

Overview of the Ten Year Retrospect Assessment of Urban Debate and High School Educational Outcomes: Evidence from the Chicago Debate League

Despite widespread testimonial¹ and anecdotal² evidence of the impact of academic debate on critical thinking skills, personal development, academic achievement, and scholastic success, few studies have systematically evaluated its effect in general, let alone in urban settings. The current era of accountability in public education and the reality of finite resources, make it imperative that co-curricular activities such as debate provide evidence of their effects that can withstand scrutiny. Dr. Briana Mezuk of Virginia Commonwealth University, in association with the Robert Wood Johnson Health and Society Scholars Program at University of Michigan and the Consortium on Chicago School Research, is working on a project which seeks to systematically evaluate the individual and institutional-level effects of policy debate in an urban public school system. The specific aims of the project are:

- To describe the implementation, dissemination, expansion, and scope of high school debate (in particular, the Urban Debate League approach) in an urban public school system over a 10-year period.
- To evaluate the relationship between institutional support for debate and learning environment outcomes, including faculty turnover, drop-out rates, and availability of higher achievement oriented course offerings.
- To investigate the relationship between intensity of student participation in debate and educational outcomes, including grade point average, on-time graduation, absenteeism, disciplinary action (detention, suspension, expulsion), and college admission.

II. SIGNIFICANCE

Educational achievement is tightly linked with earning power, job advancement, and socioeconomic status (SES). On average, each additional year of education increases earning power by 8 to 15%.³ Urban public school districts, on average, perform less-well than their suburban counterparts.⁴ In 1998, the national high school graduation rate was 71%, while in the city of Chicago school district the rate was 47%. Racial/ethnic minorities disproportionately experience poor educational attainment even in these underperforming urban settings. For

¹ National Association for Urban Debate Leagues. Urban Debate QuickFacts. Chicago, IL: NAUDL 2008, url: <http://www.naudl.org/quickfacts.htm>; see also Lee E. Memoir of a former urban debate league participant. Contemporary Argumentation and Debate 1998;19:93 - 96.

² See Branham R. Was Gone on Debating': Malcolm X's Prison Debates and Public Confrontations. Argumentation and Advocacy 1995;31:117-137; see also Warner E, Brusckie J. 'Gone on debating:' Competitive academic debate as a tool of empowerment. . Contemporary Argumentation and Debate 2001;22:1 - 21.

³ Topel R. The private and social values of education. Federal Reserve Bank of Cleveland. Cleveland, OH; 2005:47 - 57.

⁴ Greene J. High school graduation rates in the United States. New York: Manhattan Institute for Policy Research; April 2002.

example, within Chicago, the graduation rate for white students in 1998 was 14% higher than for African Americans (59% versus 45%, respectively).⁵ This pattern is repeated in school districts across the U.S. It has been argued that socioeconomic status is a “fundamental cause” of disease,⁶ meaning that SES determines the distribution of more proximal risk and protective factors and coping resources that influence health outcomes over the life course. For example, persons with a four-year college degree have a life expectancy five years longer than persons who did not graduate high school,⁷ and this mortality risk is especially pronounced for preventable deaths.⁸ Practically all health conditions, from depression to cancer, are more common and more deleterious among lower SES relative to higher.^{9 10} Finally, the disadvantages incurred by low educational attainment persist and accumulate over the life course.^{11 12 13}

Thus it is clear that if debate improves proximal educational outcomes there is the potential that it influences long-term SES and therefore health trajectories. Previous research has shown the merit of examining social policies from the health disparities framework, specifically policies aimed at reducing socioeconomic disparities (i.e., civil rights legislation).¹⁴

III. BACKGROUND

A. Debate as an Academic Activity

1. Policy Debate

Policy debate is an interscholastic and curricular activity that allows students to face off against each other in a structured exchange centered on pressing issues of social concern. From candidate debates or legislative decision-making, democratic society is thought by many to be an engagement in a discussion of opposing views – and is thus thought by many to be critical to democratic empowerment.¹⁵ The majority of empirical studies of debate suggest that intensive participation in the activity, at least at the college level, is associated with improvements critical

⁵ Link B, Phelan J. Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior* 1995;80 - 94.

⁶ Robert Wood Johnson Foundation. *Overcoming obstacles to health: A report to the Commission to Build a Healthier America*. Princeton, NJ: RWJF; 2008.

⁷ See Link & Phelan, *supra* note 8.

⁸ See Robert Wood Johnson Foundation, *supra* note 9; see also Smith J. Healthy bodies and thick wallets: the dual relation between health and economic status. *Journal of Economic Perspectives* 1999;13:145 - 166; see also Lynch J, Smith G, Harper S, Hillemeier M. Is income inequality a determinant of population health? U.S. National and regional trends in income inequality and age- and cause-specific mortality. *Milbank Quarterly* 2004;82:355 - 400.

⁹ Kaplan G, Rangit N, Burgard S. Lifting gates – lengthening lives: Did civil rights policies improve the health of African American women in the 1960s and 1970s? . In: House J, Schoeni R, Kaplan G, Pollack H, eds. *Social and economic policy as health policy*. New York: Russell Sage; 2008.

¹⁰ Mitchell G. Pedagogical possibilities for argumentative agency in academic debate. *Argumentation and Advocacy* 1998;35:41 - 56.

¹¹ Allen M, Berkowitz S, Hunt S, Loudon A. A meta-analysis of the impact of forensics and communication education on critical thinking *Communication Education* 1999;48:18 - 30.

¹² Colbert K. Enhancing critical thinking ability through academic debate. In: Broda-Bahm K, ed. *Perspectives in controversy: selected essays from Contemporary Argumentation and Debate*. New York: International Debate Education Association; 2002:71 - 100.

¹³ See Mitchell, *supra* note

¹⁴ Berger B. Overview of the Urban Debate Program. *Rostrum* 2000;75:14.

¹⁵ See NAUDL, *supra* note 1.

thinking skills (i.e., indicated by the Watson-Glaser Critical Thinking Appraisal),¹⁶ although differing study design and sample composition preclude generalizing these findings to other settings.¹⁷ Some suggest that debate provides not only a laboratory for simulating and evaluating competing claims, but also a framework for developing civic engagement and personal advocacy in all aspects of society.¹⁸ Debate might be thought to provide a venue for disadvantaged citizens to empower themselves through the provision of social capital acquired by voicing and defending their concerns in a public arena.¹⁹

2. The Urban Debate Model

In 1985 the first Urban Debate League (UDL) was founded in Atlanta by the efforts of Melissa Wade at Emory University and Larry Moss at Spelman College, and this initial program served the model for the Open Society Institute urban debate initiative in 1997.²⁰ Most Urban Debate Leagues consist of a partnership between the school district and a private non-profit partner that has a board of directors comprised of leaders in the education, civic, and business communities. There are currently 24 UDLs affiliated with NAUDL.²¹ It is difficult to estimate the scope of debate in the U.S. because there are no national statistics regarding the number of programs or students participating. The National Forensics League (NFL), a fee-based organization that does not encompass all debate programs and which includes forensic activities other than policy debate (i.e., poetry recitation), reports that there are approximately 1700 active NFL school chapters in the U.S.²² See appendix for a description of the urban debate model.

B. Debate and educational outcomes

Despite widespread community support and anecdotal accounts, there has been little empirical research on the impact of debate on student or institutional-level outcomes in urban settings. An unpublished longitudinal study comparing debaters (n = 209) from UDLs in Chicago, Kansas City, New York City, St. Louis, and Seattle to non-debater students (n = 212) reported that over the course of the academic year debaters had improved reading scores (indicated by the Scholastic Reading Inventory) and higher grade point averages than non-debaters.²³ Another unpublished report of students (n = 235) and coaches (n = 25) from the Baltimore UDL examined student attitudinal and educational outcomes over the course of the academic year and reported

¹⁶ National Forensics League. Number of active NFL chapters in the U.S. Personal communication to B. Mezuk, National Forensics League 2008, url: <http://www.nflonline.org>.

¹⁷ Collier L. Argument for success: a study of academic debate in urban high schools of Chicago, Kansas City, New York, St. Louis and Seattle. National Communication Association Convention. Chicago, IL; 2004.

¹⁸ Sugland B, Pelea B, Leon J, Harris V, Peak G. Learning what you can, building from what you learn: assessing the role of the Baltimore Urban Debate League on academic and social development outcomes of students. Baltimore, MD: Fund for Educational Excellence; 2003.

¹⁹ DOC Communications, LLC. Assessing the effect of the Minnesota urban debate league on academic and social development outcomes of students: First year report. Minneapolis, MN: Minnesota Urban Debate League; 2005.

²⁰ National Association for Urban Debate Leagues. Research documenting the academic and social benefits of urban debate leagues. Chicago, IL: NAUDL 2008, url: <http://www.urbandebate.org>.

²¹ See Colbert, *supra* note

²² Correa M, Easton J, Johnson O, Ponisciak S, Rosenkranz T. Selected indicators from the U.S. census and Chicago public school records related to the lives and schooling of children: Webbased data brief. Chicago, IL: CCSR 2004, url: http://ccsr.uchicago.edu/web_reports/Schoolageenvironment/front.html.

²³ Consortium on Chicago School Research at the University of Chicago. Data and data requests. Chicago: CCSR 2008, url: <http://ccsr.uchicago.edu/content/page.php?cat=6>.

that more intense debate participation was associated with improvements in self-reported reading comprehension and a shift towards an internal locus of control.²⁴ An unpublished evaluation comparing reading and psychosocial outcomes of debaters in the Minneapolis UDL to comparison students reported that debaters had greater improvements in reading comprehension, self-esteem, and truancy rates relative to non-debaters over the school year.²⁵ Other unpublished accounts have indicated that debaters have higher graduation and college admission rates compared to school or district averages.²⁶

The primary limitations of these studies are: (1) lack of or inappropriately specified comparison group, (2) failure to control for confounding variables, (3) failure to account for selection effects, (4) inappropriate statistical methodology (i.e., failure to account for correlated measurements over time and within schools), and (5) lack of academic scrutiny of the findings (i.e., none have been published in peer-reviewed journals).

IV. METHODS

A. Conceptual Model

How can speech change action? Unlike health or behavioral education, in which the subject of speech is the behavior that is the target of change, a new high school debate topic is chosen each year and in the past 15 years only three topics have dealt directly with health or education: The federal government should establish an education policy to significantly increase academic achievement in secondary schools in the United States (1999); The United States federal government should substantially increase public health services for mental health (2002); and The United States federal government should substantially increase its public health assistance to Sub-Saharan Africa (2007).

Therefore, if debate does impact long-term educational or health outcomes it cannot be operating in the same manner that health education or awareness campaigns are believed to work (i.e., information dissemination and behavior promotion).²⁷ Proponents argue that debate is also qualitatively different from other so-called “extra-curricular” activities such as athletics or drama/theater arts because of the nature of the activity. It is axiomatic that debate enhances “critical thinking skills,” but such skills are difficult to define, operationalize and measure. By examining tangible achievement outcomes, this proposal aims to circumvent those issues by focusing on the purported ends of critical thinking skills, namely, enhanced ability to access and actualize educational opportunities.

B. Sample

The Chicago Debate League (CDL) was founded in 1997 as part of the OSI initiative and began with five public high schools in the city district. The League grew to 10 schools in 1998, 15 in 1999, 19 in 2000, 24 in 2001, 28 in 2002, 32 in 2003, 36 in 2004 and currently has 48 schools

²⁴ Diez Roux A. A glossary for multilevel analysis. *Journal of Epidemiology and Community Health* 2002;56:588-594.

²⁵ *Id.*

²⁶ Rosenbaum P, Rubin D. The central role of the propensity score in observational studies for causal effects. *Biometrika* 1983;70:41 - 55.

²⁷ *Id.*; see also Rubin D. Estimating causal effects from large data sets using propensity scores. *Annals of Internal Medicine* 1997;127:757 - 763.

participating. The CDL currently holds 16 high school tournaments each year. Approximately 675 high school students (grades 9-12) currently participate in the CDL. In the Chicago public school district, approximately one-third of school-age children live below the federal poverty level. The school district is racially diverse and is approximately 33% non-Hispanic white, 40% African American, 25% Hispanic, with Asians making up the majority of the remainder.²⁸

C. Measures

Chicago Debate League (CDL)

The CDL has three primary sources of data: (1) tournament registration: team rosters, which include students participating at a given tournament, school attended, coaches, division entered, and conference, and lists of judges and coaches who attended the tournament; (2) tournament results: students' and teams record of performance at the tournament (i.e., win-loss records, speaker points and awards) and ranking relative to other teams in the same division and conference; and (3) administrative records: school participation status (i.e., coaches, number of teams) and debater registration forms (i.e., name, ID number, school, GPA, and optional contact information for seniors). From these sources the following four measures will be derived: student participation, coach commitment, school participation, and team strength (Table 1). See appendix for a letter of support from the CDL/NAUDL.

Consortium on Chicago School Research (CCSR):

The CCSR at the University of Chicago possesses the largest archive of quantitative data of any urban school district. The Consortium conducts biannual surveys of faculty and students on student preferences and attitudes, school climate, faculty-student relationships, and course offerings and quality. The CCSR also houses data on student and faculty administrative records (i.e., disciplinary actions, drop-out rates, attendance), standardized test scores (i.e., ACT), college admittance and matriculation, and grade transcripts for all high school students in the Chicago public school district.²⁹ See appendix for a letter of support from the CCSR.

D. Analysis

Two statistical approaches will be used for this project. Foremost, multi-level modeling (MLM) approaches will be used to account for the clustering of debaters within schools and for multiple outcome measurements over time for an individual debater or institution.³⁰ Multi-level analysis accounts for the nesting of debaters within schools and of multiple observations nested within an individual student or school. MLM allows for the simultaneous examination of school- and debater-level characteristics on debater-level outcomes, and of the influence of debater- and school-level characteristics on variability in school-level outcomes.³¹ For example, the influence of the school-level characteristic – number of tournaments entered – and the debater-level characteristic – number of rounds debated – on one debater-level outcome specified under Aim 3 – grade point average (GPA) – could be expressed as:

$$Y_{ij} = \gamma_{00} + \gamma_{01}\text{School}_j + \gamma_{10}\text{Debater}_{ij} + \gamma_{11}\text{School}_j\text{Debater}_{ij} + U_{0j} + \epsilon_{ij}$$

²⁸ Raghunathan T, Leprowski J, VanHoewyk J, Solengerger P. A multivariate technique for multiply imputing missing values using a sequence of regression models. *Survey Methodology* 2001;27:85 - 95.

²⁹ van der Lann M, Robins J. *Unified methods for censored longitudinal data and causality*. New York: Springer; 2003.

³⁰ See Link & Phelan, *supra* note 8.

³¹ See Lynch, Smith, Harper & Hillemeier, *supra* note

This model specifies the effects of school-level variables (i.e., number of tournaments entered) (γ_{01}), individual-level variables (i.e., number of rounds debated by a student) (γ_{10}), and the interaction of these individual-level and school-level variables (γ_{11}) on the outcome (Y_{ij}), GPA.

The model also allows accounts for the correlation between the debater- and school-level characteristics with the random intercept term (U_{0j}). These analyses can also account for the influences of potential confounders, such as socioeconomic status (i.e., proportion of school on free/reduced lunch), school size, racial/ethnic composition of the student body, and the influence of co-occurring school improvement initiatives.

The second approach, propensity score matching, will be used to assess the causal association between intensity of debate participation and debater- and school-level outcomes. Propensity score matching reduces all confounding or “background” characteristics (i.e., SES, racial/ethnic makeup, school size) to a single summary construct in order to allow the straightforward comparison of lower vs. higher levels of debate participation on risk of some outcome (i.e., GPA).³² The aim of this approach is to mimic a randomized controlled trial, in which the process of randomization ensures that confounding and background characteristics are balanced equally across the comparison groups, thus allowing one to estimate the causal effect of the “treatment” (i.e., more intense debate participation) on the outcome.³³

Aim 1: To describe the implementation, dissemination, expansion, and scope of high school debate in an urban setting over a 10-year period.

Descriptive statistics (Mann-Whitney tests for continuous and chi2-tests for categorical variables) will be used to investigate institutional factors that influence school support for debate such as (1) earlier vs. later adoption of the program (i.e., faculty turnover, school size), (2) more vs. less successful programs (i.e., number of coaches, number of tournaments entered), and (3) lower vs. higher levels of program activity (i.e., competitive success, level of competition) and how those relationships may have changed over the 10-year period.

Aim 2: To evaluate the relationship between institutional support for debate and learning environment outcomes, including faculty turnover, drop-out rates, and availability of higher achievement-oriented course offerings.

Two statistical approaches will be used to investigate this aim:

1. Multilevel modeling will be used to evaluate the impact of school-level debate activities on school-level educational outcomes while accounting for the influence of debater-level characteristics. Time-varying covariates will be used to assess changes in these relationships over the 10-year period.
2. Propensity score matching will be used to isolate the effect of institutional support for debate from confounding debater and school-level characteristics and therefore allow for an estimate of the causal relationship between support for debate (i.e., earlier vs. later program adopters) and school-level outcomes.

Aim 3: To investigate the relationship between intensity of student participation in debate and educational outcomes, including grade point average, on-time graduation, absenteeism, disciplinary action (detention, suspension, expulsion), and college admission.

Two statistical approaches will be used to investigate this aim:

³² LaVeist T. Disentangling race and socioeconomic status: a key to understanding health inequalities. *Journal of Urban Health* 2005;82:iii26 - iii34.

³³ See Brusckhe, *supra* note 4.

1. Multilevel modeling will be used to evaluate the impact of debater-level activities on debater-level outcomes while accounting for the influence of school-level characteristics. Time-varying covariates will be used to assess changes in these relationships over the 10-year period.
2. Propensity score matching will be used to isolate the effect of debate participation from confounding debater and school-level characteristics and therefore allow for an estimate of the causal relationship between intensity of debate participation (i.e., short-term vs. longer-term participation) and individual-level outcomes.

E. Limitations

The primary limitation of this project concerns missing data due to the fact that the exposure (debate participation) and outcome (educational attainment) data are derived from records and that were not intentionally collected to conduct research. Tournament rosters and records are incomplete for some tournaments, and students may have left the school district before graduating. If this missing data was not non-differential based on debate status, failing to impute these values could lead to biased estimates. In order to account for missing values and other irregularities, five imputed datasets were created using known information about the students³⁴ and rules were developed by the study team to address nonsensical data points (i.e., GPAs of greater than 5). Also, as the league grew in size over the 10-year period the structure of the competition changed (i.e., the league was divided into divisions – Junior varsity, Varsity, and Circuit – and later further divided into conferences – A, AA, and AAA). As a result, comparing across programs initiated at substantially different time periods (i.e., Year 1 adopters vs. Year 8 adopters) is likely to result in biased estimates.

Despite these limitations, this project represents the most comprehensive and complex assessment of urban debate on educational outcomes that has ever been initiated.

V. CONCLUSION

As discussed above, education is a fundamental – and, critically, modifiable – determinant of physical and mental health over the life course.³⁵ It has been argued that socioeconomic³⁶ and sociodemographic³⁷ inequalities are potent contributors to population health, and that educational systems can serve as exemplars of these broader social inequalities.³⁸ It is important to note, however, that in addition to the social science questions posed by this project there is the motivating factor of social justice, an aspiration for which epidemiology is uniquely situated to address.³⁹ From the standpoint of this advocacy, a critical outcome of urban debate initiatives might be thought to be the emergence of motivated and skilled orators who have a direct stake in the educational and social policies that differentially affect disadvantaged groups. As a political activity, debate might be thought to have the potential to empower students and teachers to

³⁴ Kaplan G. The role of epidemiologists in eradicability of poverty. *The Lancet* 1998;352:1627 - 1628.

³⁵ See Link & Phelan, *supra* note 7

³⁶ See Lynch, Smith, Harper & Hillemeier, *supra* note 10.

³⁷ LaVeist T. Disentangling race and socioeconomic status: a key to understanding health inequalities. *Journal of Urban Health* 2005;82:iii26 - iii34.

³⁸ See Brusckke, *supra* note 2.

³⁹ Kaplan G. The role of epidemiologists in eradicability of poverty. *The Lancet* 1998;352:1627 - 1628.

change the structural conditions that promote societal inequalities.⁴⁰ History has shown that it is critical for those most affected by social policies and inequalities to effectively communicate their concerns to policymakers and other citizens in order to mobilize broader political change.⁴¹

⁴⁰ See Mitchell, *supra* note 13.

⁴¹ X M. Autobiography of Malcolm X. New York: Grove Press; 1965.