

# **BEHAVIOR AND PERFORMANCE IN THE ECONOMICS CLASSROOM**

by

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### **Abstract**

The relationships between classroom performance and student characteristics such as grade point average and gender have been the subject of much analysis in economic education. Heretofore, student behavior in the economics classroom has not been among the characteristics studied. Using newly collected data, this paper presents empirical evidence regarding two sets of student behaviors: "inattentiveness" and "boorishness." Controlling for other factors, a significant, negative relationship was found between inattentiveness and performance. Although boorishness was not significant, estimated coefficients for gender and grade point average were significant and consistent with the economic education literature. Our results suggest the potential fruitfulness of future research on classroom behavior.

## **Behavior and Performance in the Economics Classroom**

The doctrine of *in loco parentis* that once prevailed on college campuses has all but vanished. The pendulum regulating campus behavior seems to have come full-swing; students are quite uninhibited in today's classrooms. This paper examines the link between student behavior and performance in economics classrooms. While student characteristics have been analyzed in economics, classroom behaviors have heretofore been neglected. Our focus will be on two sets of student behaviors: "inattentiveness" and "boorishness." Factors traditionally linked to performance, such as gender and grade point average, will be used as controls.

### **I. Related Literature**

The literature is replete with studies that link students' characteristics to their performances.<sup>1</sup> Yet little work has been done in the field of higher education (and none in economics) to examine the relationship between classroom behavior and student performance. This is surprising because such a linkage has been explored in the elementary education literature, and for some time. For example, correcting for differences in IQ, Swift and Spivack (1975, p. 8) pointed to "inattentiveness" and "negative" or "disturbing" behaviors as "dimensions" that negatively affect performance.

To our knowledge, there are only two articles about the behavior of college students that are relevant to our investigation. Johnson and Butts (1983, p. 361) defined "engaged time" as the sum of the following classroom behaviors: 1) looking at the teacher or chalkboard; 2) taking notes; and 3) talking with the teacher or appropriately with other students. They found a positive relationship between student achievement and engaged time.<sup>2</sup> Along similar lines, Bob Boice (1996) investigated "classroom incivilities" by conducting interviews with college students and faculty and

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<sup>1</sup>For a classic survey see John J. Siegfried and Rendigs Fels (1979).

<sup>2</sup>In essence, "engaged time" is a reciprocal to the "inattentiveness" measure used by Swift and Spivack to evaluate elementary school children. Therefore Johnson and Butts results are supportive of Swift and Spivack's findings.

making classroom observations.<sup>3</sup> Boice's main conclusion can be related to the Johnson and Butts article as follows: fewer "classroom incivilities" occurred in classrooms of more "engaging" teachers.

## II. Inattentiveness and Boorishness in Economics Classrooms

In line with the above literature, we hypothesize that student performance (P) is dependent upon: 1) an index of variables labelled inattentiveness (I); 2) an index of negative behaviors labelled boorishness (B); and 3) a vector of control variables (C). Formally, our model is:

$$(1) P = f(I, B, C).$$

Data used to estimate this equation were collected in three classrooms and for two instructors between 1995 and 1997. Instructor A was observed for two different courses: 1) a survey of economics course with 31 students; and microeconomic principles course with 47 students. Instructor B was observed teaching microeconomic principles with 28 students.<sup>4</sup> Graduate students attended the entire class period of virtually every session of each class,<sup>5</sup> keeping records of student behaviors from the back of the classroom. Students were not told what the graduate students were recording.

The measure of performance (P) used in this paper is percentage of total course points available earned by the student. Inattentiveness (I) is the sum (for each student throughout the semester) of instances of: 1) tardiness to class; 2) talking with other students without permission (each inappropriate conversation added a stroke to the tally); 3) sleeping in class; and 4) reading outside

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<sup>3</sup>Boice attended a fraction of the class periods (generally only the first and last 20 minutes of an 80 minute class) and visited a fraction of classes studied ("at least once a week").

<sup>4</sup>Our original submission involved only one instructor teaching one section of one course. Anonymous referees suggested that our result would be more convincing if they were robust to a wider range of classroom environments. Therefore we collected data for the originally studied instructor teaching a different course and for an additional instructor teaching the course analyzed in the original manuscript.

<sup>5</sup>Graduate students were occasionally ill or had job interviews, but these were rare occurrences (once or twice in any one class per semester).

materials (such as newspapers or textbooks for other courses). We proxied boorishness (B) by summing instances of: 1) eating; 2) beverage consumption; and 3) failure to remove hats.<sup>6</sup>

The following variables were used as controls: 1) a dummy variable equalling one if the student is male (XY); 2) a dummy variable equalling one if the student is majoring in pre-business or economics (MJR); 3) the number of college credit hours the student had prior to entering the class (HRS); 4) the student's grade point average at the start of the semester (GPA); and 5) dummy variables D1 and D2 which take into account that two instructors and two courses were involved.<sup>7</sup>

#### IV. Estimation

We estimated the generally stated performance equation (1) by running ordinary least squares on the following estimating equation:

$$(2) P = b_0 + b_1I + b_2B + b_3XY + b_4MJR + b_5HRS + b_6GPA + b_7D1 + b_8D2 + \varepsilon.$$

The results of this estimation appear in Table 1 below:

**Table 1:**  
**OLS estimates of variables affecting performance**

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<b>Dependent Variable: Performance (P)</b>			
<b>Number of Students: 106</b>			
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<b>Independent Variable</b>	<b>Estimated Coefficient</b>	<b>T-Statistic</b>	<b>2-Tail Significance</b>
Constant	16.09	2.23	0.028
I	-0.33	-1.94	0.055
B	0.07	0.38	0.706
XY	9.07	3.09	0.003
MJR	2.53	0.84	0.402
HRS	0.10	1.92	0.057
GPA	12.65	5.68	0.000

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<sup>6</sup>Inattentiveness (I) and boorishness (B) represent (linear) sums of instances of particular sets of behaviors. Given that so little research has been done in this area, we had little guidance in terms of how to construct these variables and used linear weighing by default as the simplest. Also, the factors included in I and B are probably not exactly what every researcher would have included. The factors that we chose were those that we decided upon as a result of discussions with our colleagues. Again, the literature offered us no guidance on the factors to include.

<sup>7</sup>We chose not to use attendance as a control variable because there were attendance requirements in the classes examined dampening absenteeism below the threshold of relevance indicated by Durden and Ellis (1995).

D1	6.91	1.60	0.112
D2	4.81	1.31	0.192

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**R-squared: .386**  
**Adjusted R-squared: .335**  
**F-statistic: 7.63**

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Based on these results, the hypothesis that student performance is negatively related to inattentiveness cannot be rejected at the 6% level. On the other hand, one must reject the hypothesis that performance is negatively related to boorishness. There is little that is surprising in the results on the control variables. Gender (XY) and grade point average (GPA) have the usual signs found elsewhere in the economic education literature and are highly significant; better performances were garnered by males and students with higher grade point averages. The only other control variable that is significant is the number of hours taken by the student (HRS).

## **V. Summary and Conclusion**

As in the elementary education research, our results regarding student "inattentiveness" in economics indicate a negative relationship with performance. On the other hand, our results do not support the hypothesis that "boorishness" adversely affects student performance.

These results do not suggest a return to the doctrine of *in loco parentis*. They do, however, lead one to wonder whether the pendulum regulating classroom behavior on campus has swung too far. Additional investigation seems warranted to discover the best ways to overcome inattentiveness, and to determine whether behaviors other than inattentiveness are important.

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