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PERCEIVED INSTRUCTOR ENTHUSIASM AND STUDENT ACHIEVEMENT

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ABSTRACT

Enthusiasm comes from the Greek, where it meant "possessed by a god." An enthusiastic person is someone who literally is inspired by a powerful force. It is used frequently as a descriptor of effective teachers. This research studied the relationship between instructor enthusiasm, as measured by an Enthusiasm Awareness Index, and student achievement. Results indicated that performance in the classroom as measured by exam scores and final grades varies minimally if at all with perceived instructor enthusiasm. This is at variance with previously cited research. The article presents and discusses several reasons for this variance.

Enthusiasm is a valuable quality for anyone, regardless of the kind of work one does. The word "enthusiasm" is derived from a combination of Greek words meaning, "possessed by a god." An enthusiastic person is someone who literally is inspired by a powerful force. In the literature on enthusiastic teaching, the word usually means "stimulating," "animated," "energetic," or "mobile."

Most would agree that an enthusiastic classroom environment is a more interesting and stimulating place to be than in a dull or stolid environment. But, what effect, if any, does teacher enthusiasm have on student achievement?

The available research on enthusiastic teaching suggests a positive relationship between teacher enthusiasm and student achievement. Cruichshank (3) found that, all other things being equal, a teacher who presents material in an animated and stimulating manner will have students who achieve better on tests than a teacher who does not. Another group of researchers tested retention in college students after experiencing presentations from "static" speakers and "dynamic" speakers. Static speakers read from a manuscript, used no gestures, had no direct eye contact, and kept vocal inflection to a minimum. Dynamic speakers delivered presentations from memory, with extensive use of gesturing, eye contact, vocal inflection and animation. The mean score of the students who heard the dynamic speaker was significantly higher than those who heard the static speaker (1). The implications of this study are that energy level not only contributes to retention but to attention.

Lastly, in his review of the research on enthusiastic teaching, Rosenshine (4) identified behavioral components of enthusiastic teaching and classified them into two categories: high inference and low inference variables. High inference variables measured behaviors that required considerable inferring from what was observed or heard in the classroom. They included variables such as mobility, animation, energy or expressiveness. Low inference variables measured those behaviors that required an observer to classify teacher movements into objective categories, such as, words per minute, amount of gesturing, or movements per minute. Rosenshine found that high ratings on both categories of variables, as measured by independent observers, related

positively to measures of pupil achievement. Rosenshine concluded that animated teacher behaviors also may serve as secondary reinforcers; that is, hearing or seeing an energetic teacher "may positively reinforce certain responses of the pupils during the lesson" (1, p. 510).

In the studies cited above, teacher enthusiasm was measured by an observer or by a person external to the classroom or learning environment. In the present student instructor enthusiasm is measured by student responses to a questionnaire, the Enthusiasm Awareness Index (EAI). This study has two purposes: first, to introduce the EAI as an instrument in which college students may rate their instructors on enthusiasm behaviors; and secondly, to use the EAI as an aid to study the effects of enthusiasm on student achievement. More specifically, it asks the question: What is the relationship between perceived instructor enthusiasm as measured by an Enthusiasm Awareness Index (See Appendix 1), and student performance as measured by two exam scores and final grades?

METHOD

The Enthusiasm Awareness Index (EAI) was designed initially as a self-reflective device for teachers and trainers to assess personal awareness of enthusiasm levels. The intent of the index was not verification of levels of enthusiasm, but awareness based on self-knowledge and feedback from ones environment. The index was developed based upon the research review of Rosenshine (4), and the enthusiasm training programs of Collins (2). While the index itself has not been tested for validity and reliability, each item on the index, or a variation thereof, has been verified by both Rosenshine and Collins as a component of enthusiastic teaching.

The EAI was administered to 442 students in 20 separate management classes at two different universities (U-1, and U-2). Students were required to rate their instructor's level of enthusiasm over the seven items of the EAI on a seven point Likert-type scale. At U-1 the EAI was administered at the twelfth week of a fifteen week semester in 16 separate management classes in policy, principles, production, and management topics. Ten sections from the 16 were selected randomly to participate in the study. This was done to avoid selection bias. The EAI was administered by a graduate assistant and student code numbers were used as a means of identification. Final grades were obtained by student ID for students in the randomly selected classes. At U-2 students were enrolled in ten separate sections of the same Production course. The EAI was administered at the eleventh week of a fifteen week semester. The EAI was administered by a graduate assistant and student code numbers were used as a means of identification. Students in the ten sections took two common exams constructed by a person not teaching any of the Production sections. The two exams were administered by a graduate assistant, one at the tenth week, and the other at the fifteenth week.

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RESULTS AND ANALYSIS

Separate one-way analyses of variance were completed for each dimension of the EAT by the 20 classroom sections, as well as for a total enthusiasm score by the 20 sections. Table 1 presents both the analysis of variance and descriptive statistics for total enthusiasm scores by all sections. Analysis of variance indicates significant differences across sections on all seven dimensions of the enthusiasm index. That is, student perceptions of enthusiasm do differ across classroom, and they differ across instructors, as well.

TABLE 1
ANALYSIS OF VARIANCE OF TOTAL SCORES
ON THE ENTHUSIASM INDEX BY SECTION

	D.F.	SUM OF SQUARES	F	p
BETWEEN GROUPS	19	14925.1110	28.6884	.0000
WITHIN GROUPS	421	11527.6419		
TOTAL	440	26452.7528		

SECTION	N	MEAN	STANDARD DEVIATION
1	28	29.6429	6.0993
2	23	29.6522	6.0348
3	27	39.7037	4.1678
4	28	24.3929	5.7693
5	26	39.6923	3.7817
6	22	22.3182	6.8549
7	27	27.0741	6.0506
8	21	29.8571	6.8868
9	18	30.6111	5.6375
10	18	29.8889	5.2006
11	15	37.3333	4.9087
12	14	37.4286	4.7671
13	24	35.0833	4.9862
14	19	35.5789	3.9765
15	21	35.8095	2.6948
16	17	35.1765	6.0129
17	20	44.7500	3.2907
18	25	37.6000	6.3377
19	25	39.2400	3.7670
20	23	39.4348	4.2834
TOTAL	441	33.8141	7.7537

There also appears to be consistency among raters. A rank order of mean enthusiasm scores of each of the twenty sections by instructor appears in Table 2, and shows that instructors in multiple sections were rated similarly across sections. That is, instructors consistently received highest, moderate, or lowest ratings by students.

TABLE 2
RANKING OF ENTHUSIASM SCORES BY INSTRUCTOR

INSTRUCTOR	RANK OF MEAN TOTAL ENTHUSIASM SCORE FOR EACH SECTION
Se*	1
H	2, 3
Sc*	4, 5, 6
C*	7, 8
F*	9, 10, 11, 12
J	13
B	14, 15
Sm	16, 18, 20
Ga	17, 19

* = U-1

Table 3 presents an analysis of variance for both sets of exams scores for the ten sections at U-2. Analysis of variance yields no significant differences across sections on exam scores. That is, there were no significant differences in accomplishment across the ten sections. This means that variances in performance cannot be explained by variances in enthusiasm.

TABLE 3
SUMMARY OF ANALYSIS OF VARIANCE OF EXAM SCORES BY SECTION

EXAM I					EXAM II				
	DF	SUM OF SQUARES	F	p	DF	SUM OF SQUARES	F	p	
Between Groups	9	2163.5	1.541	.133	9	3092.1	1.183	.305	
Within Groups	311	48524.2			311	90324.9			
Total	320	50687.7			320	93417.0			

This finding also is supported by a correlation analysis as presented in Table 4. These results show minimal or no relationship between enthusiasm scores on one hand, and either exam scores or final grades, on the other. The correlations in Table 4 are broken down by university. This breakdown reveals that correlations at U-1 are greater and more positive than those at U-2.

DISCUSSION

The results of this study indicate that performance in the university classroom as measured by two exam scores and final grade varies minimally, if at all, with perceived instructor enthusiasm. This suggests that instructor enthusiasm has little effect on student achievement, at least as measured by exam scores and final grades. This finding appears to be at variance with previously cited research indicating a positive relationship between teacher enthusiasm and student achievement, and contrary to the commonly held notion that teacher enthusiasm is an important ingredient in student achievement. It should be noted, however, that the bulk of the previously cited research studied teacher enthusiasm at the elementary and secondary levels of education. It is possible that age and maturity may have a leveling effect on enthusiasm and achievement.

In this study four of the enthusiasm scale scores and the total enthusiasm score correlated significantly at the .10 with grades at U-1, where common exam scores did not comprise the majority of students' grades. This suggests that at U-1 achievement did vary with enthusiasm, only if minimally. It also should be noted that the overall enthusiasm scores were higher at U-1. The differences between the two universities may be explained by several factors: sections sampled, subject matter taught, and use of common exams. At U-2 all sections sampled were in Production Management, a required core course for all business students, and uniformity was encouraged by the use of common exams and a common text. At U-1 there was a greater variety of sections sampled, subject matter taught, and none of the instructors taught to a common exam. At U-1, only two sections were in Production Management. The remainder of the sections sampled were in slightly more dynamic subject matter than Production Management.

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TABLE 4
CORRELATION OF ENTHUSIASM SCALE SCORES WITH GRADES
EXAM SCORES, AND TOTAL ENTHUSIASM SCORE

Enthusiasm Scale	Grades			Exam		Total Enthusiasm Score
	at u-1	at u-2	u-1 and u-2	I	II	
Eye Contact	r .1394	.0318	.0804	.0882	.0563	.8122
	n (203)	(238)	(441)	(234)	(234)	(441)
	p .024	.313	.046	.089	.196	.000
Facial Expression	r .1003	.0700	.0807	.0631	.0698	.8754
	n (203)	(239)	(442)	(234)	(234)	(441)
	p .077	.141	.028	.168	.144	.000
Gestures	r .0926	-.0658	.0056	.0318	-.0157	.8224
	n (203)	(238)	(441)	(234)	(234)	(441)
	p .094	.156	.453	.314	.406	.000
Body Movement	r .0285	.0261	.0327	.1192	.1032	.7340
	n (203)	(238)	(441)	(234)	(234)	(441)
	p .343	.344	.190	.034	.058	.000
Word Selection	r .0631	.0057	.0419	.0186	.0038	.7859
	n (203)	(238)	(442)	(233)	(233)	(441)
	p .185	.465	.190	.389	.477	.000
Vocal Delivery	r .1129	-.0286	.0372	.0353	.0055	.8831
	n (203)	(239)	(442)	(234)	(234)	(441)
	p .054	.330	.217	.295	.467	.000
Overall Enthusiasm	r .0449	.0035	.0358	.0404	-.0139	.8788
	n (203)	(239)	(442)	(234)	(234)	(441)
	p .262	.479	.226	.269	.416	.000
Total Enthusiasm	r .1090	.0062	.0540	.0683	.0378	1.000
	n (203)	(236)	(439)	(233)	(233)	
	p .061	.462	.180	.149	.283	

Score

The fact that at U-1, subject matter was more dynamic and instructors had greater choice in selecting course curriculum may have resulted in greater enthusiasm scores. Also, it is possible that instructors who are perceived as enthusiastic create a more positive, open, and energetic classroom atmosphere that becomes mutually reinforcing with a stronger student/instructor relationship. In this type of open environment, it is possible that instructors may use more subjective judgments in determining student achievement. The subtleties of such a positive classroom environment may induce the instructor, either subconsciously or consciously, to place greater emphasis on attitudes, appreciation, and participation, rather than on specific exam scores, thus evaluating the student overall as an individual, as well as a performer on exams.

It is also noted that at U-2, the Enthusiasm Index was administered the week following the first exam. One might conclude that enthusiasm scores at U-2 reflected Exam I results. Differences in exam scores, however, do not support this conclusion.

Finally, it is interesting to note that at U-1, at least two instructors used experiential or modified experiential teaching techniques. It is possible that there is some relationship between pedagogic style and perceived instructor enthusiasm, regardless of achievement. This notation is worth further investigation.

CONCLUSION

If there is a relationship between an instructors enthusiasm and achievement, the results of this study do not reveal it. The focus of the study was narrow. It focused on two measures of performance, achievement on exams and final grades. It is possible that instructor enthusiasm may have a more subtle, but significant impact on students in terms of appreciation for and attitudes toward subject matter that may be longer lasting than the effects of performance on exams. The problem is that measures of performance reflecting this more subtle influence are very illusive.

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It is not clear that a relationship between enthusiasm and learning exists, especially at the college level with quantitative courses. Continued research is necessary to clarify if it does and under what circumstances.

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- (2) Collins, M. L. The effects of training for enthusiasm on the enthusiasm displayed by presence teachers. Doctoral dissertation. Syracuse University, Syracuse, New York, 1976.
- (3) Cruichshank, D. R. Teaching is Tough. Englewood Cliffs, N.J.: 1980.
- (4) Rosenshine, B. Enthusiastic teaching: A research review. School Review, 1970, 78, 499-514.

EXHIBIT 1

Enthusiasm Awareness Index

Below are seven indexes related to enthusiastic delivery skills. Please assess your level of enthusiasm based on self-knowledge and past performance in training situations. Remember there are no right or wrong answers. The aim of the index is to assess self-awareness of your level of enthusiasm in training situations and not to evaluate your training effectiveness. Circle the appropriate level of enthusiasm on each index.

	LEVEL OF ENTHUSIASM						
	LOW		MEDIUM			HIGH	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Eye Contact	Avoids eye contact; unfocused gaze or blank stare; dull or bored look. 1	2	Moderately good eye contact; appearing interested and occasionally lighting up. 3 4 5			Maintains excellent and constant eye contact while avoiding staring; shinning, wide-opened eyes. 6 7	
2. Facial Expressions	Expressionless, deadpan, or frowned; little smiling; closed lips. 1	2	Smiles occasionally; agreeable looking; pleased; expression generally "fits" situation. 3 4 5			Vibrant; demonstrative; exhibits many variations and frequent changes in expression; broad smile. 6 7	
3. Gestures	Arms kept at sides or folded; rigid; infrequent use of arms. 1	2	Maintains steady pace of appropriate gestures; pointed occasionally sweeping movements. 3 4 5			Quick and demonstrative movements; frequent and sweeping movements of hand, arms or head. 6 7	
4. Body Movements	Stationary; standing or sitting; seldomly moves from one spot. 1	2	Moves freely, steadily but slowly; sometimes paces; uses frequent instructional motions. 3 4 5			Large demonstrative body movements to emphasize vocal delivery; rapid, energetic and natural movements. 6 7	
5. Word Selection	Few Descriptors or adjectives; Simple expressions; no use of simili or metaphor. 1	2	Moderate use of descriptors, simili and metaphor but tends to be repetitive. 3 4 5			Highly descriptive; great variety; excellent and frequent use of simili and metaphor. 6 7	
6. Vocal Delivery	Monotone; minimum inflection; Poor articulation; little variation; reads from notes or book. 1	2	Pleasant variations in pitch, tone, cadence and volume; good articulation; good integration of notes and instructional materials. 3 4 5			Highly varied tone, pitch, volume and cadence; uplifting intonations; excellent articulation; variations from rapid excited speech to a whisper. Rarely uses notes or book. 6 7	
7. Overall Energy Level	Lethargic; inactive; sluggish; appears tired or sleepy. 1	2	Maintains an even and moderate level of energy; occasional bursts of energy. 3 4 5			Exuberant; high and constant degree of vitality, drive and spirit throughout session; inspiring. 6 7	

Scoring: In general, a score of 42-49 indicates a very high level of enthusiasm. You are "inspired by the gods."
a score of 21-41 indicates moderate levels of enthusiasm. You are in "apprenticeship to the gods."
a score of 7-20 indicates a very low level of enthusiasm. You are "inspired by Morpheus."