

Effects of Student Uniforms on Attendance, Behavior Problems, Substance Use, and Academic Achievement

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ABSTRACT Mandatory uniform policies have been the focus of recent discourse on public school reform. Proponents of such reform measures emphasize the benefits of student uniforms on specific behavioral and academic outcomes. Tenth-grade data from The National Educational Longitudinal Study of 1988 was used to test empirically the claims made by uniform advocates. The findings indicate that student uniforms have no direct effect on substance use, behavioral problems, or attendance. Contrary to current discourse, the authors found a negative effect of uniforms on student academic achievement. Uniform policies may indirectly affect school environment and student outcomes by providing a visible and public symbol of commitment to school improvement and reform.

Public discourse surrounding education reform has focused recently on the importance of uniform policies in public schools. Historically, school uniform policies have been restricted to the private sector and have been discussed only recently as a viable policy option in public school districts. A decade of research indicating the effectiveness of private schools has led some school reformers to consider policies that are linked to private and Catholic school success. Within the Catholic school literature, school uniforms have never been acknowledged as a primary factor in producing a "Catholic school effect" (Bryk, Lee, & Holland, 1993, pp. 286-287). Nevertheless, public school administrators are beginning to consider uniform policies to improve the overall school environment and student achievement. Because of the controversial nature of mandatory school uniform policies, those educators who advocate the proposed reform, as well as those who condemn it, are speaking out.

Uniform advocates present several arguments. First, they contend that uniforms affect students' safety by lowering student victimization (Scherer, 1991), decreasing gang activity and fights (Kennedy, 1995; Loesch, 1995), and differentiating strangers from students in school buildings

(Department of Justice, 1996; Gursky, 1996). Second, advocates believe that uniforms increase student learning and positive attitudes toward school through enhanced learning environments (Stover, 1990), heightened school pride (Jarchow, 1992), increased student achievement (Thomas, 1994), high levels of preparedness (Thomas, 1994), and conformity to organizational goals (LaPointe, Holloman, & Alleyne, 1992; Workman & Johnson, 1994). Third, advocates believe that wearing uniforms leads to decreased behavior problems by increasing attendance rates, lowering suspension rates, and decreasing substance use among the student body (Gursky, 1996). Finally, those in favor of school uniforms attribute such psychological outcomes as increased self-esteem (Thomas, 1994), increased spirit (Jarchow, 1992), and reinforced feelings of oneness among students (LaPointe, Holoman, & Alleyne, 1992) to wearing uniforms.

Opponents of adopting uniform policies stress the legal, financial, and questionable effectiveness of those policies. The legal concerns focus on the supposition that requiring a uniform violates children's individual rights (Thomas, 1994; Virginia State Department of Education, 1992). That argument is extended by opponents who argue that mandatory uniform policies are being considered largely for urban school districts, and, hence, are being forced on a predominately minority and poor student population (Thomas, 1994). Groups such as the American Civil Liberties Union have voiced concerns about the cost of uniforms, specifically that some disadvantaged parents are unable to afford them (Gursky, 1996). Finally, the strongest opponents of uniform policies charge that no empirical evidence exists to support the numerous and varied claims of uniform proponents (LaPointe, Holoman, & Alleyne, 1992).

The case study cited most often in the political rhetoric surrounding the uniform debate is that of the Long Beach

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Unified School District (LBUSD). LBUSD was one of the first large urban school districts within the United States to adopt a mandatory school uniform policy. That case is relevant to the uniform debate because it is a prime example of a system that (a) has recently instituted a school uniform requirement, (b) has received national attention, and (c) attributes students' behavioral changes to the mandatory uniform policy. In a press release, the board president of LBUSD made the following comments about the uniform policy:

These schools are becoming educational workplaces. Students arrive dressed for success, ready to learn. They're getting along with one another better and experiencing significant gains. Principals and teachers tell us that students' success is taking many forms—(fewer absences, fewer tardies, fewer truancies, fewer referrals to the office for behavior problems, fewer suspensions and expulsions, better grades and, in some cases, significantly higher achievement. (Polacheck, 1996, p. 7)

In the Long Beach school district, school uniforms are mandatory in 70 schools for about 60,000 students in kindergarten through eighth grade. Press releases from the school district indicate widespread parental support for the policy. California law provides a clause allowing parents to request a uniform exemption for their students; less than 1% of the parents have requested such an exemption. To aid Long Beach students from financially disadvantaged families, philanthropic groups in the area provided \$160,000 for their uniforms. The statistical evidence provided by the school district supporting their claims that school uniforms decrease crime is reported in Appendix A.

It is typically assumed, as exemplified in Long Beach, that uniforms are the sole factor causing direct change in numerous behavioral and academic outcomes. Those pronouncements by uniform proponents have raised strident objections and created a political climate in which public school uniform policies have become highly contested. The ongoing public discourse is not only entrenched in controversy but also largely fueled by conjecture and anecdotal evidence. Hence, it now seems critical that empirical analyses should be conducted to inform the school uniform debate. In this study, we investigated the relationship between uniforms and several outcomes that represent the core elements of uniform proponents' claims. Specifically, we examined how a uniform affects attendance, behavior problems, substance abuse, and academic achievement. We believe that a thorough analysis of the arguments proposed by uniform advocates will add critical insight to the ongoing debate on the effects of school uniform policies.

Theoretical Framework

Joseph (1986) has formulated an analysis of clothing as communication that provides a framework within which uniform proponents' claims can be understood. He asserted that clothing can be considered a sign, which he defined as

“anything that stands for something else” (p. 26). Clothing, as a sign, conveys information about values, beliefs, and emotions. If the clothing that adolescents wear can be considered a sign, then one can perceive their clothes as an expression of personal identity. School uniforms, by contrast, are selected by school officials and mandated to students. Uniforms are simple in style and color and are intended to convey the institutional values of the school.

Joseph (1986) suggested that clothing can be considered a uniform when it (a) serves as a group emblem, (b) certifies an institution's legitimacy by revealing individuals' relative positions, and (c) suppresses individuality. Within the context of an educational institution, school uniforms function as a symbol of membership in the school community. The presence of uniforms in schools automatically implies a two-tiered hierarchical structure—those who wear uniforms (subordinates) and those who do not wear uniforms (superiors). School uniforms are a sign of the status distinction between students and faculty, and, therefore, certify the legitimacy of that distinction. School uniforms suppress students' individuality by mandating standardization of appearance and removing student expression.

Given the uniform characteristics, mandatory uniforms maintain social control within the school environment. The uniforms, as a sign of group membership, are immediate cues that signal who does and who does not belong to the school community. Among the community members, uniforms seem to serve as a dramaturgical device by establishing interactional boundaries between members of separate statuses (teachers and students) and by promoting the internalization of organizational goals.

If uniforms are considered to facilitate the social control of student behavior, then one may expect that students in uniforms will display behaviors consistent with the institutional goals of the school. Inconsistent attendance, disciplinary behavior problems, and substance abuse represent student behaviors that are nonrepresentative of the values of public high schools. By contrast, high levels of academic achievement are consistent with the goals of educational institutions. The following hypotheses test the validity of the uniform advocates' statements:

1. Student uniforms decrease substance use.
2. Student uniforms decrease behavioral problems.
3. Student uniforms increase attendance.
4. Student uniforms increase academic achievement.

Within the context of the public debate on mandatory uniform policies, the mechanisms through which uniforms effect the above-stated outcomes are subtly implied. They include proschool attitudes, peer proschool orientation, and academic preparedness. When we tested each of the above-stated relationships, we expected that the direct effect of uniforms on the four outcomes would disappear when the moderating variables were added to the equation. If that effect would happen, then arguments proclaiming uniform policies' direct effect on a given outcome should be aban-

done, and more attention should be given to the mechanisms that produce the sought-after effects. The purpose of this study was to test the claims made in the context of the school uniform debate using a nationally representative sample of students.

Method

We used the National Educational Longitudinal Study of 1988 (NELS:88) to test the relationships outlined above. NELS:88 is a national stratified random sample of schools and students that began in 1988 with 8th-grade students. Three follow-up studies of NELS:88 have been written; the most recent one (1994) reported data on the original 8th graders in their 2nd year of postsecondary education. The data used for that analysis came from the first follow-up of NELS:88 when students were in 10th grade. NELS:88 oversampled certain minority groups, private sector schools, and high-performance schools. Thus, we applied standardized weights and design effects to make statements about the population of 10th-grade students in the United States, and the effects of uniforms on them. We used the student and school administrator components to provide data on uniform policies and the student background, peer group, achievement, and behavioral characteristics needed for this analysis.

NELS:88 provided a number of variables that we used to analyze the relationship between student uniforms and various student outcomes. Table 1 shows the means and standard deviations of the variables that follow (see Appendix B for the specific NELS:88 variables used to construct the relevant measures).

Independent variables

We constructed several controls for student characteristics. Student minority status was measured by a dummy variable for Blacks, Asians, and Hispanics. We omitted the category for White students; all comparisons were made with them. We assessed student gender by a dummy variable; male students were the omitted category. These categorizations resulted in a weighted distribution of students as follows: 49.6% female, 50.4% male, 3.8% Asian, 12.5% Black, 10.1% Hispanic, and 73.6% White. As an indicator of student socioeconomic status (SES), we used a precomputed NELS:88 SES composite to control for parental education, income, and occupational prestige. The distributional properties of the scale were a zero mean and a standard deviation of 1; thus, we obtained a scale that represented individual student family deviations from the mean of the composite.

We also used variables to control for school characteristics. Important controls for student track placement were measured with a dummy variable for the academic, vocational-technical, and other programs, with general-tracked students as the omitted category. Another crucial school

Table 1.—Weighted Means and Standard Deviations of Variables Used in the Analysis

Variable	<i>M</i>	<i>SD</i>
Female	.496	.500
Asian	.038	.191
Black	.125	.330
Hispanic	.101	.301
SES	3.267	17.861
Catholic	.056	.229
Private, nonreligious	.012	.110
Private, not ascertained	.001	.022
Private, religious	.020	.141
Academic	.323	.468
Votech	.098	.297
Other programs	.060	.237
Rural	.320	.467
Urban	.276	.447
Uniform	.050	.219
Absent	3.012	1.379
Behavior	1.781	2.359
Drugs	2.702	3.092
Standardized test composite	50.453	9.922
Peer proschool attitudes	7.475	1.386
Academic preparedness	9.707	1.756
Proschool attitudes	43.835	4.124

Note. *N* = 4,578. A new weight was computed using the NELS:88 population weight and the design effect for the entire sample. SES = socioeconomic status.

variable to control for in our analysis was school sector. Because a small percentage of public schools have uniform policies, we could not relegate our findings to a private-public explanation. Thus, we constructed control variables for Catholic schools, private religious schools, private nonreligious schools, and private schools that were not ascertained according to their affiliation. The omitted category was public high schools. That categorization revealed a weighted description of the sample as follows: 51.9% in general track, 32.3% in academic track, 9.8% in vocational-technical track, 6% in other programs; 92% public schools, 5.6% Catholic schools, 2% private religious schools, 1.2% private nonreligious schools, and a small (less than 1%) percentage of private nonascertained schools. Type of school district (urban, rural, suburban) was also controlled for. Thirty-two percent of schools were rural, 27.6% were urban, and 40.4% were suburban.

We used a variable from the school component of NELS:88 to ascertain that 5% of the students in the sample were required by school policy to wear a uniform. Furthermore, 65.4% of Catholic, 16.6% of private nonreligious, 5.4% of private other religious, .8% of public, and 0% of private nonascertained students were required to wear a uniform at their high schools. Student uniform use was the focal independent variable of this research.

We created three scales to represent school preparedness, student proschool attitudes, and peer group proschool attitudes. We used the scales to test our hypothesized intervening processes (see Appendix B for scale information). An

academic preparedness scale assessed the degree to which students came to class with their books, homework, and school supplies (i.e., pencils, paper, etc.). A scale to assess proschool attitudes measured the degree to which students believed it was okay to cut class, destroy school property, fight on school grounds, and so forth. That scale taps an important dimension of attitudes toward school behavior that may or may not cater to a positive academic atmosphere. Finally, we created a scale to assess the importance that the students' peer group placed on proschool attitudes. The scale included attitudes toward finishing school, receiving good grades, and studying. We also computed interaction terms between the uniform variable and those of the moderating scales to assess the effects of those combinations on the outcomes of interest.

Dependent Variables

The debate over school uniforms suggests that researchers should use several outcomes to test the effectiveness of a uniform policy on student consequences. The dependent variables included absenteeism, behavior problems, substance use, and achievement. We used a variable to assess how often a student was absent from school. We created a behavioral scale from a number of variables to assess the degree to which a student had been involved in behaviorally problematic conduct at school. Some of the variables in the behavior scale included whether the student fought, received in-school suspension, skipped or cut classes, was suspended from school, and got into trouble in general. To assess the degree of substance usage among students, we computed a scale to reflect student use of cigarettes, alcohol, and marijuana. To assess student achievement, we used a composite standardized achievement test (composite of reading and mathematics tests).

We conducted regressions on students' and peers' proschool attitudes and academic preparedness to observe the effect of uniforms on those characteristics. By testing the logic of claims made by advocates of school reform, we found several interesting implications for the ongoing debate. We remain specifically responsive to the relationships and the predictive power of student uniform policies on the outcomes of interest.

In all the analyses, we computed a weighting procedure that used a population weight and the design effect appropriate to the population being tested (see Table 1). We used the standardized population weight multiplied by the inverse of the appropriate design effect to consider the fact that NELS:88 is a clustered data set. By creating the new weights (a weight for the entire sample, for the Catholic sample, and for the private sample) we corrected for clustered sample problems (see Table 2). Weighted regressions using design effects will be performed when the relationships highlighted previously are tested. The corrections provided results that are representative of 10th graders in the United States.

Table 2.—Weighted Sector Comparisons on Means of Absenteeism, Behavior, Substance Use, and Standardized Achievement Scores

Sample	Uniform ^a	Nonuniform
Total (<i>N</i> = 4,578)		
Absent	2.90	3.01
Behavior	1.58	1.74
Drugs	2.68	2.71
Standardized test composite	52.89**	50.58
Catholic (<i>n</i> = 327)		
Absent	2.89*	2.55
Behavior	1.49	1.41
Drugs	2.73	2.80
Standardized test composite	53.51**	56.53
Private (<i>n</i> = 80)		
Absent	2.93	2.73
Behavior	1.33	1.28
Drugs	2.36	2.07
Standardized test composite	56.60	56.01

^a*t* tests of significance were conducted comparing uniform with nonuniform within each sector.
p* < .05. *p* < .01.

Results

Descriptive Analysis

Table 1 reports the weighted means and standard deviations of the variables that we used in our analyses. Most of the descriptive highlights have been summarized in the previous section on variable construction. Appendix B gives a summary of the original NELS:88 variables that we used to create the independent and dependent scales.

Appendix C shows the correlation matrix of the variables used in the analysis. Student uniforms were correlated slightly (.05) with standardized achievement scores, indicating a possible relationship; although not signifying a predictive nature of uniforms, the correlation was much smaller than indicated in the debate. The uniform debate focuses on such correlations. Student uniform use was not significantly correlated with any of the school commitment variables such as absenteeism, behavior, or substance use (drugs). In addition, students wearing uniforms did not appear to have any significantly different academic preparedness, proschool attitudes, or peer group structures with proschool attitudes than other students. Moreover, the negative correlations between the attitudinal variables and the various outcomes of interest are significant; hence, the predictive analysis provides more substantive results.

To provide a slightly more rigorous test of the relationships between uniforms and the four dependent variables, we conducted *t* tests comparing the means of the dependent measures by uniform use and sector. Table 2 reports the results for the weighted sector comparisons. In the first panel, means of our four dependent measures were com-

pared for those 10th graders who wore uniforms and for those who did not, all of whom were part of the total sample that included all school sectors. At the 10th-grade level, students wearing uniforms had significantly higher achievement ($p < .01$) than did students not wearing uniforms. That finding mirrored the hypothesized character of the difference as stated in the public discourse. However, when one breaks down this type of analysis into sectors, the relationships are not supported.

Catholic schools imply uniforms in most people's minds and in fact, Catholic schools account for 65.4% of all uniform policies—more than any other type of organization. Panel 2 of Table 2 shows the results of a weighted comparison between students in the Catholic sector ($n = 327$) who wear uniforms and those who do not. Only the results for absenteeism and achievement were significant; those relationships are the opposite of what we hypothesized earlier in this study. Catholic school students who wore uniforms were absent more often ($p < .05$) and, on average, scored 3 points less ($p < .01$) on an achievement test than did Catholic school students who did not wear uniforms. That finding did not support the hypothesis that uniforms are related to lower absenteeism, decreased behavioral prob-

lems, less drug use, and increased standardized achievement scores. None of the comparisons are significant in panel 3 where other private schools are compared, most likely because of small sample size.

Student uniforms as predictors. Until this point in our study, we have presented somewhat weak, although interesting, tests of the relationship between student uniforms and the various outcomes. The debate tends to imply stronger claims than simple correlations and mean comparisons: There is an implicit charge that uniforms cause or affect the outcomes with which educators and policy makers are concerned. We ran a number of weighted regression analyses to test the predictive effect of student uniforms on absenteeism, behavior problems, substance use, and achievement. The results for the regressions using the three indicators of noncommitment to school are reported in Table 3; the results for the regression of achievement on uniforms and other variables are shown in Table 4.

Do uniforms have an effect on absenteeism? Model 1 presents the unstandardized coefficients for the effect of the control variables on absenteeism, which explain 3% of the variance in the dependent variable (see Table 3). In Model 2, we added the variable for student uniforms. The uniform

Table 3.—Weighted Regression of Absenteeism, Behavior Problems, and Substance Use on Uniform Use, Proschool Attitudes, Academic Preparedness, Peer Proschool Attitudes, and Other Variables

Variable	Absenteeism (models)			Behavior problems (models)			Substance use (models)		
	1	2	3	1	2	3	1	2	3
Female	.24***	.24***	.41***	-.91***	-.91***	-.35***	-.40***	-.40***	.27**
Asian	-.53***	-.53***	-.44***	-.37	-.36	-.04	-.121***	-.121***	-.74**
Black	-.37***	-.37***	-.26***	.15	.15	.55***	-1.40***	-1.40***	-.82***
Hispanic	.08	.08	.13	.11	.11	.29*	-.53*	-.53*	-.25
SES	.00**	.00*	.00*	.00*	.00*	.00*	.01**	.01**	.01**
Catholic	-.22*	-.32*	-.30*	-.18	-.41	-.33	.25	.22	.34
Private, nonreligious	-.25	-.27	-.22	-.58	-.63*	-.46	.02	.01	.21
Private, not ascertained	.80	.80	1.08	-1.37	-1.36	-.50	-1.68	-1.68	-.54
Private, religious	-.20	-.22	-.18	-.18	-.22	-.09	-.87*	-.87*	-.81*
Academic	-.27***	-.27***	-.14**	-.77***	-.77***	-.32***	-.81***	-.81***	-.25*
Votech	-.01	-.01	-.00	.10	.10	.14	-.03	-.03	.05
Other programs	.02	.02	.04	.14	.14	.21	-.16	-.16	-.06
Rural	-.11*	-.11*	-.09	-.17*	-.17	-.08	.01	.01	.12
Urban	-.01	-.01	.01	.05	.04	.13	-.10	-.10	-.01
Uniform		.17	.13		.36	.23		.05	-.08
Prepare			-.07***			-.16***			-.10**
Proschool attitudes			-.07***			-.30***			-.10***
Peer proschool attitudes			-.07***			-.05*			-.20***
Constant	3.07***	3.07***	6.98***	2.45***	2.45***	16.8***	3.43***	3.43***	20.5***
R ²	.03	.03	.11	.08	.08	.41	.05	.05	.32
Standard error	1.34	1.34	1.29	2.20	2.20	1.76	3.00	3.00	2.54
F value	8.4***	7.9***	22.6***	20.0***	18.9***	133***	10.7***	10.0***	75.3***
N	3,427	3,427	3,427	3,410	3,410	3,410	2,927	2,927	2,927

*Coefficient was .0045 in all cases where indicated by .00.
 * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4.—Weighted Regression of Standardized Achievement Test Scores on Uniform Use, Proschool Attitudes, Academic Preparedness, Peer Proschool Attitudes, and Other Variables

Variable	Standardized achievement (models)		
	1	2	3
Female	.33	.40	.00
Asian	.16	.10	-.09
Black	-6.29***	-6.27***	-6.53***
Hispanic	-4.41***	-4.43***	-4.53***
SES	-.01	-.01	-.01
Catholic	1.40*	3.04***	2.99***
Private, nonreligious	3.30**	3.67**	3.55**
Private, not ascertained	-.08	-.14	-.68
Private, religious	3.21**	3.52***	3.43***
Academic	6.60***	6.60***	6.29***
Votech	-3.95***	-3.94***	-3.97***
Other programs	-2.78***	-2.79***	-2.82***
Rural	-1.37***	-1.40***	-1.47***
Urban	.15	.17	.09
Uniform		-2.59**	-2.50**
Prepare			.18*
Proschool attitudes			.22***
Peer proschool attitudes			-.10
Constant	50.7***	50.6***	39.9***
R ²	.23	.23	.24
Standard error	8.57	8.56	8.50
F value	69.1***	65.2***	57.7***
N	3,286	3,286	3,286

Note. SES = socioeconomic status.
* $p < .05$. ** $p < .01$. *** $p < .001$.

coefficient was not significantly different from zero; it was not an effective deterrent to decrease absenteeism. We found that once the variation for uniform use was considered, absenteeism decreased in Catholic schools. That finding implies that the effect of Catholic schools, often cited in the literature as affecting behavioral outcomes, remains supported. However, the effect was not associated with whether the students wore uniforms; it was caused likely because of the social relations fostered in Catholic schools. Finally, the variables in Model 3 explain an extra 8% of the variance in absenteeism; they are all significant predictors of decreased absenteeism, indicating that academic preparedness, proschool attitudes, and peer norms positively affect school attendance. Hypothesis 1, which stated that student uniforms decrease absenteeism, was not supported by our results.

Do student uniforms significantly decrease behavioral problems? Model 1 shows the results of the control variables on the dependent variable. Those variables explained 8% of the variance in behavior problems. We added the student uniform variable to Model 2; the insignificant effect was similar to that for absenteeism. We added the mediating variables to Model 3; an extra 33% of the variance in behav-

ioral problems was explained. On average, academic preparedness, proschool attitudes, and peer norms effectively lessen behavioral problems. Hypothesis 2, which stated that student uniforms decrease behavior problems, was not supported by the analysis.

A final question of uniforms' relationship to school commitment can be posed: Do student uniforms significantly decrease substance use among high school students? As in the previous results, Model 2 presents the control variables' effects. Those effects explained 5% of the variance in substance use. The student uniform variable, which was nonsignificant, was added to Model 2. Finally, academic preparedness, proschool attitudes, and proschool peer norms effectively decreased substance use among high school students. Those variables explained an extra 27% of the variance. Thus, Hypothesis 3, which stated that student uniforms decrease substance use, was unsupported, implying that implementing uniform policies at the high school level does not create the desired outcomes.

Table 4 reports a set of models similar to the previous three analyses for the effect of uniforms on achievement scores. Do student uniforms affect achievement? Model 1 shows the results for the control variables, explaining 23% of the variance in the standardized achievement test. Model 2 adds the dummy variable for student uniforms. Contrary to what we expected, the 10th-grade students who were required by school policy to wear uniforms had almost a 3-point decrease in standardized test scores. Although it explains no more of the variance than did Model 1, the coefficient for uniforms was statistically significant ($p < .01$) and negative. Model 3 includes the attitudinal variables; an extra 1% of the variance in achievement was explained with preparedness and proschool attitudes significantly increasing achievement. Finally, Hypothesis 4, which reports that student uniforms will increase student achievement, was not supported by the data. All four of the original hypotheses, derived from public discourse surrounding the uniform debate, were not supported. Most striking were the significant negative effects of uniforms on achievement, an outcome of much concern to educators and policy makers.

Uniforms and proschool attitudes: Is there a relationship? Although the hypotheses were not borne out, we examined whether uniforms directly affect the development of academic preparedness, proschool attitudes, or peer structures with proschool norms. Because those variables consistently produce the desired outcomes, one should assess the effects of uniforms on them. Uniforms did not have any effect on the moderating variables in our analysis (see Table 5). Although academic preparedness, proschool attitudes, and peer norms significantly affected the outcomes studied, uniforms did not affect the moderating attitudinal variables.

We computed the interactions of the student uniform variable with each of the following variables and entered

them into a full model (like Model 3 in Tables 3 and 4): academic preparedness, proschool attitudes, peer proschool attitudes, urbanicity, SES, and the Catholic sector. The following questions apply, respectively, to the tests of interactions: Do students who wear uniforms and have increased academic preparedness differ significantly in the desired direction from their counterparts on the dependent measures? Do Catholic school students who wear uniforms and have increased proschool attitudes significantly differ in the desired direction from their counterparts on the dependent measures? Do students who wear uniforms and have strong proschool peer groups differ significantly from all other students on the dependent measures? Do students in urban areas who wear uniforms differ significantly in the

desired direction from their counterparts on the dependent measures? Do students with high SES who wear uniforms differ significantly in the desired direction from their counterparts on the dependent measures? Finally, do Catholic school students who wear uniforms differ significantly in the desired direction from all other students on the dependent measures?

Contrary to what we expected, the only significant coefficient was that students who wore uniforms and had high proschool attitudes had worse behavior problems than all other students (see Table 6). Uniforms seemingly had no affect on the outcomes that we studied in tandem with the variables that do affect outcomes such as academic preparedness, proschool attitudes, and peer norms.

Table 5.—Weighted Regression of Academic Preparedness, Proschool Attitudes, and Peer Proschool (Peerpro) Attitudes on Uniform Use and Other Variables

Variable	Prepare (model)		Proschool (model)		Peerpro (model)	
	1	2	1	2	1	2
Female	.59***	.59***	1.47***	1.47***	.43***	.43***
Asian	.03	.03	1.01**	1.01**	.42***	.42***
Black	-.08	-.08	1.45***	1.45***	.37***	.37***
Hispanic	-.14	-.14	.72**	.72**	.15	.15
SES	-.00	-.00	-.00	-.00	.00	.00
Catholic	.13	.29	-.09	.02	.01	.01
Private, nonreligious	.26	.30	.35	.38	.13	.13
Private, not ascertained	.70	.70	2.52	2.52	1.17	1.17
Private, religious	.09	.12	.36	.38	.08	.08
Academic	.32***	.32***	1.29***	1.29***	.38***	.38***
Votech	.02	.02	.12	.12	-.03	-.03
Other programs	.04	.04	.23	.23	.12	.12
Rural	.14**	.13**	.22	.22	-.01	-.01
Urban	.05	.05	.25	.25	.02	.02
Uniform		-.25		-.18		-.01
Constant	9.28***	9.28***	42.2***	42.2***	7.06***	7.06***
R ²	.04	.04	.07	.07	.05	.05
Standard error	1.70	1.70	4.01	4.01	1.34	1.34
F value	11.5***	10.9***	19.4***	18.1***	14.4***	13.5***
N	3,776	3,776	3,639	3,639	3,594	3,594

Note. SES = socioeconomic status.
p < .01. *p < .001.

Table 6.—Interaction Effects of Interest on Various Outcomes

Interaction	Absent	Behavior	Drugs	Std. Test
Uniform × Academic Preparedness	.08	.11	-.07	-.29
Uniform × Proschool Attitudes	-.00	.07*	.02	-.23
Uniform × Peer Proschool Attitudes	.03	.04	.01	-.05
Uniform × Urban	-.30	-.17	-.47	.76
Uniform × SES	.00	-.00	.00	-.00
Uniform × Catholic	.18	-.15	-.22	1.42

Note. Std. = standard; SES = socioeconomic status.
*p < .05.

Discussion

Implications

Discourse/rhetoric reexamined. Our failure to find a direct effect of uniforms on behavioral outcomes or academic achievement indicates a need for a closer examination of the uniform debate. Experts involved in education reform evidently considered seriously the research showing outcome differentials between public and Catholic school students. However, it is equally apparent that the most superficial policies are those that have been extracted for possible reform efforts. A close reading of the public versus private school literature suggests that uniforms are merely symbolic of the communal organization of Catholic schools which, researchers have proposed (Bryk & Driscoll, 1988; Bryk, Lee, & Holland, 1993; Coleman & Hoffer, 1987), is the fundamental reason for the advantages that Catholic schools provide.

A reconsideration of the Long Beach case sheds light on the flawed logic of uniform proponents' assertions. The descriptive information provided by LBUSD (Appendix A) suggests that school crime was reduced significantly between the 1994–1995 and 1995–1996 school years when a mandatory uniform policy was established district wide. The correlation between the two events was enough reason for Long Beach administrators to state that a causal relationship existed. Although the two events may be verified empirically, the argument that uniforms caused the decrease in school crime was not substantiated. Considering both the findings provided in this study and the relevant materials from the Long Beach public school system, we propose an alternative interpretation.

An omission from the discourse on school uniforms is the possibility that, instead of directly affecting specific outcomes, uniforms act as a catalyst for change and provide a highly visible opportunity for additional programs. An examination of the Long Beach case shows that several additional reform efforts were implemented simultaneously with the mandatory uniform policy. Those programs included a reassessment of content standards, a \$1 million grant to develop alternative pedagogical strategies, and the Focused Reporting Project (Kahl, 1996). Given those substantive reform efforts, we question why administrators continue to insist that uniforms are the sole factor causing a variety of positive educational outcomes.

Requiring students to wear uniforms is a change that affects not only students, but also school faculty and parents. Instituting a mandatory uniform policy is a change that is immediate, highly visible, and shifts the environmental landscape of any particular school. Changing the landscape is a superficial change, but it attracts attention because of its visible nature. Instituting a uniform policy can be viewed as analogous to cleaning and brightly painting a deteriorating building in that on the one hand it grabs our immediate attention; on the other hand, it is only a coat of paint. That type of change attracts attention to schools and implies the

presence of serious problems that necessitate drastic change. It seems possible that that attention renews an interest on the parts of parents and communities and provides possibilities for supporting additional types of organizational change.

The juxtaposition of those findings and the ongoing rhetoric in the public debate on school uniforms provides a lens for viewing the effects of public opinion on school reform in general. The nature and magnitude of the support behind the mandatory uniform policies of districts such as Long Beach seem to illustrate the *quick fix* nature of school reform policies in the 1990s. A policy that is simplistic, readily understandable, cost free (to taxpayers), and appealing to common sense is one that is politically pleasing and, hence, finds much support. When challenged with broader reforms, those policies with results not immediately identifiable and those that are costly and demand energy and a willingness to change on the part of school faculty and parents are unacceptable.

NOTE

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REFERENCES

- Bryk, A., & Driscoll, M. (1988). *The high school as community: Contextual influences, and consequences for students and teachers*. Madison: University of Wisconsin, National Center on Effective Secondary Schools.
- Bryk, A., Lee V., & Holland, P. (1993). *Catholic schools and the common good*. Cambridge, MA: Harvard University Press.
- Coleman, J. S., & Hoffer, T. (1987). *Private and public high schools: The impact of communities*. New York: Basic Books.
- Department of Justice. (1996). *Manual on school uniforms* (Publication No. BBB00482; EDD00101). Washington, DC: Office of Elementary and Secondary Education.
- Gursky, D. (1996, March). 'Uniform' improvement? *The Education Digest*, 67, 46–48.
- Jarchow, E. (1992). Ten ideas worth stealing from New Zealand. *Phi Delta Kappan*, 73, 394–395.
- Joseph, N. (1986). *Uniforms and nonuniforms: Communication through clothing*. New York: Greenwood.
- Kahl, K. (1996). Support for breakaway teachers may be the key to LBUSD reforms. Available E-mail: <http://www.lbusd.k12.ca.us/>
- Kennedy, M. (1995, August 21). Common denominator: Schools see less violence when kids wear uniforms. *The Los Angeles Times*, p. 1
- LaPoint, V., Holloman, L., & Alleyne, S. (1992, October). The role of dress codes, uniforms in urban schools. *NASSP Bulletin*, 20–26.
- Loesch, P. (1995). A school uniform program that works. *Principal*, 74, 28–30.
- Polacheck, K. (1996). Uniforms help solve many school problems. *Long Beach Press-Telegram*. Available E-mail: <http://www.lbusd.k12.ca.us/>
- Scherer, M. (1991). School snapshot: Focus on African-American culture. *Educational Leadership*, 49, 17–19.
- Stover, D. (1990). The dress mess. *American School Board Journal*, 177, 26–29.
- Thomas, S. (1994, October 20). Uniforms in the schools: Proponents say it cuts competition; Others are not so sure. *Black Issues in Higher Education*, 11, 44–47.
- Virginia State Department of Education. (1992). *Model guidelines for the wearing of uniforms in public schools: Report of the Department of*

Education to the Governor and the General Assembly of Virginia. House Document No. 27.
 Workman, J., & Johnson, K. (1994). Effects of conformity and nonconformity to gender-role expectations for dress: Teachers versus students. *Adolescence*, 29, 207-223.

APPENDIX A
Long Beach Unified School District Data

Crime category	No. of incidents (1993-1994)	No. of incidents (1994-1995)	% change
Assault/battery	319	212	-34
Assault with a deadly weapon	6	3	-50
Fighting	1,135	554	-51
Sex offenses	57	15	-74
Robbery	29	10	-65
Extortion	5	2	-60
Chemical substances	71	22	-69
Weapons or look-alikes	165	78	-52
Vandalism	1,409	1,155	-18
Dangerous devices	46	23	-50
Total	3,242	2,074	-36

APPENDIX B
Description of Variable Construction

Dependent measures

Absenteeism (ABSENT)
 FIS13 How many days R was absent from school

Behavior scale (BEHAVIOR)
 FIS10C How many times R got in trouble
 FIS10E How many times R was suspended from school
 FIS9D How many times R got into a physical fight at school

Scale created by summing across values of the three variables (min. = 0; max. = 14; Cronbach's $\alpha = .66$)

Substance use scale (DRUGS)
 FIS77 How many cigarettes R smokes per day
 FIS79 No. of times R had five drinks or more in a row
 FIS78B Last 12 months, no. of times R drank alcohol
 FIS78C Last 30 days, no. of times R drank alcohol
 FIS80AC Last 30 days, no. of times R used marijuana
 FIS80AB Last 12 months, no. of times R used marijuana

Scale created by summing across values of six variables (min. = 0; max. = 22; Cronbach's $\alpha = .82$)

appendix continues

Appendix B.—continued

Academic achievement
 F12XCOMP Standardized test composite (Reading, Mathematics)

Key independent measures and moderating variables

Student uniform policy (UNIFORM)
 F1C94F Student uniforms are required (recoded 0 = no; 1 = yes). Taken from school component of NELS:88

Proschool attitudes (PROSCHOOL)
 FIS12A Feel it's ok to be late for school
 FIS12B Feel it's ok to cut a couple of classes
 FIS12C Feel it's ok to skip a whole day
 FIS12F Feel it's ok to get into physical fights
 FIS12G Feel it's ok to belong to gangs
 FIS12J Feel it's ok to steal belongings from school
 FIS12K Feel it's ok to destroy school property
 FIS12L Feel it's ok to smoke on school grounds
 FIS12N Feel it's ok to use drugs at school
 FIS12O Feel it's ok to bring weapons to school

Scale created by summing across all reversed variables (min. = 12; max. = 45; Cronbach's $\alpha = .81$)

Peer Proschool Attitudes (PEERPRO)
 FIS70B Among friends, how important is it to study?
 FIS70D Among friends, how important is it to get good grades?
 FIS70F Among friends, how important is it to finish high school?

Scale created by summing across the three variables (min. = 3; max. = 9; Cronbach's $\alpha = .75$)

Academic preparedness (PREPARE)
 FIS40A Often go to class without paper or pencil
 FIS40B Often go to class without books
 FIS40C Often go to class without homework done

Scale created by summing across three reversed variables (min. = 3; max. = 12; Cronbach's $\alpha = .70$)

Control variables

Student background
 Gender (FEMALE)
 F1SEX Student gender (recoded to 0 = male; 1 = female)

Minority status (ASIAN, BLACK, HISPANIC)
 FIRACE Student race (recoded to 0 = White; 1 = Black, Asian, or Hispanic)

Socioeconomic status
 F1SES SES composite

School context
 School sector (CATHOLIC, PRIVNON, PRIVNOT, PRIVREL)
 G1OCTRL1 School sector (recoded 0 = public; 1 = Catholic, private nonreligious, private religious, or private not ascertained)

Curricular track (ACADEMIC, VOTECH, OTHPROG)
 F1HSPROG High school program in which R is enrolled (recoded 0 = general; 1 = academic, vocational-technical, or other program)

School district (URBAN, RURAL)
 G1OURBAN Type of school district, diocese, county (recoded 0 = suburban; 1 = urban or rural)

Note. Numeric variables were taken from NELS:88.

APPENDIX C
Correlation Matrix of Variables in the Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. Female	—																						
2. Asian	<i>ns</i>	—																					
3. Black	<i>ns</i>	-.08	—																				
4. Hispanic	<i>ns</i>	-.07	-.13	—																			
5. SES	<i>ns</i>	<i>ns</i>	<i>ns</i>	.05	—																		
6. Catholic	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	.03	—																	
7. Privnon	<i>ns</i>	<i>ns</i>	-.03	<i>ns</i>	<i>ns</i>	<i>ns</i>	—																
8. Privnot	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	—															
9. Privrel	<i>ns</i>	.06	-.04	-.04	<i>ns</i>	.03	<i>ns</i>	<i>ns</i>	—														
10. Academic	.04	.03	-.04	-.06	-.05	.12	.06	<i>ns</i>	<i>ns</i>	—													
11. Votech	-.06	<i>ns</i>	.10	.03	<i>ns</i>	-.06	-.04	<i>ns</i>	-.04	-.23	—												
12. Othprog	<i>ns</i>	<i>ns</i>	.05	.06	.05	-.04	<i>ns</i>	<i>ns</i>	<i>ns</i>	-.17	-.08	—											
13. Rural	<i>ns</i>	-.09	-.07	-.07	-.05	-.17	<i>ns</i>	<i>ns</i>	-.07	-.06	.03	<i>ns</i>	—										
14. Urban	<i>ns</i>	.07	.20	.15	.06	.30	.06	<i>ns</i>	.08	<i>ns</i>	.03	.04	-.42	—									
15. Uniform	.05	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	.69	.06	<i>ns</i>	.05	.09	-.05	-.04	-.16	.26	—								
16. Absent	.09	-.06	-.07	.04	.04	-.05	<i>ns</i>	<i>ns</i>	-.03	-.10	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	—							
17. Behavior	-.19	-.03	<i>ns</i>	.04	.06	-.03	-.03	<i>ns</i>	<i>ns</i>	-.18	.07	.05	-.03	<i>ns</i>	<i>ns</i>	.33	—						
18. Drugs	-.08	-.07	-.14	<i>ns</i>	.06	<i>ns</i>	<i>ns</i>	<i>ns</i>	-.04	-.12	<i>ns</i>	<i>ns</i>	<i>ns</i>	-.05	<i>ns</i>	.28	.50	—					
19. F12xcomp	.05	.04	-.22	-.14	-.07	.10	.08	<i>ns</i>	.06	.39	-.22	.13	-.07	<i>ns</i>	.05	-.10	-.27	-.14	—				
20. Peerpro	.16	.05	.08	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	.13	-.03	<i>ns</i>	<i>ns</i>	.03	<i>ns</i>	-.16	-.30	-.31	.06	—			
21. Prepare	.17	<i>ns</i>	<i>ns</i>	-.03	-.03	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	.10	-.04	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	-.15	-.33	-.25	.12	.23	—		
22. Proscho	.18	.03	.11	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	<i>ns</i>	.14	<i>ns</i>	<i>ns</i>	<i>ns</i>	.05	<i>ns</i>	-.26	-.60	-.55	.12	.42	.34	—	

Note. Privnon = private, nonreligious; privnot = private, not ascertained; privrel = private, religious; othprog = other programs; F12xcomp = standardized achievement test; peerpro = peer proschool attitudes; prepare = academic preparedness; proscho = proschool attitudes; SES = socioeconomic status.