
4. Development of an online resource center for professional development. The Professional Development Initiative recently launched North Carolina's first online directory of professional development providers and opportunities. *The directory is available at <http://www.learnnc.org/pddir/>.*

Contact:

Jenni Owen, MPA

Director of Policy Initiatives, Center for Child and Family Policy
jwowen@duke.edu
(919) 613-9271

Internationalizing Teacher Education at Duke University: A Case Study

This pilot study was conducted in direct response to the changing demographics of public school classrooms and the need to prepare culturally competent teachers. The study examined how student teachers perceive other cultures and cultural differences, how beliefs and attitudes about other cultures change over the course of the student teaching internship, and what interventions are effective in promoting intercultural competency.

In fall 2006, 14 Duke undergraduate student teachers responded to presurvey questions regarding their perceptions about other cultures and completed the Intercultural Development Inventory (IDI). Following the administration of the inventory and questionnaire, participants received instruction in intercultural competency skills and participated in an immersion experience.

During spring 2007, the student teachers focused on the practical application of intercultural competency skills in public school classrooms in collaboration with their mentors in Durham Public Schools. During the last week of class, the teachers took the IDI again and answered post-survey questions.

Based on multiple measures of intercultural competence, an Intercultural Competence Score (ICC) (Deardorff and Deardorff, 2007) was calculated for each student teacher. In addition, a group IDI profile was generated. As a group, the scores reflected overall growth in intercultural competence, with individual profile scores revealing mixed results.

Implications of the research will include dissemination of recommended strategies to school systems in an effort to promote intercultural competency skills of beginning and experienced educators.

Contacts:

Jan Riggsbee, Ed.D.

Associate Professor of the Practice, The Program in Education
jrigg@duke.edu
(919) 660-3077

Darla Deardorff, Ed.D.

Executive Director, Association of International Education
Administrators, and Fulbright Advisor, Center for International Studies
d.deardorff@duke.edu
(919) 668-1928

Beginning Teacher Retention and the Importance of Mentoring, School Climate, and Principal Leadership in a Professional Learning Communities Framework

High teacher turnover rates negatively impact instruction and ultimately affect student achievement. This three-year study examines beginning teacher retention by surveying first- and second-year teachers to see if their perceptions of mentoring, school climate and principal leadership are linked to their career decisions.

The findings of this analysis consistently reveal that beginning teachers' decisions to remain at a school site or in the school district are influenced by school climate and principal leadership. Mentoring programs are not related to beginning teachers' career decisions. These findings also point to the importance of building and sustaining professional learning communities in which beginning teachers are viewed as valued members.

This study also compares the effectiveness of two distinct mentoring programs. The first mentoring program (2005) used teachers who continued their full-time teaching duties to mentor initially licensed teachers. The newly structured mentoring program (2006, 2007) placed experienced teachers in full-time mentoring roles. The mentors also received ongoing training to support and develop beginning teachers. First-year teachers who participated in the newly structured mentoring program in 2006 were significantly more satisfied compared to first-year teachers who participated in the 2005 mentoring program. The same was true for first-year teachers in 2007.

***Investigators:* Susan R. Wynn, Ed.D.; and Erika A. Patall, Department of Psychology and Neuroscience and The Program in Education.**

Contact:

Susan R. Wynn, Ed.D.

Assistant Professor of the Practice and Director, Secondary Teacher Preparation Program, The Program in Education
swynn@duke.edu
(919) 660-3075

IV. Race, Ethnicity and Culture

School Segregation under Color-Blind Jurisprudence: The Case of North Carolina

Using detailed administrative data for the public K-12 schools in North Carolina (from the North Carolina Education Research Data Center), we measure racial segregation in the public schools of North Carolina. With data for the 2005-2006 school year, we update previously published calculations that measure segregation in terms of unevenness in racial enrollment patterns both between schools and within schools.

We find that classroom segregation generally increased between 2000-2001 and 2005-2006, continuing, albeit at a slightly slower rate, the trend of increases we observed over the preceding six years. Segregation increased sharply in Charlotte-Mecklenburg Schools, which introduced a new choice plan in 2002. Over the same period, racial and economic disparities in teacher quality widened in that district. Finally, we compare our basic measure to two alternative measures of segregation.

Investigators: **Charles T. Clotfelter, Ph.D.**; **Helen F. Ladd, Ph.D.**, **Terry Sanford Institute of Public Policy**; and **Jacob L. Vigdor, Ph.D.**, **Sanford Institute**.

Contact:

Charles T. Clotfelter, Ph.D.

Z. Smith Reynolds Professor of Public Policy Studies and Director, Center of the Study of Philanthropy & Voluntarism, Terry Sanford Institute of Public Policy
Professor of Economics and Law
charles.clotfelter@duke.edu
(919) 613-7361

Parent Behavior and Child Adjustment Across Cultures

The purpose of this study is to understand how parents' discipline strategies and other parenting practices, attitudes and beliefs affect children's development within diverse cultural contexts. The research being conducted in Durham is part of a larger study being conducted in eight countries (China, India, Italy, Kenya, Philippines, Sweden, Thailand and the United States).

Our goal is to recruit a total of 300 third-grade children and their mothers and fathers (whenever possible) from Durham, N.C. We aim to have 100 children and their parents from each of three cultural groups participate: African-American, European-American and Hispanic. We will aim for equal representation of boys and girls in each sample.

We have just begun to interview children, mothers and fathers separately in their homes or another location they may choose (using a team of three interviewers conducting the separate interviews simultaneously whenever we can arrange that with the families' schedules). Each interview takes between one and two hours.

We are still in the process of recruiting participants and conducting interviews. Our goal is to finish initial data collection by August 2008. After the study, we would be pleased to prepare a report or to discuss the findings with any interested Durham Public Schools administrators, teachers or parents.

Findings from this study will advance our understanding of how parenting affects children's adjustment in diverse cultural contexts and will have the potential to influence interventions designed to prevent children's behavioral and emotional problems.

Contact:

Jennifer Lansford, Ph.D.

Research Scientist, Center for Child and Family Policy
lansford@duke.edu
(217) 586-2870 or (217) 722-0965

The Enduring Impact of Race: Understanding Disparities in Student Achievement

The continuing relevance of race as a predictor of educational success runs counter to fundamental principles of school reform. This study seeks to disentangle the component elements of race gaps by closely examining differences in academic achievement among black and white students attending seventh grade in North Carolina public schools. Our first set of analyses examines the effects of student, peer and school characteristics on academic achievement. Using administrative data from the North Carolina Education Research Data Center (NCERDC), we estimate race-specific models of performance on end-of-grade reading and math tests. Decomposition methods are then applied to model estimates, in order to quantify the proportion of the race gap that is linked to the student, peer and school *composition* of race groups, as well as the proportion that reflects unequal risk of *poor* academic performance between race groups.

We find that the largest proportion of the academic achievement gap is explained by students' family and demographic characteristics, followed by the organizational characteristics of the schools they attend. The distribution of students by race across schools with differing racial composition explains a significant portion of the achievement gap, suggesting that policy shifts away from integration may hinder efforts to decrease achievement gaps over time. Race differences in the characteristics of schools, such as school size, teacher qualifications and poverty status of the school, also contribute to race differences in achievement. These findings point to the need for continuing to address achievement gaps through more equitable distribution of such resources.

Our models include many predictors that vary in their distributions by race; yet, a substantial portion of the achievement gap remains unexplained by differences in the composition of the black and white student populations. This "unexplained" component of race differences reflects both the impact of unmeasured covariates, as well as differences in the pattern of effects or risk. The latter can be interpreted as the "enduring impact of race"—that educational outcomes may differ for black and white students regardless of their attributes, accomplishments and the schools that they attend. In order to further reduce the achievement gap, it is essential that we acknowledge the persistence of this component and further investigate the complex relationship of race to educational outcomes.

Investigators: **Clara G. Muschkin, Ph.D.; and Audrey Beck, Ph.D.,
Center for Research on Child Wellbeing, Princeton University.**

Contact:

Clara G. Muschkin, Ph.D.

Research Scientist, Center for Child and Family Policy
muschkin@duke.edu
(919) 613-9302

V. Educational Policy Influences on Student Outcomes

Reflections on Equity, Adequacy, and Weighted Student Funding

Within the context of the school finance literature, the concepts of equity and adequacy raise a number of complex definitional and pragmatic issues. The purpose of this paper is to clarify those issues and to use equity and adequacy concepts to evaluate the recent policy proposal called Weighted Student Funding (WSF).

Though WSF contains some equity-enhancing elements, it is likely to fall short of its equity goals because the weights are likely to be inappropriate. Furthermore, the approach fails to take full account of the concentrations of challenging-to-educate students and their effects on the distribution of teachers. In addition, the WSF proposal can be faulted for paying no attention to adequacy, potentially stigmatizing individual students, and placing so much focus on individual schools. A more complete evaluation of WSF would require a broader institutional perspective that extends beyond the equity and adequacy considerations of this article.

(Forthcoming in *Journal of Education Finance and Policy*. Also available as a Terry Sanford Institute of Public Policy Working Paper).

Investigator: **Helen Ladd, Ph.D.**

Contact:

Helen Ladd, Ph.D.

Edgar T. Thompson Distinguished Professor of Public Policy and
Professor of Economics, Terry Sanford Institute of Public Policy
helen.ladd@duke.edu
(919) 613-7352

School Policies and the Black-White Test Score Gap

This paper examines school-related policies and strategies that have been proposed or justified, at least in part, on the basis of their potential for reducing black-white test score gaps. These include strategies, one of which is greater integration, to reduce differences in the quality of teachers faced by black and white students; school and classroom policies designed to improve the achievement of low-performing students; and the strategies of school accountability and parental choice designed to change incentives throughout the educational system.

While none of these strategies is likely to be sufficiently powerful to offset the powerful nonschool social forces that contribute to the racial achievement gap, the failure of education policymakers to be vigilant about the aspects of the problem over which they do have some control could well lead to even greater gaps in the future or to lost opportunities to reduce them.

(Forthcoming in Katherine Magnuson and Jane Waldfogel, eds., *Steady Gains and Stalled Progress: Inequality and the Black-White Test Score Gap*. Also available as a Terry Sanford Institute of Public Policy Working Paper.)

Investigator: **Helen Ladd, Ph.D.**

Contact:

Helen Ladd, Ph.D.

Edgar T. Thompson Distinguished Professor of Public Policy and
Professor of Economics, Terry Sanford Institute of Public Policy
helen.ladd@duke.edu
(919) 613-7352



Box 90545
Durham, NC 27708-0545
www.childandfamilypolicy.duke.edu
www.duke.edu/schoolresearch