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# INTERPERSONAL TEACHING STYLE AND STUDENT IMPRESSION FORMATION

Jeffrey Coldren and Jodi Hively

**Abstract.** Assuming that learning is an inherently social process, this research explores interpersonal variables that affect teaching. Specifically, does the interpersonal teaching style affect student impressions of the instructor? Eighty-five undergraduates viewed one of three ten-minute videos that portrayed either an authoritarian, authoritative, or neutral style. While the content remained constant, the videos differed in many ways. Students rated the authoritative style as most positive and the authoritarian as least positive. These results are consistent with socio-instructional theories of learning and imply that style is as important as substance in teaching.

**Keywords:** *authoritative, impression formation, interpersonal style, socio-instructionals*

Consider the following two scenarios that are quite familiar in college teaching. In the first situation, the instructor (let's call him Prof. Stern) drones on endlessly about a topic using a firm monotone voice, rarely makes eye contact with students, appears stiff,

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and has a general air of condescension. If a brave student should ask a question, the instructor would likely glare and sniff with contempt and indignation that his expertise is being challenged. Although the instructor has a confident command over the material because he finds it to be utterly absorbing, Prof. Stern fails to convey this fascination and excitement to the students. Quite the contrary, in fact: the students are bored and disengaged.

In another hypothetical case, the instructor (let's call her Prof. Hart) appears at ease with the material, but even more comfortable with the students. She speaks with a warm lilt in her voice, seems to be genuinely interested in the students, and appears to be concerned with making the students at ease and motivated. The instructor is confident, self-assured, laughs at her mistakes, looks students in the eye, leans in to them as they talk, and perhaps even refers to students by name.

One could not work in a college atmosphere without having some experience with each of these two teaching archetypes (although they are admittedly exaggerated here for illustrative purposes). As you think about which style best describes you or your colleagues, it is probably all too easy to recall conversations and comments about these types of instructors. Frequently, Prof. Stern is criticized as being rigorous and out of touch while he complains about the quality of students. Although he is well versed in his topic, he may be uninspiring to students. On the other hand, Prof. Hart is frequently criticized as being too easy, not rigorous enough about content, and being more interested in good teacher ratings than in covering the material.

In this article, we plan to go beyond this shallow academic discourse to answer the deeper question of whether individual stylistic differences among instructors actually have an effect on the quality of the learning experience. Particularly, do

variations in tone of voice, eye contact, and bodily mannerisms (which collectively we call “style”) influence student perceptions and impressions? There are several sources of theory and evidence from basic research in developmental and social psychology that suggest that interpersonal style may go beyond merely superficial differences to impact how students perceive the teacher and the quality of teaching.

### **Learning Is a Social Phenomenon**

The general theoretical rationale for interest in the interpersonal influences in the classroom comes from the pioneering work of the Soviet psychologist Lev Vygotsky (1962, 1978; Kessen 1979), who proposed that learning is an inherently and necessarily social process. This is a significant departure from previous orientation to instruction such as Piaget’s cognitive developmental theory and the information-processing perspective that viewed thinking as an individual activity (Bruner 1986; Wood 1998). For Vygotsky, thinking entails the construction of knowledge between two partners as part of a cooperative social exchange. Thus, both members of the dyad share responsibility for the learning process gradually leading to a transfer of responsibility between the instructor and the learner (Belmont 1989; Rogoff and Gardner 1984).

### **The Interpersonal Social Climate of the Classroom Matters**

Because one-on-one direct teaching interactions between social partners may not be possible in all classroom settings due to practical constraints, there are several indications that the positive effects of interpersonal interaction may occur in a manner that is more subtle, less direct, and more pervasive than originally proposed by Vygotsky.

In a classic example from social psychology, Asch (1946) found that the ability to form impressions about another person provides information about the character and conception of that person, and thereby serves as a prerequisite for subsequent social interactions. Further, such impressions may be formed surprisingly quickly and found to be amaz-

ingly accurate. Ambady and Rosenthal (1993) confirmed this observation when they reported that adults’ judgments of college teachers from thirty-second video clips of nonverbal behavior were able to predict positive end-of-semester evaluations. These effects also apply to the role of language-related variables: Haleta (1996) found that teachers using powerful language (e.g., free of hesitations) were rated by students as higher on traits of dynamism, status, and credibility.

In another example of the role of emotional climate in the classroom, Grasha (1996) demonstrated the importance of matching the predominant style of the instructor with that of the student. In recognizing that instructors and learners bring various styles in the classroom, Grasha emphasized the importance of matching the dominant style of instructor to the learner so an overlap can occur. Building upon this work, a previous study showed that even in a college environment that is notoriously impersonal—large lecture-based freshman-level classes—the extent to which the instructor was able to adopt a “personal” teaching style was the most important predictor of student success in the class (Long and Coldren 2006).

### **Rationale, Purpose, and Design of the Experiment**

Thus, there is ample evidence that the social context, whether it is defined as direct teaching or the general social climate between the instructor and learner, provides students with support for learning. This project seeks to build upon this research by exploring interpersonal variables by which the social environment has an effect on teaching and learning. Specifically, we will determine whether various teaching styles affect student impressions about the instructor and the class.

To do this, we will take an experimental approach by presenting three types of interpersonal styles to students. Whereas measurement of reactions to naturally occurring variations in style among individual instructors is valuable (e.g., Ambady and Rosenthal 1993), such a naturalistic observation technique of variations among instructors under *in vivo* conditions does not allow the elimination of several potential confounding variables. For example,

the effect of stylistic variables upon student impressions may be confounded with familiarity, past experiences, or the reputation of certain instructors.

Another reason for using an experimental technique is to precisely manipulate the stylistic variables portrayed by the instructor. Because the word “style” when used in the context of studying teaching and learning has had a varied and perhaps dubious usage in the past (see the review by Cassidy 2004), we must explain how we are using the term in the present context. We do not use “style” to refer to orientation of structuring classes (e.g., instructor-centered or student-centered; Dressel and Marcus 1994), disciplinary-related instructional styles (e.g., Hativa and Birenbaum 2000), or to cognitive or learning processing preferences of the students (Kolb 1985). Instead, we use “style” to refer to a cluster of personal attributes and characteristics that function to create and convey an interpersonal social context within which instruction and cognitive processing between partners may occur. The personal characteristics may be verbal (including *what* a person says as well as *how* it is said, such as tone of voice, phrasing, and pacing) and nonverbal qualities (e.g., eye contact and facial expression).

Our use of the term “style” is closely derived from Baumrind’s (1971, 1991) research to identify the most effective styles for parenting. Through interpersonal characteristics, parents convey attitudes, expectations, structure, control, and direct-teaching opportunities. For instance, parents using the authoritative style integrate high levels of warmth, structure, and expectations; and thereby it is not surprising that this style is associated with the best developmental outcome in children. A less successful outcome is attributed to parents who use an authoritarian style that is exemplified by high levels of demandingness, expectations, and structure, but combined with a cold and rejecting demeanor. As applied to teaching, Prof. Stern is an example of the authoritarian type whereas Prof. Hart is an example of the authoritative type. In the present research, we had the instructor model either the authoritative or authoritarian style to observe the impression formed by the students.

## Method

### Participants

Eighty-five undergraduate students (23 males; 59 females; 3 did not indicate gender) mostly from general (introductory) psychology classes made up the sample. Students volunteered for the study to receive either class credit or extra credit. The mean age of the participants was 21.60 years (minimum = 18; maximum = 49;  $SD = 5.73$ ). Most of the students were in their first year of college ( $M = 37.34$  total credit hours;  $SD = 34.34$ ). Further, most participants (84.7 percent) identified themselves as Caucasian, 9.4 percent as African American, and 5.9 percent as either Hispanic or Asian. The university is an urban, predominantly commuter-based school with 23.5 percent of the participants the first in their families to attend college. Also, most students held jobs ( $M = 19.40$  hours worked per week;  $SD = 13.30$ ) while being enrolled full-time ( $M = 14.26$  semester hours;  $SD = 3.36$ ). The students entered the class with a mean cumulative grade point average of 3.15 ( $SD = 0.52$ ).

### Procedure and Design

After obtaining consent, the experimenter showed groups of five or six participants one of three videotapes on a color video monitor. Each ten-minute-long videotape showed a young, professionally dressed woman (the instructor) giving a lecture at a podium about the lives and contributions of Mamie and Kenneth Clark to psychology. The person portraying the instructor was an advanced undergraduate student from another department with some acting experience.

The design of the experiment followed a posttest-only procedure (Cozby 2007) in which the reactions of participants were measured after being randomly assigned to one of three experimental conditions. While the content or script remained constant across the video segments, the conditions portrayed differences in eye contact, verbal and vocal characteristics, and bodily mannerisms of the instructor. In the authoritarian condition ( $n = 29$ ), the instructor used a stern and monotone voice, made little eye contact, frowned, and used distracting body mannerisms such as rocking back and forth and tapping a pen on

the podium. In the authoritative condition ( $n = 30$ ), the instructor used a soft and varied tone of voice, made frequent eye contact, smiled, and used deliberate and gentle body motions. In the control condition ( $n = 26$ ), the instructor simply read the lecture in a monotone manner devoid of any emotion or body movement. The experimenter randomly determined which condition would be played prior to the arrival of the participants.

After viewing one of the scenarios, participants completed a question-

naire with “7” as high and “1” as low, whereas other items were reversed. For analysis purposes, individual items were recoded so that a response of “7” was considered high and “1” was low.

## Results

The two parts of the questionnaire were analyzed separately. A one-way ANOVA on the Style factor (authoritative, authoritarian, control) was run for each of the eight items in the first part of the questionnaire. To control for family-

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AFTER OBTAINING CONSENT, THE EXPERIMENTER SHOWED GROUPS OF FIVE OR SIX PARTICIPANTS ONE OF THREE VIDEOTAPES ON A COLOR VIDEO MONITOR. EACH TEN-MINUTE-LONG VIDEOTAPE SHOWED A YOUNG, PROFESSIONALLY DRESSED WOMAN (THE INSTRUCTOR) GIVING A LECTURE AT A PODIUM ABOUT THE LIVES AND CONTRIBUTIONS OF MAMIE AND KENNETH CLARK TO PSYCHOLOGY.

naire consisting of two sections. The first section served as a manipulation check to determine whether the videotapes had their intended effect. Following the statement “This teacher seems . . .” eight semantic differential scale items appeared. In the semantic differential scale approach, question items are anchored by opposite ends of a particular concept. This type of question format is a useful variation of the venerable 5- or 7-point rating scale in which the participant judges how much they agree with a single concept (Cozby 2007). In the present research, each item contained seven choices anchored by terms such as “fair” and “unfair.” The participant rates along the continuum whether these attributes apply to the instructor, thereby, making it a more efficient measure than a standard rating scale. In a similar format as the first section, the second section of the questionnaire contained twenty-one items following the heading “This teacher would probably . . . .” The seven-choice items were anchored with terms such as “trust me” and “not trust me.” To prevent a response set bias in responding, some items in the questionnaire were scaled

wise Type I error, the alpha level used to evaluate the  $F$ -test for each item was adjusted to .025 using a modified Bonferroni procedure (Keppel 1982).<sup>1</sup> If a significant difference was found for an item, follow-up (Tukey HSD) tests were used to parse for differences between the three conditions. Under this criterion, seven of the eight scales were found to contain significant differences (see table 1), leading us to conclude that students did view the three videotaped conditions as authoritative, authoritarian, or neutral. To assess the internal consistency of the eight items in the first part of the questionnaire, Cronbach’s alpha was found to be .907, which is considered to be very high.

The second part of the questionnaire contained items that reflected personality and characteristic attributions made by the students about the instructor. A separate Style (authoritative, authoritarian, control) one-way ANOVA was run for each of the twenty-one items in the scale. As in the first part of the questionnaire, the alpha level used to evaluate the  $F$ -test for each item was adjusted to .009 using a modified Bonferroni procedure (Keppel

**TABLE 1. Responses to “This teacher seems . . .”**

| Response      | Authoritative demonstration | Authoritarian demonstration | Control demonstration | <i>F</i> | <i>df</i> | <i>p</i>  | Significant Tukey HSD comparisons (.05 alpha) |
|---------------|-----------------------------|-----------------------------|-----------------------|----------|-----------|-----------|---|
| Fair          | 5.76                        | 3.69                        | 5.04                  | 16.74    | 2, 81     | < .025    | 1 > 2 and 2 < 3                               |
| Laid back     | 4.97                        | 3.77                        | 3.60                  | 5.40     | 2, 81     | < .025    | 1 > 2 and 1 < 3                               |
| Warm          | 5.48                        | 2.93                        | 4.16                  | 33.00    | 2, 80     | < .025    | 1 > 2 and 1 > 3 and 2 < 3                     |
| Easy          | 4.31                        | 3.73                        | 3.48                  | 2.22     | 2, 82     | <i>ns</i> | —   |
| Down to earth | 5.52                        | 3.70                        | 4.58                  | 11.64    | 2, 80     | < .025    | 1 > 2   |
| Patient       | 5.41                        | 2.86                        | 4.48                  | 18.46    | 2, 80     | < .025    | 1 > 2 and 2 < 3                               |
| Accepting     | 5.66                        | 3.83                        | 4.56                  | 11.86    | 2, 81     | < .025    | 1 > 2 and 1 > 3                               |
| Calm          | 5.86                        | 3.03                        | 4.88                  | 24.03    | 2, 81     | < .025    | 1 < 2 and 2 < 3                               |

Note. Responses based on a 7-point Likert-type scale ranging from 1 (*low*) to 7 (*high*).

1982). If a significant *F*-test was found for an item, Tukey HSD post hoc tests were used to parse for differences between the three conditions. Under this very conservative criterion, thirteen of the twenty-one items contained significant differences (see table 2). In general, students rated the instructor in the authoritative condition as the most positive and the authoritarian condition as least positive. Specifi-

cally, students rated the instructor in the authoritative condition as mostly likely to: “trust me,” “be interested in me,” “have clear rules,” “praise me,” “explain rules,” “know me,” “pay attention to me,” “care about my side,” “make me feel good,” “want me to talk,” “like me,” “want me to think for myself,” and “be available for help.” To assess the internal consistency of the twenty-one items in the second part

of the questionnaire, Cronbach’s alpha was found to be .933, which is considered to be very high.

### Discussion

In answer to the question posed at the outset of the article, the results of this experiment make clear that instructor style influences students’ impression about the instructor and the class. After

**TABLE 2. Responses to “The teacher would probably . . .”**

| Response                    | Authoritative demonstration | Authoritarian demonstration | Control demonstration | <i>F</i> | <i>df</i> | <i>p</i>  | Significant Tukey HSD comparisons (.05 alpha) |
|-----------------------------|-----------------------------|-----------------------------|-----------------------|----------|-----------|-----------|---|
| Trust me                    | 6.03                        | 4.40                        | 4.92                  | 8.18     | 2, 81     | < .009    | 1 > 2 and 1 > 3                               |
| Have high expectations      | 5.45                        | 4.47                        | 4.81                  | 3.54     | 2, 82     | <i>ns</i> | —   |
| Be interested in me         | 5.31                        | 4.00                        | 4.35                  | 5.81     | 2, 82     | < .009    | 1 > 2   |
| Have clear rules            | 5.62                        | 4.37                        | 5.54                  | 6.69     | 2, 82     | < .009    | 1 > 2 and 2 < 3                               |
| Have few rules              | 3.83                        | 2.79                        | 3.04                  | 3.56     | 2, 81     | <i>ns</i> | —   |
| Praise me                   | 5.03                        | 3.23                        | 4.46                  | 13.06    | 2, 82     | < .009    | 1 > 2 and 2 < 3                               |
| Explain rules               | 5.90                        | 3.73                        | 5.12                  | 17.37    | 2, 82     | < .009    | 1 > 2 and 2 < 3                               |
| Know me                     | 4.59                        | 3.17                        | 3.84                  | 5.83     | 2, 81     | < .009    | 1 > 2   |
| Care about me               | 4.59                        | 3.43                        | 4.00                  | 4.31     | 2, 82     | <i>ns</i> | —   |
| Reward me                   | 4.90                        | 4.17                        | 4.42                  | 2.76     | 2, 82     | <i>ns</i> | —   |
| Pay attention to me         | 5.41                        | 3.70                        | 4.19                  | 12.83    | 2, 82     | < .009    | 1 > 2 and 1 > 3                               |
| Think I’m a good student    | 5.38                        | 4.47                        | 4.88                  | 3.85     | 2, 82     | <i>ns</i> | —   |
| Care about my side          | 4.83                        | 3.47                        | 4.27                  | 7.05     | 2, 82     | < .009    | 1 > 2   |
| Make me feel good           | 5.38                        | 3.90                        | 4.08                  | 10.22    | 2, 82     | < .009    | 1 > 2 and 1 > 3                               |
| Want me to talk             | 4.54                        | 2.57                        | 3.12                  | 9.61     | 2, 81     | < .009    | 1 > 2 and 1 > 3                               |
| Like me                     | 5.66                        | 4.13                        | 4.69                  | 11.93    | 2, 82     | < .009    | 1 > 2 and 1 > 3                               |
| Not discipline me a lot     | 5.07                        | 4.37                        | 4.15                  | 3.56     | 2, 82     | <i>ns</i> | —   |
| Want me to think for myself | 5.41                        | 3.47                        | 4.35                  | 7.70     | 2, 82     | < .009    | 1 > 2   |
| Make me think               | 5.48                        | 4.30                        | 4.81                  | 3.25     | 2, 82     | <i>ns</i> | —   |
| Give me freedom             | 4.47                        | 3.70                        | 3.85                  | 1.66     | 2, 82     | <i>ns</i> | —   |
| Be available for help       | 5.69                        | 4.17                        | 4.73                  | 6.75     | 2, 82     | < .009    | 1 > 2   |

Note. Responses based on a 7-point Likert-type scale ranging from 1 (*low*) to 7 (*high*).

brief exposure to one of the three teaching styles, students had definitive reactions to the instructor and expectations about the class. Of the three styles, the instructor portraying the authoritative style was rated quite positively and the authoritarian instructor was rated rather negatively.

One might argue that the results showing an authoritative style of instruction yields more positive perceptions by students are quite predictable. In fact, other studies have also found that impressions are formed very quickly, on the basis of very little information, and tend to persist (Asch 1946; Cooper 1988). However, what we find to be quite surprising is the degree and depth to which students make highly personal attributions based upon relatively miniscule and superficial information and in the absence of any real experience. Based upon relatively little exposure to an instructor portrayed in an experimentally controlled (that is, relatively dry) scenario on videotape, students read and interpreted a great deal into what it would be like to have this instructor in the classroom as well as the instructor's qualities. For instance, students perceived that the instructor would "like," "trust," and "know" them based largely upon stylistic differences in communication. The magnitude of the differences after only a ten-minute exposure to the instructor has such a strong effect that we wonder how much of an impression we may make upon our students during the entire course of a regular class, or for that matter how successful we may be in changing those perceptions.

This research represents a significant advance over previous research on teaching and learning style because we use "style" to refer to the interpersonal social context within which instruction and cognitive processing between partners may occur. Past studies about style have used the term in a more limited manner to refer to the structure of classes (e.g., instructor-centered or student-centered; Dressel and Marcus 1994) disciplinary-related instructional styles (e.g., Hativa and Birenbaum 2000), cognitive or learning processing preferences of the students (Kolb 1985), or matching the predominant style of the instructor with that of the student (Grasha 1996). Instead, our use of the term is closely derived from Baumrind's (1971, 1991)

research on interpersonal characteristics, attitudes, expectations, structure, control, and direct-teaching opportunities.

#### *Theoretical Significance*

The evidence about the importance of social and interpersonal factors in education supports Lev Vygotsky's (1962) sociocultural theory that learning is inherently a social and interactive process. This study goes further to provide specific details about the way that individual stylistic differences among instructors actually have an effect on the quality of the learning experience. Particularly, variations in tone of voice, eye contact, and bodily mannerisms (which collectively we call "style") influence student perceptions and impressions.

Moreover, it is interesting that social processes operate in education in the same manner as in other areas of development such as parenting. Indeed, a recent study by Wentzel (2002) reports that teachers and parents share the same interpersonal elements of structure, rules, warmth, and demandingness. The authoritative style, which is associated with the best developmental outcome in children, integrates high levels of warmth, structure, and expectations (Baumrind 1971, 1991). Other less successful styles include authoritarian methods (highly demanding but cold), permissive (high warmth and low expectations), or noninvolved (low warmth and low expectations). The fact that similar strategies may be involved in both parenting and teaching is not surprising because both share the common goal of attempting to bring about cognitive and socialization advancements.

#### *Practical Significance*

Because impressions are being formed in the absence of real experiences, the practical importance of this study lies in the possibility that students' perceptions may come to define their reality. Recall that impressions serve to guide subsequent social interactions. As a result, the self-fulfilling prophecy effect may be operating in which impressions about the instructor may factor into decisions by the student about class attendance, test performance, motivation and effort, as well as their perceived likelihood of success. If the student perceives that the instructor

does not like them or that the instructor is harsh based upon the interpersonal context and communication, the student will probably not devote much effort to the class, believing that it makes little difference.

This possibility finds support in the work of Pintrich and his colleagues who formulated a multiphase model of self-regulated learning that contains several processes by which learners set goals or plan for their learning, monitor, regulate, and control their behavior (Pintrich, Marx, and Boyle 1993; Pintrich 2000; Schunk 2005). Motivation by the learner plays a key role in this model to affect self-regulation and thereby conceptual change. Pintrich showed that factors such as self-efficacy, personal interest, and values have all been shown to increase motivation and, as a result, self-regulation. Although Pintrich did not explicitly consider the role of the teacher per se, the present research serves as a complement to his theory by highlighting how information through the teacher's style may be conveyed to the learner to affect motivation. For example, if the teacher conveys warmth, high expectations, and structure, the learner may be more apt to internalize these attributes to perform well. The same might happen, but with a negative outcome, if the instructor conveys exceedingly high demandingness combined with harshness and rejection.

Thus, to return to the teaching scenario with which we began, while Prof. Stern may be indeed quite knowledgeable about the content of his class topic, his tone of voice, eye contact, and bodily mannerisms may actually be interfering with his students' success in the course because of their negative impressions of him and the class. On the other hand, Prof. Hart, because of her interpersonal ability to have students form favorable impressions, is more likely to capture their attention, interest, and motivation.

#### *What about Direct Effects on Learning?*

We limited our investigation to studying impression formation because of its importance for guiding future social interactions in the classroom learning experience. However, given the strong effect that style has on impression formation, it is important that future research also

consider the effect on direct measures of learning. Based upon the significant effects of the instructor styles, it is plausible that students' learning and performance will be negatively affected either directly through poor interpersonal communication or indirectly through a self-fulfilling prophecy.

#### NOTE

1. Because some readers may not be fluent in statistical terminology and designs, a brief explanation of our rationale is in order. In traditional hypothesis testing, the investigator attempts to determine whether a difference between two experimental conditions is real or due to chance factors. To do this, the level of chance occurrence that the investigator is willing to accept is called the alpha level. Most often, this level is set at .05 meaning that the probability of the finding purely due to matters of chance is only 5 times out of 100. As a consequence, the investigator will be wrong 5 times out of 100 in accepting the difference between the experimental conditions as real when there is in fact no difference, a phenomenon known as a Type I error. Unfortunately, the probability of a Type I error increases with the number of statistical tests performed. In order to minimize the possibility of accepting false differences between conditions due to the numerous questionnaire items, we have adopted the strategy of using a more stringent alpha level so that false differences are less likely to be accepted as real differences across the set of comparisons.

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