Overcoming Educational Challenges to Women Living in At-Risk Communities through Urban Debate

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Abstract

Every year 1.3 million U.S. high school students drop out of school with one quarter of female students failing to graduate on time. Female dropouts are more likely to be unemployed, to earn less when they are employed, to become pregnant before the age of 20, to become obese, to smoke, and to drink more heavily than their male counterparts.

This study focuses on two public school systems with high rates of dropouts to determine whether urban debate leagues (UDLs) improve the affective, behavioral, and cognitive dimensions of school engagement of middle and high school females. The methods used in the analysis include: (1) propensity score matching to compare behavioral and cognitive indicators of debaters vs. non-debaters, (2) a nationally normed pre/post reading test, and (3) an alumni survey of UDL participants.

The study found that debaters were significantly less likely to be tardy from school, scored significantly higher on standardized reading exams, and substantially exceeded national norms for annual progress in reading rate, accuracy, fluency, and comprehension. Program alumni reported that UDL participation increased both the skills and confidence levels needed for success in college and their careers.

Introduction

Approximately 1.3 million students in the United States drop out of high school each year (Office of the Press Secretary, 2010). More than half of those failing to graduate on time attend schools in the primary school systems of the nation's 50 largest cities (Swanson, 2009). Schools in urban districts are particularly at risk for producing high numbers of dropouts because they serve large concentrations of students who share documented predictive indicators for dropping out of school: those who are African-American or Hispanic minorities (Maxwell, 2012; Newcomb et al., 2002; Prater, Sileo, & Black, 2000; Snyder & Sickmond, 2006, Swanson, 2008), those who belong to families with low incomes (Newcomb et al., 2002), and those who have comparatively lower levels of academic achievement (Battin-Pearson et al., 2000; Finn & Rock, 1997; Krohn, Thornberry, Collins-Hall, & Lizotte, 1995; Storm and Boster, 2007).

In an effort to improve urban students' academic engagement and timely progression to graduation, 26 U.S. cities have implemented Urban Debate Leagues (UDLs). Begun in Atlanta, Georgia in the 1980s, UDLs have historically served more than 40,000 students and are now active in more than 500 schools nationwide (NAUDL, 2012). Previous research on the leagues' impact has been promising. One study reported that African-American males who participated

in the Chicago UDL from 1997 to 2006 were 70% more likely to graduate, 3 times less likely to dropout, and more likely to meet ACT benchmarks for college readiness in English and Reading than a matched sample of their non-debate peers (Mezuk, 2009). Another study of the same city's UDL focused on poor students with low grades who held special education status. It found that those debaters were 3.1 times more likely to graduate and more likely to reach college-ready benchmarks for English, Reading and Science on the ACT than their non-debate peers (Anderson & Mezuk, 2012). The remaining published studies attempting to quantify the impact of UDLs have focused on the totality of their league populations without consideration of how different genders respond to such programs. Studies combining the male and female participants have found that debaters were more likely to graduate, meet college readiness benchmarks, and improve their cumulative GPAs than their non-debate peers (Mezuk et al., 2011); debaters improved their reading levels beyond national norms for annual progress (Winkler, 2010); and debaters substantially improved their school attendance and conduct after only one year of participation in the activity (Winkler, 2011).

No published study to date has focused on the impact of UDLs on female participants. The oversight is troubling for only one in four U.S. females completes high school on time. The problem worsens for minority females. Only 37 percent of Hispanic women, 40 percent of African American women, and 50 percent of Native American women graduate from high school on time (National Women's Law Center, 2007).

The need to focus on female participants becomes even more compelling when the consequences of leaving school receive consideration. Of all U.S. students who dropped out of high school in 2006, for example, males were more likely to find employment than females by a margin of 77 to 53 percent. Female dropouts on average earned $6000 less per year than females who stayed in school, a figure representing only 63 percent of the wages earned by male dropouts during the same period. When compared against females who stayed in school, female dropouts were also more likely to become pregnant before the age of 20, to become obese, to smoke, and to drink more heavily (National Women's Law Center, 2007). A key reason why females held back a grade in school were twice as likely to drop out as their male peers has been that female students, in particular, viewed their lack of timely progression as embarrassing (Fine & Zane, 1991).

This study will help fill the research gap by examining how UDLs impact the school engagement of female participants in two urban school districts. School engagement is a multifaceted concept that encompasses affective, behavioral, and cognitive dimensions (Fredricks, Blumenfeld, & Paris, 2004). Accordingly, the study focuses on four research questions:

RQ1. Does participation in UDLs improve the behavioral engagement of females in middle and high school?

RQ2. Does participation in UDLs improve the cognitive engagement of females in middle and high school?

RQ3. Does participation in UDLs improve the cognitive engagement of high school females who have fallen below grade level for reading?

RQ4. How do female UDL alumni evaluate the lasting impact of UDL programs on their own cognitive, behavioral, and affective dimensions of school engagement?

To address these questions, the following will describe the UDL program, explicate the study's methodology and results, and discuss the research findings.

The Urban Debate League Program

Prior to the start of the school year, each league begins by hosting a one-week, full-day summer debate workshop staffed by high school coaches, college debate coaches, UDL alumni, and intercollegiate college debaters. The workshop introduces the attendees to the fundamentals of debate: argument construction, evidence evaluation, organizational skills, efficient note taking, and oral presentation skills. It also familiarizes the students with the annual national debate topic. Examples include the 2011-12 topic, "Resolved: The United States federal government should substantially increase its exploration and/or development of space beyond the Earth's mesosphere" and the 2012-13 topic, "Resolved: The United States federal government should substantially increase its transportation infrastructure investment in the United States." Most importantly, the summer workshops frequently employ game formats as teaching methods to underscore that debate can be fun.

During the academic school year, participating schools offer 2-4 hours of classroom or after-school debate instruction per week. During these sessions students practice skill building in debate fundamentals (described above), anticipate their future opponents' argumentative strategies, learn the vocabulary and arguments in their pre-packaged argument/evidence packets, review judge's ballots from previous competitions to focus on needed areas of improvement, and participate in spar debates, rebuttal re-works, and other abbreviated forms of debate.

Throughout the academic year, each league hosts 8 debate tournaments where students participate in switch-side debating to alternatively affirm or negate a proposition during 3-4 rounds of inter-scholastic competition. High school debate coaches, college debaters, and community members serve as judges after receiving training designed to encourage constructive suggestions for individual or team improvement. Students compete in novice, junior varsity, or varsity division based on their previous experience and success with debate. Students receive individual and team awards at the competitions' conclusions based on their performances in tournament rounds of competition. The philosophy of the UDL is to present numerous awards in an effort to maximize the number of students who have positive, successful experiences in the academic competitions.

Student recruitment into the UDLs occurs through a combination of methods. School-wide assemblies, teacher-led targeted recruitment of students deemed unmotivated by school,

peer-led recruitment of friends, intercom/poster announcements of upcoming debate meetings, and after-school snacks are all strategies implemented to encourage student participation. In many urban debate leagues, summer workshops occur on college campuses, which can also serve to attract certain students. UDLs deploy various media formats, such as Twitter, Facebook, and movies about debate such as *The Great Debater* starring Denzel Washington, to help attract new members into the UDL community. Many school principals display the students' accomplishments in trophy cases and publicize those successes in school-wide announcements.

Student retention in UDL programs is a multi-faceted process. Initially, each of the participating leagues provides pre-packaged evidence and argument packets in order to reduce the stress about the workload associated with debate and to "level the playing field" by providing equal access to debate resources. The program's pre-packaged materials address aspects of the national topic deemed of interest to the students (e.g., a focus on space colonies during the space topic and a focus on social exclusion due to inadequate transportation for poor, minority families during the transportation topic). Novice workshops and school debate meetings rely heavily on a game format to teach debate fundamentals (e.g., raps filled with debate terminology, speed and articulation drills, spar debates on topics where the students are already knowledgeable about the content, etc.). Having variable divisions based on ability level in tournament competition reduces the chances that more-experienced peers will overwhelm beginning students to the point that they leave the program.

Once participants overcome their initial fears about debate, they respond to different retention strategies. The primary one is competition. Just as competitive sports have ongoing attraction for many participants, debate is an academic game with winners and losers that builds skills during the process. Further, debaters develop friendly rivalries with competitors from other schools, driving them to remain in the activity to defeat their opponents in future competitions. Moreover, UDLs offer a stable community that students can rely upon regardless of whether their home address or school changes. Other retention strategies for more advanced high school participants include invitations to serve as peer mentors or judges in middle school competitions. Frequently, UDL students have active and inactive periods in tournament participation based on challenging situations at home or school. Rather than remove them from the program, league directors encourage the students to return whenever and as soon as they can.

Method

Participants

To examine what effect, if any, UDLs had on the cognitive and behavioral engagement of female participants (RQ1; RQ2), this study examined the programs' effects in two of the nation's principle school districts. Both UDLs were serving school systems falling in the ten lowest performing urban districts nationwide for moving students through to graduation in a timely manner. Together, the two school districts were serving more than a million students, but neither

district moved more than 45 percent of their students to graduation within four years (Swanson, 2009).

The study examined the effect of UDL programs on middle school debaters in one school district and high school debaters in the other. The need to bifurcate the district sample by school level resulted from the implementation of the UDL programs. During the one year time frame used to analyze league data related to RQ1 and RQ2 (June 2011-June 2012), one city's school district provided high school programming exclusively, while the other devoted the vast majority of its resources to serving middle school students. Debate participants were students in grades 6 through 10 who attended at least one interscholastic debate competition during the academic year. Together, the middle and high school UDL programs served 245 students (203 in middle school and 42 in high school). Among the middle school students, 117 had complete administrative records for the year prior to their participation in debate. Twenty-five of the high school program students had complete administrative records for their 8th grade year. These limitations left about 58 percent of the debate participating students in our models for analysis.

Table 1 (MSD) provides descriptive statistics on the 2010-11 school year characteristics of the middle school debaters and their matched comparison group of non-debaters. The final two columns of Table 1 present statistics comparing the means of the non-debate participant students to the overall school population and the reduction (or increase) in the difference as a result of our study's creation of matched comparison groups respectively. For example, the 0.079 value for *Male* indicates that the overall school population contained about 7.9 percent more males than the debate participating student sample. After matching, this difference in means was reduced by 35 percent.

As Table 1 demonstrates, the middle school students participating in the league were not representative of their school-wide populations. In the middle school participant sample, tournament debaters were less likely to be of black ethnicity, to have participated in limited English proficiency programs (LEP), and to be eligible for free lunch than their school-wide population of peers. The UDL participants also had generally lower rates of absences for excused and unexcused reasons and had lower rates of disciplinary incidents. Test scores for students participating in debate were dramatically higher than the comparison pool students (about one-half to seven tenths of a standard deviation higher compared to the average student). After matching, the overall observable differences between the groups were substantially reduced, with the average test score difference falling by about 90 percent. In three cases, however, our matching procedure increased the differences between the two groups: underage for grade, homeless, and times tardy in 2010-11.

Table 2 provides descriptive statistics for high school students in the comparison pool, debaters, and the study's matched sample. The group comparisons columns indicate differences between the overall school-wide population of students (8th Grade Comparison Pool), tournament debate participants, and the changes in those differences after the study's matching procedure.

The participants in the high school UDL program were also not representative of the school-wide populations of the participating school districts. Females made up a larger percentage of the league's participants in the analysis sample, a figure about 10 percentage points higher than in the school-wide population. The ethnicity of the two groups was also different, with African Americans making up a larger percentage of the league participants compared to the school-wide population. Further, Hispanics constituted 22 percent of the school-wide population, but none participated in the UDL. The pool of comparison students had higher rates of free lunch eligibility, but lower rates of reduced priced lunch eligibility. Tournament debaters had lower rates of both excused and unexcused absences, but slightly more disciplinary incidents. Finally, the high school debate tournament participants scored higher than their school-wide peers across all 8th grade standardized test scores in reading, math, English/language arts, science, and social studies. While the study's matching procedure increased the differences between groups for the other ethnicity group, days absent 2010-11, times tardy 2010-11, and the number of disciplinary incidents, all other observed differences between debate participants and other peers in the school were reduced. The difference in prior test score performance was reduced by about 70% across the five standardized tests used to match students.

To examine what, if any, effect UDLs had on the cognitive engagement of female high school participants who have fallen below grade level for reading (RQ3), the study focused on participants who attend at least one debate tournament from 2006-07 to 2010-11 during grades 9-12. All of the participating students were drawn from the school district described above that devoted all its programming resources to the high school level. As participation in this component of the study required signed parental consent forms, signed student assent forms, and time availability to complete both the pre- and post-test conditions of the measuring instrument, the sample size was 132 students, 17 percent of the total UDL population in that city over the years 2006-07 through 2010-11. Of those, between 25 and 34 students fell below grade level for reading prior to their involvement in debate based on which aspect of reading proficiency was tested.

To examine what, if any, effects UDLs had on alumni's affective, behavioral, or cognitive dimensions of school engagement (RQ4), the study utilized a convenience sample drawn from UDL programs nationwide. League directors throughout the United States received a message posted on the national UDL list serve asking for their help in forwarding an attached invitation to participate in the study to any female alumni who they could still contact. Twenty-three women from Atlanta, GA, Baltimore, MD, Boston, MA, Milwaukee, WI, Minneapolis/St. Paul, MI, Newark, NJ, New York, NY, and Oakland, CA responded to the survey.

Measures

To determine if UDL programs increased the behavioral and cognitive engagement of participating females (RQ1; RQ2) and to reduce any selection bias resulting from the voluntary

nature of UDL participation, the study compared UDL debaters with groups of their non-debate peers based on propensity score matching (Rubin, 1973). Propensity score matching (Rosenbaum and Rubin, 1983; Rosenbaum and Rubin, 1985) modeled the probability of selection into a treatment based on observable pre-treatment characteristics. The resulting information was then used to construct a comparison group whose likelihood of treatment was similar to the treatment group. For this analysis, we coded students who participated in debate tournaments as the treatment condition and all other students in the same schools were available for participation in the matched comparison group. We created the comparison groups in Stata 12 using the psmatch2 algorithm (Leuven and Sianesi, 2003) with nearest neighbor matching as recommended by Henry and Yi (2009). The regression models analyzed the difference in outcomes for debate participation students and students in the matched comparison group based on propensity score matching.

In an effort to find students similarly likely to participate in debate, our matched comparison groups were based on demographic factors (e.g., gender, ethnicity, socio-economic status), family-related factors (e.g., mother at home, father at home, number of siblings), academic risk factors (e.g., special education status, English Language Learner status, and over age for grade), behavioral engagement indicators (i.e. number of absences, excused absences, days tardy at school, and suspensions), and academic factors (e.g. GPA quality points, credit values of courses taken, and standardized test scores). For the groups matching the study's middle school cohort, we extracted information from the student's records during their prior year of schooling (5^{th} -7^{th}); for the high school cohort, we used data from the students' 7^{th} and 8^{th} grade years in school to identify the comparison group. The exact variables differed slightly as different school systems collect different student characteristics as part of their administrative data collection systems.

This study combined the middle and high school data to create a common dataset for analysis of the outcomes associated with debate participation. To assess whether UDLs increased participants' behavioral engagement (RQ1), our outcome indicators were the number of excused absences from school, the number of unexcused absences from school, the number of tardy incidents, and the number of disciplinary incidents. To assess whether UDLs increased participants' cognitive engagement (RQ2), our outcome indicators included standardized test scores on end of grade exams in reading and mathematics. Because the exams occurred across systems and grade levels, scores were standardized within grade and test to generate a standardized test score. Using the entire universe of test takers in the district in a given year, we retained the single highest test score for each student after excluding test score values that were outside the range of plausible scores. Next, we standardized the test scores to have a mean of zero and a standard deviation of one.

Our models using test score outcomes as the dependent variable utilized OLS regression with robust standard errors. Due to the severe non-normality of outcome distributions for models with count data such as disciplinary incidents and absences, we utilized negative

binomial regression models with robust standard errors (Long and Freese, 2006). The models included the propensity score as a regression control and a variety of other control variables unrelated to debate participation that may have influenced the outcomes for students in the year of debate participation. The following provides the reduced form equation used for the test score related regressions.

$$y_{it} = \beta_0 + \beta_1 y_{i_{t-1}} + X_{it}\beta_2 + Debate\beta_3 + \varepsilon_{it}$$

where y_{it} is student i's test score achievement in the current year, β_0 is the y-intercept, $y_{i_{t-1}}$ is student achievement in a prior time period, X_{it} is a vector of individual student characteristics both time varying and time invariant,

Debate is an indicator variable indicating a student's participation in the urban debate league program, and ε_{it} the individual error associated with the observation of student *i* at time *t*.

The models testing for gender specific effects introduced an interaction between the *Debate* indicator and *female* indicator where observations that are both female and debate participants equal 1 (the product of the *Debate* and *female* variables).

To determine if UDL participation increased the cognitive engagement of high school females who fell below their grade level in reading, we used an additional measure of student reading to provide information (RQ3). The need for the supplementary instrument arose because of the relevant school districts' decision to last administer its standardized tests during their students' 10th grade year(s) in school. To ensure the inclusion of results from 11th and 12th grade participants, we administered Gray Oral Reading Tests (GORTs), a reliable and valid national reading test which evaluates student gains in reading rate, accuracy, fluency, and comprehension against national norms for annual progress (Wiederholt & Bryant, 2001). In both pre- and post-test conditions, each student read passages aloud for 30 to 45 minutes to trained GORT administrators. The results were then compared against charted norms for reading that spanned from the 1st to the 12th grade. For the purposes of this study, students whose pre-tests showed that they had less than a year's growth potential on rate, accuracy, fluency, and/or comprehension were removed from the calculations of the league-wide averages for annual reading progress, as such scores would artificially deflate any findings of reading progress.

To discern how female UDL alumni evaluated the lasting impact of the program on the three dimensions of school engagement (RQ4), we administered an online survey. The survey began with questions related to the respondents' age, ethnicity, number of years of UDL participation, city of UDL participation, highest grade level achieved, and current occupation. Open-ended questions followed that were related to academic success (level of preparation, ability to achieve goals, skill development related to goals, management of challenges, class participation, accessing college opportunities, and the use of college mentors), interpersonal interactions (with opposite and same-sex peers, instructors, and family members), and community engagement (involvement in community activities, management of community challenges, ongoing connections with UDL mentors, and on-going connections with UDL peers).

Results

Propensity Score Matching Results for RQ1 and RQ2. Table 3 presents the results of regression models comparing the outcomes of students on four measures of behavioral engagement and two measures of cognitive engagement. Each outcome model is presented twice. The first model result of each outcome pair estimates the difference in outcomes for students participating in debate tournaments to the matched comparison group. The second model includes the interaction between the dichotomous *female* variable and the *debate* treatment indicator variable. This interaction term estimates the difference in treatment effects by gender. A statistically significant coefficient indicates that the treatment effect for girls is statistically different from the treatment effect for boys. The resulting models indicate that debate tournament participation is equally effective for boys and girls in terms of influencing the treated student outcomes.

Debate participation was associated with a reduced number of times tardy during the year. The coefficient (-0.718) represents the reduction in the log of the expected number of times tardy for students participating in debate compared to non-participants holding the other variables constant. Expressing this difference as an incidence rate ratio, debate participants are expected to decrease their rate for tardy attendance incidents by a factor of 0.488 compared to similar non-debate students. The models comparing the association between the other behavioral outcomes and debate participation revealed no statistically significant relationships between the treatment and the number of excused absences, the number of unexcused absences, or the number of disciplinary incidents. The p-value for the relationship between debate participation and the number of unexcused absences fell just outside our cut-off for statistical significance (0.054).

Students participating in debate scored, on average, about 2/10ths of a standard deviation higher (0.221) than comparable students on standardized reading tests holding other characteristics constant. On standardized math tests, the students participating in debate and the comparison group students scored similarly when examining the results of a model that did not differentiate by gender. In the second standardized math outcome model, the coefficients differ sharply for male and female debate participating students with a -0.176 coefficient for male debate tournament participants and a 0.291 coefficient for female debate tournament participants. The t-statistic for the female debate interaction term has a p-value of 0.073, which does not meet the 0.05 cut-off for statistical significance. The introduction of these interaction effects did inflate the standard errors due to the decreased cell size of the groups.

Gray Oral Reading Test Results (RQ3). The GORT results demonstrated that female high school students who entered the UDL reading below grade level exceeded national norms for annual progress on all four dimensions of reading proficiency. On the dimension of reading *rate*, forty-eight percent (n = 31) of the females who began the program read below grade level with an average pre-test score falling more than two years behind national norms for their grade level (8.0 vs. 10.3). Their average post-test score 12 months later showed rate progress of almost

two years (1.9). On *accuracy*, 42 percent (n=34) entered the UDL reading below grade level, averaging more than two and half years below national norms for grade level on the pre-test (7.7 vs. 10.3). Twelve months later the female participants had improved their reading accuracy, on average, by a year and a half (1.5). On *fluency*, 50 percent (n=29) began the program reading below grade level by more than two and a half years for their grade level (7.6 vs. 10.2). After 12 months of UDL programs, they had improved their fluency by a full 2 years when compared against national norms. Finally, on comprehension, 43 percent (n-25) began the program reading below grade level by two and a half years (7.7 vs. 10.2). With twelve months of participation in the UDL, their reading comprehension rose by a year and two-thirds (1.7) on the nationally scale.

Alumni Survey Results (RQ4). The 23 alumni respondents included 11 Blacks (African-Americans/ Caribbean Black), 6 Whites (Caucasian), 3 Hispanics, 2 Asians and 1 non-disclosed ethnicity. The average age of the respondents was 22 years old. All the study's respondents graduated from high school; 74 percent continued their education into college and/or graduate school. Twelve identified their highest grade or program level completed as college, 3 as MA, 1 as PhD, and 1 as a professional school degree. When identifying their current occupation, the respondents indicated that 15 were currently college students, 2 were lecturers, 4 had careers in business, 1 was in the medical field, and 1 was currently unemployed.

With the exception of one respondent who self-identified as "flakey with debate" rather than fully involved, all alumni who completed the survey indicated debate had enhanced their academic preparation for college. Two of the respondents indicated debate helped them strengthen their college applications, one because the analytical skills she learned from debate made her essays more "clever and well-written" and the other because she learned to tailor her arguments to explain why her personal profile fit with a particular college. One of the same two respondents went on to describe how debate also improved her college interviews. In her own words, "Debate also helped me in the interviews because I was able to respond fast to the questions they asked." Beyond the application process, respondents listed fundamental skills that debate helped them to obtain that were useful once they had entered college: critical thinking, reading comprehension, public speaking, essay writing, study habits, annotation, problem solving, research methodologies, organization, time management, and practical sense. In the words of one respondent: "I am a much better reader, writer, and speaker. This helps across all college subjects to a greater or lesser degree."

The majority of respondents also reported that participation in UDLs helped bolster their academic confidence. One noted the impact before she even matriculated into college, when she stated, "It made me want to do well in school. It made me want to go to school and participate, ultimately helping me graduate valedictorian of my school and get into a good college." Others commented on how their new sense of confidence gained from debate played out during their college years. One respondent reported, "I participate much more in class than I think I would otherwise," with another proclaiming she is now a "champion hand raiser." For several of the alumni respondents, debate helped reduce their fears of competing with their classmates.

Examples of their comments included: "I'm not afraid to express my ideas or to counter someone else's ideas," "it gave me a level playing field with my white counter parts from private high schools," and "I am not afraid to speak up in class and whenever a student tries to counter what I stated, I am very good at responding fast without being mean." One respondent expressed concern that the confidence she had gained had one downside. She noted, "I must admit I felt like my UDL made me think that I was better than others and it took a very long time for me to cope with the idea that I was just another kid trying to do better."

Respondents reported that academic confidence instilled from participation in the UDLs also affected how they interacted with authority figures on college campuses. For example, when reporting how debate impacted their relationships with their instructors, the alumni reported that debate "allowed me to come closer to my teachers and be able to approach them more frequently," "I am able to have a confident, competent conversation with them," "They respected me more because they saw me as someone who went beyond school to learn," "It gave me the ability to talk to them about important critical concepts that many other students did not know about," "I am more confident talking to professors because I feel like I have a sufficient degree of academic sophistication, largely due to my participation in debate," and "I feel more open when talking to my professors about my ideas even if they are different from what they believe." One respondent confided, "When I was accused of plagiarism, I was able to defend myself accordingly. Debate supplied me with the knowledge to craft a sufficient argument." While the large majority of respondents expressed that debate positively affected their relationships with teachers and other authority figures, two did not. One respondent indicated her UDL experience had no change on her relationships with instructors, while another feared her UDL experience had harmed her interactions. As she put it, "I question everything and this can be annoying to my professor."

The majority of alumni surveyed also reported that relationships with their peers changed as a result of participating in UDLs. Two respondents mentioned that they had added friends from debate, while another reported that debate "made her think about what types of people" she considered her friends. The remainder of the relevant responses suggested that UDLs altered the way in which the alumni interacted with their peers. Those alumni indicated that since debate, they "expressed their thoughts more eloquently," "became more outspoken," "engaged in constructive conversations with my peers even when we disagreed," and, in one case, "felt compelled to state my opposing argument with a certain individual."

When asked if debate had impacted their interactions with the opposite sex, nine alumni responded. Seven indicated that debate had impacted their relationships with their male peers, while two reported it had not. Explaining how their interactions had changed, one respondent wrote, "When I debated I only did so with male partners. It made me feel more comfortable in the presence of males. It also made me feel equal to them because I could do just as good, or even better them." Another reported, "It gave me the confidence to believe I am just as capable as males, it helped me form bonds with my male guy friends, and it gave me the ability to show

strength around boys." Two of the respondents reported that while they participated in the debate programs, their debate partners had been their brothers. Of those, both reported positive experiences. One indicated that debate "had allowed me to form a better bond with him" and the other reported, "It brought my family together because I debated with my brother and a lot of my family members would come watch. My parents were always proud of my brother and I because of debate."

When asked if UDLs had impacted their interactions with their same-sex peers, nine alumni again responded to the question. Seven indicated that debate had changed their interactions, while two reported it had not. The nature of the reported change, however, was quite diverse. One student reported that her increased confidence helped her in interactions with "people of all genders," while another mentioned that debate "helped me become closer to the women in the league and form solidarity with one another." Several respondents expressed more concerns about the change. One reported that debate "made her really competitive with females," another that it "made it difficult to agree with the same-sex peers," and one "found that females were less likely to interact with me when I displayed my debate skills (like effective speaking)." One respondent indicated her interactions with female peers had changed, but didn't explain how, while a final respondent reported, "I tend to judge people and how intelligent I think they are because of debate, so if you appear that you aren't intelligent, I am weary of my interactions with a person."

The alumni survey also revealed that the personal relationships built through the UDL were lasting for the female participants. When asked whether they remained in touch with their mentors from the UDL, all but one of the respondents indicated that they did so. When asked whether they remained in touch with their peers from their experiences in the UDL, every respondent said yes. Several respondents indicated that their peers from UDL remained their best friends. One responded, "We are still great friends, both of which are attorneys. We speak on a bi-monthly basis." Others indicated they continued contact with their UDL peers through Facebook.

The survey results also showed that through ongoing volunteerism, UDL alumni had high levels of personal investment within their neighborhoods and broader communities. When asked if they were involved in community activities, respondents indicated by a ratio of 3:1 that they did volunteer. Most of the responses indicated that the alumni gave back to communities and causes closely affiliated with UDLs, such as judging or coaching in debate, volunteering for youth academies, serving as members of the NAACP, and participating in various events in the Chicano/Latino community.

Discussion and Conclusion

To examine if after-school debate programs improve graduation rates of middle and high school female students, this study analyzed the results of debate programs in two of the lowest

performing U.S. urban school districts for graduating students in a timely manner. Females in grades 6 through 10 who participated in urban debate demonstrated statistically significant gains on both the behavioral and cognitive dimensions of school engagement when compared against matched groups of students who had similar demographic, family, academic risk, behavioral, and academic factors. .

With regard to behavioral engagement, female debaters were tardy from school only about half as many times as a matched comparison group of their non-debate school peers. The female debaters' rate of unexcused absences approached but fell just outside of this study's standards for statistical significance. Consequently, future studies of urban debate's effect on behavioral engagement of students at risk of dropping out of school should utilize larger sample sizes to continue to explore whether participation in the activity also decreases female students' rate of unexcused school absences.

On the cognitive dimension of school engagement, females in grades 6 through 10 who participated in urban debate posted significantly higher scores on standardized tests for reading than the matched comparison group of non-debate peers. Notably, the positive impact of urban debate league participation on reading continued throughout high school, particularly for those who were reading below grade level when they started to debate. After only one year of participation in an urban debate league, females reading below grade level progressed 1.9 years on rate, 1.5 years on accuracy, 2 years of fluency, and 1.7 years on comprehension when compared against national norms for annual reading progress for students in U.S. schools.

The effect of urban debate participation for female students on standardized test scores in mathematics also warrants further study. While not rising to the level of statistical significance, the gender-based interaction model showed that female debate participants demonstrated substantial gains in comparison to the matched group's math scores, while the male students' scores declined. A larger sample size would again strengthen the ability to compare the two gender groups.

Assessing their previous personal experience with urban debate leagues, female alumni of the program maintain that UDL participation contributed to their success in higher education. Debate helped the students develop needed skill sets in critical thinking, reading comprehension, public speaking, essay writing, study habits, annotation, problem solving, research methodologies, organization, and time management. It also heightened the women's confidence to levels sufficient for success in their college environments. The added confidence was particularly useful in their interactions with those in comparatively powerful positions, such as instructors, campus administrators, and male peers.

Participation in urban debate leagues finally influenced how female students interacted within their community networks. While the women debaters reported that their relationships with other females changed in ways that made them less likely to associate with certain types of females than they would have prior to debate, virtual unanimity existed that the interpersonal relationships formed with both peers and mentors while they participated in the UDLs resulted in

lasting friendships. Apparently appreciative of the benefits they received through UDLs, a high percentage of female participants also gave back by volunteering in their home communities.

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Table 1. Middle School Debate

	2010-11 Comparison Pool					2010-11 Tournament Debater Characteristics					2010-11 Matched Comparison Group				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Weight	Mean	Std. Dev.	Min	Max
Tournament Debaters	9952	0.00	0.00	0.00	0.00	117	1.00	0.00	1.00	1.00	117	0.00	0.00	0.00	0.00
Gifted	9951	0.13	0.34	0.00	1.00	117	0.21	0.41	0.00	1.00	117	0.15	0.36	0.00	1.00
Male	9951	0.48	0.50	0.00	1.00	117	0.40	0.49	0.00	1.00	117	0.35	0.48	0.00	1.00
Black	9951	0.82	0.38	0.00	1.00	117	0.77	0.42	0.00	1.00	117	0.78	0.42	0.00	1.00
Hispanic	9951	0.05	0.22	0.00	1.00	117	0.02	0.13	0.00	1.00	117	0.02	0.13	0.00	1.00
Other ethnicity	9951	0.02	0.15	0.00	1.00	117	0.06	0.24	0.00	1.00	117	0.05	0.22	0.00	1.00
Underage	9952	0.03	0.16	0.00	1.00	117	0.04	0.20	0.00	1.00	117	0.02	0.13	0.00	1.00
Overage	9952	0.19	0.39	0.00	1.00	117	0.07	0.25	0.00	1.00	117	0.07	0.25	0.00	1.00
LEP	9952	0.02	0.15	0.00	1.00	117	0.00	0.00	0.00	0.00	117	0.00	0.00	0.00	0.00
Homeless	9952	0.02	0.15	0.00	1.00	117	0.03	0.16	0.00	1.00	117	0.00	0.00	0.00	0.00
Free Lunch Eligible	9952	0.76	0.42	0.00	1.00	117	0.62	0.49	0.00	1.00	117	0.59	0.49	0.00	1.00
Reduced Lunch Eligible	9952	0.03	0.17	0.00	1.00	117	0.05	0.22	0.00	1.00	117	0.06	0.24	0.00	1.00
Grade 5	9952	0.37	0.48	0.00	1.00	117	0.36	0.48	0.00	1.00	117	0.36	0.48	0.00	1.00
Grade 6	9952	0.32	0.46	0.00	1.00	117	0.50	0.50	0.00	1.00	117	0.51	0.50	0.00	1.00
Grade 7	9952	0.31	0.46	0.00	1.00	117	0.14	0.35	0.00	1.00	117	0.13	0.34	0.00	1.00
Days Absent 2010-11	9952	4.51	5.37	0.00	66.00	117	3.45	3.33	0.00	15.00	117	3.17	4.69	0.00	43.00
Days Unexcused Absences	9952	3.17	4.22	0.00	63.00	117	1.91	2.59	0.00	13.00	117	1.67	2.33	0.00	13.00
2010-11 Times Tardy 2010-11	9952	3.59	10.59	0.00	221.00	117	5.22	15.34	0.00	133.00	117	7.38	17.29	0.00	111.00
Attendance Data Missing	9952	0.16	0.37	0.00	1.00	117	0.11	0.32	0.00	1.00	117	0.12	0.33	0.00	1.00

Table 1. Middle School Debate - Continued

	2010-11 Comparison Pool					2010-11 Tournament Debater Characteristics					2010-11 Matched Comparison Group				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Weight	Mean	Std. Dev.	Min	Max
Disciplinary Incidents	9952	0.63	2.18	0.00	49.00	117	0.33	1.46	0.00	9.00	117	0.20	0.92	0.00	8.00
Special Education Student	9951	0.08	0.27	0.00	1.00	117	0.06	0.24	0.00	1.00	117	0.06	0.24	0.00	1.00
Multiple Test Attempts	9952	0.09	0.28	0.00	1.00	117	0.01	0.09	0.00	1.00	117	0.03	0.18	0.00	1.00
2011-12															
Standardized Language Arts Score†	9952	0.00	0.92	-2.80	3.49	117	0.73	0.97	-1.75	3.49	117	0.66	0.98	-2.19	3.49
Standardized Math Score†	9952	-0.01	0.93	-2.16	4.14	117	0.49	0.86	-2.13	2.59	117	0.40	0.91	-1.48	3.19
Standardized Social Studies Score†	9952	0.02	0.97	-1.76	3.47	117	0.63	1.07	-1.58	2.76	117	0.69	0.93	-1.44	3.47
Standardized Reading Score†	9952	0.00	0.93	-2.66	3.83	117	0.60	0.90	-2.08	3.19	117	0.53	0.81	-2.26	3.19
Standardized Science Score†	9952	0.01	0.95	-1.89	3.87	117	0.59	0.95	-1.57	2.75	117	0.59	0.95	-1.84	3.87

† Scores were standardized to z-scores with a mean of zero and a standard deviation of one by test type and year of administration. When limiting the sample to students with complete administrative records for propensity score matching, the mean values rise above zero.

Table 2. High School Debate

	8th Grade Comparison Pool (200910/2010-11)					2010-11 Tournament Debater Characteristics					2010-11 Matched Comparison Group				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Weight	Mean	Std. Dev.	Min	Max
Tournament Debaters	7487	0.00	0.00	0.00	0.00	25	1.00	0.00	1.00	1.00	25	0.00	0.00	0.00	0.00
Male	7487	0.51	0.50	0.00	1.00	25	0.40	0.50	0.00	1.00	25	0.32	0.48	0.00	1.00
Black	7487	0.57	0.49	0.00	1.00	25	0.76	0.44	0.00	1.00	25	0.72	0.46	0.00	1.00
Hispanic	7487	0.22	0.41	0.00	1.00	25	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00
Other_ethnicity	7487	0.06	0.23	0.00	1.00	25	0.04	0.20	0.00	1.00	25	0.12	0.33	0.00	1.00
Underage	7487	0.02	0.15	0.00	1.00	25	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00
Overage	7487	0.22	0.41	0.00	1.00	25	0.08	0.28	0.00	1.00	25	0.08	0.28	0.00	1.00
LEP	7487	0.11	0.31	0.00	1.00	25	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00
Free Lunch Eligible	7487	0.71	0.45	0.00	1.00	25	0.60	0.50	0.00	1.00	25	0.52	0.51	0.00	1.00
Reduced Lunch Eligible	7487	0.08	0.27	0.00	1.00	25	0.20	0.41	0.00	1.00	25	0.24	0.44	0.00	1.00
Grade 8	7487	1.00	0.00	1.00	1.00	25	1.00	0.00	1.00	1.00	25	1.00	0.00	1.00	1.00

Table 2. High School Debate - Continued

	8th Grade Comparison Pool (200910/2010-11)					2010-11 Tournament Debater Characteristics					2010-11 Matched Comparison Group				
Variable	Obs	Mean	Std. Dev.	Min	Max	Obs	Mean	Std. Dev.	Min	Max	Weight	Mean	Std. Dev.	Min	Max
Days Absent 2010-11	7487	14.53	15.45	0.00	135.00	25	12.22	8.99	0.00	35.00	25	9.74	9.21	0.00	29.50
Days Unexcused Absences 2010-11	7487	7.05	11.44	0.00	135.00	25	5.84	5.61	0.00	16.00	25	6.14	7.84	0.00	28.50
Times Tardy 2010-11	7487	4.34	4.40	0.00	21.00	25	4.24	3.97	0.00	15.00	25	5.24	5.28	0.00	15.00
Disciplinary Incidents	7487	1.06	2.14	0.00	26.00	25	1.36	2.81	0.00	11.00	25	0.60	1.00	0.00	4.00
Special Education Student	7487	0.19	0.39	0.00	1.00	25	0.12	0.33	0.00	1.00	25	0.08	0.28	0.00	1.00
Standardized Language Arts Score†	7487	0.06	0.99	-2.84	3.50	25	0.67	1.35	-2.73	3.50	25	0.62	1.21	-2.73	3.50
Standardized Math Score†	7487	0.09	0.98	-2.96	4.19	25	0.30	1.09	-2.56	1.91	25	0.19	1.14	-2.96	2.06
Standardized Social Studies Score†	7487	0.06	0.99	-3.16	3.93	25	0.71	1.55	-3.16	3.75	25	0.85	1.05	-0.84	3.75
Standardized Reading Score†	7487	0.08	0.98	-2.96	5.04	25	0.66	1.21	-2.41	2.87	25	0.84	1.04	-2.04	2.61
Standardized Science Score†	7487	0.07	0.99	-3.37	4.70	25	0.44	1.11	-1.95	2.61	25	0.59	0.97	-2.25	2.16

† Scores were standardized to z-scores with a mean of zero and a standard deviation of one by test type and year of administration. When limiting the sample to students with complete administrative records for propensity score matching, the mean values rise above zero.

Table 3. Results

	Standardized Reading Test	Standardized Reading Test	Standardized Math Test	Standardized Math Test
N	237	237	234	234
	b/t	b/t	b/t	b/t
Tournament Debaters	0.221**	0.112	0.007	-0.176
	(2.63)	(0.80)	(0.10)	(-1.51)
Female*Tournament Debaters	---	0.175	---	0.291
Debaters	---	(0.94)	---	(1.80)
Female	0.128	0.030	-0.012	-0.174
	(1.50)	(0.24)	(-0.16)	(-1.71)
Black	-0.296	-0.299	-0.221	-0.227
	(-1.90)	(-1.93)	(-1.63)	(-1.68)
Hispanic	0.245	0.290	-0.174	-0.105
	(1.18)	(1.39)	(-0.41)	(-0.25)
Other Ethnicity	0.345	0.355	0.219	0.232
	(1.41)	(1.47)	(0.95)	(1.03)
Special Education	-0.796***	-0.790***	-0.405*	-0.393*
	(-5.35)	(-5.20)	(-2.08)	(-2.01)
Underage	-0.070	-0.091	0.191	0.156
	(-0.34)	(-0.44)	(1.28)	(1.00)
Overage	-0.267*	-0.286*	-0.163	-0.194
	(-1.97)	(-2.09)	(-1.45)	(-1.60)
Free Lunch Eligible (2011-12)	0.182	0.220	0.131	0.195
	(1.09)	(1.29)	(0.76)	(1.10)
Reduced Lunch Eligible (2011-12)	0.018	0.025	-0.068	-0.057
	(0.07)	(0.11)	(-0.29)	(-0.26)
Grade 7	-0.005	0.003	0.035	0.048
	(-0.05)	(0.03)	(0.38)	(0.53)
Grade 8	-0.184	-0.179	0.222	0.237
	(-1.27)	(-1.23)	(1.20)	(1.27)
Grade 9	-0.021	0.021	0.173	0.247
	(-0.11)	(0.11)	(0.70)	(1.02)
Grade 10	0.206	0.275	0.311	0.427
	(1.09)	(1.38)	(1.20)	(1.62)
High School Student	-0.095	-0.168	-0.265	-0.388
	(-0.48)	(-0.80)	(-1.03)	(-1.48)
Standardized Reading Score (Prior Measure)	0.591***	0.593***	---	---
	(9.25)	(9.40)	---	---
Standardized Math Score (Prior Measure)	---	---	0.771***	0.778***
	---	---	(11.67)	(11.92)
Propensity Score	0.565	0.539	0.790	0.743
	(0.57)	(0.55)	(0.88)	(0.87)
Constant	0.318	0.379	0.328	0.431*
	(1.72)	(1.93)	(1.86)	(2.38)

Note: T-statistics in parentheses. Statistically significant effects: * p<0.05, ** p<0.01, *** p<0.001

Table 3. Results – Continued

	Days Absent	Days Absent	Days Unexcused Absent	Days Unexcused Absent
N	275	275	275	275
	b/t	b/t	b/t	b/t
Tournament Debaters	-0.108	0.036	-0.351	-0.021
	(-0.70)	(0.13)	(-1.92)	(-0.07)
Female*Tournament Debaters	---	-0.224	---	-0.493
	---	(-0.65)	---	(-1.22)
Female	0.331*	0.451	0.606**	0.865**
	(2.03)	(1.65)	(3.17)	(2.81)
Black	-0.578**	-0.571**	-0.051	-0.060
	(-3.02)	(-2.97)	(-0.20)	(-0.24)
Hispanic	-0.885	-0.923	-0.688	-0.801
	(-1.55)	(-1.61)	(-1.21)	(-1.39)
Other Ethnicity	-1.045**	-1.064**	-1.149	-1.204
	(-2.60)	(-2.67)	(-1.65)	(-1.74)
Special Education	0.188	0.170	0.286	0.256
	(0.65)	(0.57)	(0.94)	(0.79)
Underage	-0.584	-0.569	-1.850	-1.812
	(-0.83)	(-0.80)	(-1.47)	(-1.41)
Overage	0.673	0.707*	0.606	0.696
	(1.92)	(1.98)	(1.48)	(1.63)
Free Lunch Eligible (2011-12)	1.018**	0.983**	2.099***	2.009***
	(3.21)	(3.09)	(5.23)	(4.93)
Reduced Lunch Eligible (2011-12)	0.066	0.049	0.144	0.140
	(0.12)	(0.09)	(0.15)	(0.15)
Grade 7	0.272	0.263	0.116	0.088
	(1.43)	(1.36)	(0.54)	(0.40)
Grade 8	0.403	0.405	0.345	0.345
	(1.42)	(1.42)	(1.09)	(1.08)
Grade 9	-0.281	-0.327	0.376	0.217
	(-0.71)	(-0.83)	(0.62)	(0.34)
Grade 10	-0.524	-0.606	-0.386	-0.622
	(-1.50)	(-1.61)	(-0.64)	(-0.95)
High School Student	1.139**	1.219**	-0.655	-0.416
	(3.00)	(3.09)	(-0.97)	(-0.57)
Propensity Score	-4.143*	-4.098*	-12.490***	-12.455***
	(-2.10)	(-2.01)	(-3.74)	(-3.80)
Constant	1.213***	1.129***	0.522	0.356
	(4.38)	(3.56)	(1.47)	(0.94)
lnalpha	0.280*	0.278*	0.521***	0.519***
Constant (Neg. Binomal Models)	(2.55)	(2.53)	(3.95)	(3.93)

Note: T-statistics in parentheses. Statistically significant effects: * p<0.05, ** p<0.01, *** p<0.001

Table 3. Results – Continued

	Times Tardy	Times Tardy	Disciplinary Events	Disciplinary Events
N	275	275	276	276
	b/t	b/t	b/t	b/t
Tournament Debaters	-0.718*	-0.849	-0.492	-1.293
	(-1.97)	(-1.39)	(-1.19)	(-1.68)
Female*Tournament Debaters	---	0.199	---	1.441
	---	(0.26)	---	(1.63)
Female	-0.084	-0.181	-0.640	-1.276*
	(-0.23)	(-0.29)	(-1.59)	(-1.96)
Black	1.596**	1.586**	0.968	0.985*
	(3.21)	(3.20)	(1.87)	(1.98)
Hispanic	1.952	2.011*	-15.048***	-14.481***
	(1.91)	(1.99)	(-19.61)	(-19.13)
Other Ethnicity	-1.672*	-1.639*	-14.680***	-14.032***
	(-2.30)	(-2.27)	(-23.91)	(-19.91)
Special Education	1.687*	1.683*	1.038	1.040
	(2.45)	(2.43)	(1.52)	(1.77)
Underage	-1.315	-1.322	-15.168***	-15.085***
	(-1.76)	(-1.77)	(-28.34)	(-27.91)
Overage	-0.105	-0.164	1.076*	0.855
	(-0.14)	(-0.21)	(2.34)	(1.75)
Free Lunch Eligible (2011-12)	-2.262**	-2.174*	1.825*	2.219**
	(-2.68)	(-2.47)	(2.36)	(2.72)
Reduced Lunch Eligible (2011-12)	-3.741*	-3.561*	1.307	1.839
	(-2.32)	(-2.30)	(0.90)	(1.05)
Grade 7	0.472	0.474	0.273	0.275
	(1.13)	(1.13)	(0.64)	(0.63)
Grade 8	0.925	0.952	1.253*	1.118*
	(1.27)	(1.27)	(1.99)	(2.04)
Grade 9	-1.115	-1.058	0.430	0.744
	(-1.27)	(-1.17)	(0.40)	(0.69)
Grade 10	-4.088***	-3.968***	0.217	0.793
	(-4.00)	(-3.65)	(0.21)	(0.71)
High School Student	3.066**	2.917*	-0.938	-1.670
	(2.68)	(2.35)	(-0.87)	(-1.37)
Propensity Score	19.535**	19.224**	-1.184	-1.919
	(3.18)	(3.27)	(-0.25)	(-0.38)
Constant	-1.092	-1.009	-2.260***	-1.921***
	(-1.81)	(-1.42)	(-4.58)	(-3.52)
lnalpha	2.031***	2.030***	1.430***	1.316***
Constant (Neg. Binomal Models)	(14.34)	(14.36)	(4.18)	(4.15)

Note: T-statistics in parentheses. Statistically significant effects: * p<0.05, ** p<0.01, *** p<0.001