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Classroom Organization and Participation: College Students' Perceptions

Students who actively participate in the learning process learn more than those who do not. "Involvement matters," as Tinto (1997) points out, and this involvement can occur both inside and outside the classroom. The importance of students' active involvement in learning is by now well documented and known (Fritschner, 2000; Howard & Henney, 1998; Howard, James, & Taylor, 2002; Nunn, 1996; Rau & Heyl, 1990; Smith, 1996; Thompson, 1996). Active involvement in class facilitates critical thinking (Garside, 1996) and facilitates the retention of information that might otherwise be lost (Bransford, 1979).

Although most instructors acknowledge the value of active participation in the college classroom, achieving success in eliciting it appears more difficult. Professors talk almost 80% of the time (Fischer & Grant, 1983; Smith, 1983). Only about 10 in 40 students participate in discussions, and typically, just 5 of these dominate the discussion (Karp & Yoels, 1976). Karp and Yoels (1976) refer to this overriding pattern of participation in the classroom as the "consolidation of responsibility."

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With the consolidation of responsibility, a handful of students assume the role of active participators and discussants in the classroom, while the majority engage in "civil attention"—paying sufficient attention to know when to nod, to laugh where appropriate, or otherwise to *appear* attentive without risking too much involvement (Fritschner, 2000; Howard & Henney, 1998; Howard et al., 2002; Howard, Short, & Clark, 1996).

If student participation is so central to the learning process, why is participation in the college classroom frequently so low? What constrains the more active involvement of students? Scholars have identified a host of factors ranging from, for instance, class size (Constantinople, Corneilius, & Gray, 1988; Crawford & MacLeod, 1990; Fassinger, 1995; Howard et al., 1996; Howard et al., 2002), faculty authority (Auster & MacRone, 1994; Fassinger, 1995; Howard & Baird, 2000; Nunn, 1996), age (Fritschner, 2000; Howard et al., 1996; Howard & Henney, 1998; Howard et al., 2002), gender (Auster & MacRone, 1994; Corneilius, Gray, & Constantinople, 1990; Crawford & MacLeod, 1990; Fassinger, 1995; Fritschner, 2000; Howard et al., 1996; Howard & Henney, 1998; Howard et al., 2002), student preparation (Ethington, 2000; Fassinger, 1995; Howard & Henney, 1998; Howard et al., 2002; Tinto, 1997), or student emotions such as confidence or fear (Fassinger, 1995; Howard & Henney, 1998; Howard et al., 2002; Terenzini, Pascarella, & Blimling, 1999).

We suggest that these and other constraints on participation might be more generally understood in terms of the formal and informal classroom structures within which they are embedded. Classrooms are the workplace for instructors and students, where statuses are defined, goals and tasks are laid out, and rules are specified. As with all organizations, beneath this formal structure lies an implicit, informal one wherein actors conduct their daily activities while adhering to mostly unstated rules pursuing ill-specified goals that may deviate from or even undermine the stated ones. This informal system—akin to Snyder's (1971) "hidden curriculum"—is as essential to the operation of the organization as the formal system for adjusting to an ever-changing internal and external organizational context. Indeed, students need to understand and negotiate between both the formal and informal systems to survive or thrive at all levels of their schooling (Jackson, 1968).

The present investigation attempts to understand and integrate the research on class participation within a broader framework that views the classroom as a social organization with its own structure. Students' perceptions of and experiences within the social organization of the classroom play a crucial role in shaping their participation in class. From this

perspective, we argue that how students view the formal and informal structures of the classroom directly and indirectly affect their class participation. Students' characteristics, such as age and gender, also influence their perceptions and their participation.

Framework: Formal and Informal Structure, Student Attributes, and Participation

Influence of the Formal Structure

The formal structure of the classroom constrains actions that occur within it. As argued below, class size, authority relations, and students' fears circumscribe students' reports of participation.

Class size and opportunity. Much has been written about how an organization's size affects its nature and operation. Blau and Schoenherr contend, "Size is the most important condition affecting the structure of organizations" (1971, p. 57). Numerous studies show a positive association with various measures of structural differentiation such as the number of ranks in a hierarchy and the division of labor (Blau & Schoenherr, 1971; Hall, Hass, & Johnson, 1967; Meyer, 1979; Scott, 1992). Size also positively relates to formalization, centralization, and standardization, and thus, to increased power of the formal authority (Blau & Schoenherr, 1971; Hall et al., 1967; Pugh, Hickson, Hinings, & Turner, 1969).

As with other organizations, size fundamentally affects how classrooms function. As class size grows so does the overall scale of operations, along with the level of coordination and formal control required (Scott, 1992, p. 260). To meet these greater demands, professors understandably resort to lecture-text based teaching, and this may limit opportunities for students to participate. It becomes more difficult for faculty to develop close mentoring relationships with students in larger classes where anonymity, for the most part, prevails. Finally, in larger and correspondingly more formalized classroom settings, faculty more typically rely on standard tests for "objective" evaluation of students' performance. Assessment becomes "less negotiable," and faculty authority vis-à-vis students becomes further enlarged.

The influence of class size and opportunity on interaction and participation is quite independent of the quality of students or faculty engaged in the exchange. It is impractical for all or even most students in a large section of an introductory course to participate and still cover even a portion of the material. This, in turn, encourages the consolidation of responsibility (Karp & Yoel, 1976; Howard et al., 1996; Howard et al., 2002). Large classes permit greater anonymity, enable students to seat themselves at the periphery of the classroom, and thereby facilitate the

strategic withdrawal of the majority. A rough hierarchy and division of labor among students can emerge—the "good ones" who participate; the "quiet ones" who appear attentive, say little, and are barely noticed; and the "poor performers" who irregularly attend and who sleep, read the news, chitchat, or otherwise remain inattentive. On the other hand, smaller classes not only make general student participation feasible but also render passive withdrawal less tenable. Further, greater opportunities for student participation likely prevail. Several studies support the view that class size negatively affects participation (Constantinople et al., 1988; Crawford & MacLeod, 1990; Fassinger, 1995; Howard, et al., 2002; Howard et al., 1996). Moreover, the shear number of students in larger classes might elevate students' fears associated with participation—i.e., criticism from faculty and disapproval of peers (see below)—and so indirectly diminish participation. Based upon these arguments and evidence, we expect that students will see large class size and lack of opportunity as a hindrance to their participation.

Faculty as the authority of knowledge. The classroom's hierarchical nature, power structure, and distinct divisions between the professor and students might also constrain participation. The professor typically "leads" the class, defines what is to be learned, identifies the activities and readings students are to undertake, and determines how student performance will be evaluated. In Freire's (1970) view, the "banking model" prevails in education wherein faculty use lectures to communicate knowledge and information to mostly passive students who, in turn, regurgitate on exams some portion of the knowledge and information they absorb. Numerous studies report how faculty authority hinders student participation and learning and suggest various ways for faculty to distance themselves from their position of authority—e.g., by memorizing students' names, requesting that students refer to them by their first name, arranging desks in circles, and otherwise creating an atmosphere of openness, respect, and equality (c.f., Auster & MacRone, 1994; Bonwell & Eison, 1991; Crone, 1997, 2001; Fassinger, 1995; Lehman,1997; Nunn, 1996).

Inasmuch as faculty assume responsibility for communicating relevant course materials *to* students, it is not surprising that the "consolidation of responsibility" pervades the college classroom and that just a handful of students participate while the majority mostly listen passively (Howard & Baird, 2000; Howard & Henney, 1998; Howard et al., 2002; Karp & Yoel, 1976). Moreover, schools and colleges encourage and perpetuate the view of faculty as "expert" authorities, for this perception enhances the legitimacy of the institution as a whole (Meyer & Rowan, 1978). Students who perceive faculty as having "expert" authority and

mastery over knowledge will likely see themselves as having little to contribute to classroom discussion and will readily withdraw into silence. Hence, this perception of faculty authority might well diminish students' confidence and indirectly encourage passive withdrawal. This perception might also engender students' fear of criticism from the expert or disapproval from peer. This too dampens participation. Hence, we expect that students who view faculty as "experts" will report diminished participation.

Faculty-student interaction. While class size and faculty authority might discourage participation, faculty interaction with students outside the classroom setting might diminish obstacles to communication and, in turn, encourage overall participation. Faculty can initiate interaction in various ways. For instance, they might encourage students to visit them in their office, to exchange e-mails when students have questions or problems, or to discuss issues concerning students' graduate school applications or career opportunities. Where possible, faculty may include students in their scholarly work or take students on field trips or to academic conferences. Engaging students in various scholarship activities alongside the professor, we expect, would diminish the distance between faculty and students. Students gain exposure to the doubts and uncertainties associated with academic inquiry, which might also serve to demystify the expertise. Professional socialization in this manner also helps students learn professionalism and view criticism in a constructive way. In turn, this might diminish fears of faculty criticism. Moreover, faculty's expressed interest in the students' intellectual development and learning likely engenders students' confidence in their own abilities and thereby encourages in-class participation.

Several suggest the importance of faculty-student interaction both inside and outside the classroom (Astin, 1993; Auster & MacRone, 1994; Endo & Harpel, 1982; Tinto, 1997). Although Ethington (2000) found that involvement with faculty had little affect upon student gains, Terenzini et al. (1999) found that the preponderance of evidence from various studies (using both self-reports and objective measures) suggests that out-of-class interaction between faculty and students also encourages student development and learning. Similarly, we expect that out-of-class interaction with faculty, as reported by students, will (a) affect students' perceptions of power differences that otherwise permeate the faculty-student relationship, (b) diminish the fears of faculty criticism, and (c) engender students' confidence in their own abilities. In turn, these will increase self-reported class participation.

Fear of professors' criticisms. "Before anything else," writes Barbalet (1998, p. 26), "emotions must be understood within the structural

relations of power and status which elicit them." Emotions mediate the impact of the formal and informal social structures that provide the "social energy" required to sustain organization (Collins, 1984). The emotion of fear suggests a withdrawal or contraction of energy and serves to depress sociability. The act of participation, thus, can be seen as signaling a student's attachment to the class and to others within it. Similar to the giving of a gift, participation promotes group solidarity and demands gracious acceptance and the expectation of reciprocation (Gouldner, 1960; Mauss, 1925/1967). In the same way, turning away or rejecting a gift symbolizes exclusion from the group, so student participation involves the risk of being rejected by the group and so may generate a certain fear. Such fear might be exacerbated by virtue of the instructor's positional power and presumed expertise and learnedness—participation runs the risk of appearing "unintelligent." The risk of such a rejection may be remote or not, though in college most students have likely witnessed others experience status loss or even humiliation from instructor criticism, even if they have not experienced it themselves. Inasmuch as such memories linger from other classroom settings, fears will persist in much the same way as Mills' white-collar worker experiences "the facts of unemployment" as "fears hanging over the white collar world" (Mills, 1956, p. xv). Further, such fears undermine students' confidence in their ability to contribute meaningfully to the class discussion. Confidence offers the "social energy" needed to animate the classroom, and a confidence deficit depresses the climate of interaction. Many students may consider it safer to retreat into passivity than to risk outright rejection from the person in power. We expect, then, that students' fear of professors' criticisms will be viewed as a hindrance to participation.

Influence of the Informal Structure

Beneath the formal structure of the classroom lies an informal structure that also shapes student behaviors in the classroom, including their participation. Informal peer networks influence the classroom's emotional climate and regulate students' behavior. We expect that students' fear of peer disapproval and "para-participation" will regulate students' class behavior, as expressed in self-reports of their participation in class.

Fear of peer disapproval. Although instructors retain formal authority in the classroom, students interact within their own groups to make sense of and give meaning to their educational experience. Thus, peers and peer groups influence how students construct their reality (Gareth, 1986, pp. 126–27). Lacking close connections with instructors and with few resources and time available to them, students often rely upon each

other to meet work demands and to give them more control over their education. An informal structure arises wherein peers serve as powerful forces that define and enforce informal norms associated with classroom-related behaviors. Even relatively isolated students may not escape the influence of other students, insofar as their behaviors become oriented toward achieving a modicum of acceptance from fellow students. Terenzini et al. remark that "the most powerful source of influence on student learning appears to be students' interpersonal interactions, whether with peers or faculty" (1999, p. 619).

Faculty remain largely outside this social network. They are likely to underestimate its power and influence and may wonder why even the most inquisitive students sometimes turn silent in the classroom. Class participation is circumscribed by the informal rules that prescribe appropriate levels of class participation. This phenomenon parallels that found in the workplace, whereby individual workers were labeled by their peers as either "lazy" or "rate busters" or, in the extreme cases, were rejected by the group if their output was below or above the group norm of what was known as "a fair day's work" (see Roethlisberger & Dickson, 1939). As with Burawoy's (1979) shop floor workers, students in the college classroom learn what is needed to "make out" to meet work requirements and retain some level of autonomy, without exhausting themselves in the process. Hence, a silent majority may resent students who are perceived as "monopolizing class discussions," "sending them off on tangents," or as "linguistic rate busters" in the classroom (Howard et al., 1996). Students' "concern with how they would appear in the eyes of their classmates" and their fear of appearing "unintelligent to other students" were cited as major reasons for nonparticipation in two studies (Howard & Henney, 1998; Howard et al., 2002). Fassinger (1995) also suggests that student's fears of disapproval affected their willingness to risk participation or adhere to the prevailing norm of passive learning. Such fears might negatively affect students' confidence and in this way indirectly influence participation as well. Hence, we expect that students who report such concern regarding peer disapproval also will report lesser class participation.

Para-participation. Class participation is typically understood as students' remarks or questions directed toward the instructor and as taking place within the confines of the classroom. Students may be somewhat reluctant to participate too overtly in class—e.g., due to fear or in observance of unwritten rules regarding open participation—yet may nevertheless wish to communicate their interest in the course subject matter (or in receiving a better grade). Hence, other forms of participation occur alongside the more conventional type and suggest students'

involvement with the class beyond mere "civil attention" (c.f., Howard & Henney, 1998; Howard et al., 2002; Karp & Yoel, 1976). For instance, students make nonverbal gestures to communicate agreement with faculty or enthusiasm toward the subject matter. They might locate themselves where they are clearly visible to the instructor so their presence is known, even while they remain mostly silent during the class. In addition, students might feel more at ease informally conversing with faculty before or after the actual class meeting, raising specific questions about the material or soliciting informal feedback from faculty with regard to papers or projects. We term this mainly student-initiated communication "para-participation." Para-participation exists as a separate form of communication that students may rely upon to communicate with faculty, but it is also informally regulated by peer-defined norms. For instance, students may not want to appear to fellow students as overly enthusiastic toward the subject matter, as too attached to the student role, or as a "suck up" to faculty authority. While para-participation, as reported by students, may substitute for the more conventional forms of participation, we suspect that it positively relates to class participation and that it will be reported as such by students.

Influence of Student Attributes

Student traits likely influence class participation. For instance, age and gender are primary characteristics that affect a wide range of behaviors including, we suspect, students' class participation. Similarly, students vary greatly regarding the levels of preparation and confidence they bring to the classroom situation. We discuss below how these attributes of students might influence self-reported participation.

Age. Evidence from most research suggests that older, "nontraditional" students are more likely to assume responsibility for class discussion and participation and less likely to withdraw to "civil attention" than their younger counterparts are (Howard & Baird, 2000; Howard & Henney, 1998; Howard et al., 2002; Howard et al., 1996). Respondents in Fritschner's (2000) investigation characterized nontraditional students as "more driven" and "more mature" and suggested that they "appreciate their education more." In many instances, age differences contribute to social distance between nontraditional and traditional students. Older students are likely to be at different stages in their life cycles than younger ones. Many or most nontraditional students also work, no longer financially depend upon their parents (and may even care for them), or are parents themselves (some of college-age children) and perhaps even grandparents. Nontraditional students will depend less upon

classroom peers for social support and approval and will be less inclined to identify with their younger student peers or to see them as a reference group. Hence, nontraditional students' social distance from their younger counterparts might limit the extent to which the former will recognize or feel pressure to conform to peer-defined norms that might otherwise limit participation and encourage "civil attention." Moreover, nontraditional students' social distance from the instructor may be less than that of younger students, and, hence, "non-trads" may be more bound to the formal structure that emphasizes achievement and values participation. Since nontraditional students feel less bounded by the informal rules that regulate student participation and since they are more identified with the formal structure, they would be more inclined to participate than younger ones. We expect, then, that nontraditional students will report higher levels of class participation than their younger counterparts will.

Gender. At least since Hall and Sandler's (1982) argument that the classroom offers a "chilly" climate for women, the dominant view has been that our educational system is hierarchical, competitive, and individualistic, and that it encourages public displays in intellectual exchange and argument. As such, it favors "masculine" forms of communication; in contrast, women mostly use language to establish connection and forge consensus (Auster & MacRone, 1994). Hence, the climate in classrooms favors men, and men will more likely participate in class discussion. Although some studies do suggest that women participate less often than men do (Crawford & MacLeod, 1990; Fassinger, 1995), others found a student's gender to have little effect (Cornelius et al., 1990; Fritschner, 2000; Howard & Baird, 2000; Howard & Henney, 1998; Howard et al., 2002; Howard et al., 1996). Despite efforts to foster a more collaborative, egalitarian, and open context, we suspect that gender might still play a role in affecting class participation. Hence, we expect males to report greater levels of participation than females.

Preparation. In studying the connection between students' attributes and class participation, some attention has been given to students' preparation for the class. For instance, Ethington's (2000) study of students in community colleges found various "quality of effort" measures contributed to students' "perceived gains" in education. Similarly, Tinto (1997) suggested the quality of student effort contributes to student learning and persistence. Fassinger's (1995, p. 28) investigation found that preparation contributes to class participation, in professors' but not in students' views. In contrast, for others the lack of preparation was frequently cited as a reason for nonparticipation among students (Howard & Henney, 1998; Howard et al., 2002). It is likely that

preparation interacts with other variables to affect participation. For instance, the lack of preparation might well exacerbate fears of peer disapproval or faculty criticism and so diminish the likelihood that students will risk participation in fear of sounding "unintelligent." On the other hand, being well prepared elevates students' confidence in their understanding of the material and so can enhance participation. We expect, then, that students who report higher preparation also will report greater levels of class participation.

Confidence. Confidence offers a form of "social energy" that animates the classroom while its lack depresses it. Confidence enhances the belief that the instructor or classmates will favorably receive one's remarks or questions and thus constitutes a minimum condition for any participation in the classroom. On the other hand, insufficient confidence likely generates passivity and withdrawal and undermines the solidarity, cohesiveness, and energy of the group. According to Fassinger (1995), confidence was the single most important factor students saw as affecting class participation.

As a form of social energy, however, confidence not only "upholds the social structure" but also is "produced by it" (Collins, 1984, p. 385). Hence, students' confidence will be shaped by other variables that relate to the formal and informal structure of the classroom but will directly affect class participation. For instance, a strong perception of faculty as an authority might undermine students' confidence in the contribution they might be able to offer. Confidence probably relates to fear of peer disapproval or professors' criticisms as well. It is from this viewpoint that we explore how confidence affects class participation. While various other factors will likely influence the level of confidence a student might have and the degree to which students see the lack of confidence as an obstacle to participation, we suggest that students' confidence directly affects self-reports of class participation.

To summarize, in this study we argue that the college classroom, like any other workplace, is a social organization where power is asserted, tasks are assigned and negotiated, and work is accomplished through the interplay of formal and informal social structures. The present study, therefore, relates a variety of otherwise unconnected variables and concepts to the broader theoretical framework of social organization. Furthermore, the path model we develop allows us to estimate the direct and indirect influences of students' attributes and their perceptions of various dimensions of the classroom organization on student participation and learning. Based upon a survey of 1,550 undergraduate and graduate students in a medium-sized, urban university, we assess the following 10 hypotheses:

1. Students' perception of large class size and lack of opportunity negatively affect self-reported participation both directly and indirectly by increasing fear of peer disapproval and of professor's criticisms.
2. Students' perception of faculty authority negatively affects self-reported participation both directly and indirectly by increasing fear of peer disapproval and of professor's criticisms and by decreasing level of confidence.
3. Students' self-reported rates of interaction with faculty positively affect reported participation both directly and indirectly by decreasing fear of peer disapproval and of professor's criticisms and by increasing level of confidence.
4. Students' self-reported fear of peer disapproval negatively affects reported participation both directly and indirectly by decreasing level of confidence.
5. Students' self-reported fear of professor's criticisms negatively affects reported participation both directly and indirectly by decreasing level of confidence.
6. Students' self-reported rates of para-participation have a positive, direct effect on reported class participation.
7. Students' age positively affects self-reported class participation, both directly and indirectly via confidence and diminished fear of peer disapproval and of professor's criticisms.
8. Male students will report greater levels of class participation, will report higher levels of confidence, and are less likely to develop feelings of fear of peer disapproval and of professor's criticisms than female students are.
9. Students' reported lack of preparation has negative, indirect effects on participation by increasing fear of peer disapproval and of professor's criticisms and by decreasing confidence.
10. Students' confidence positively affects self-reported participation rate.

Method

Sample and Data

The variables used for this study were drawn from our survey of teaching and learning at a medium-sized, urban, public university in the Midwest. The questionnaire was designed by the authors in collaboration with students from the Sociology and Anthropology Department's undergraduate research courses. In developing the survey instrument, we incorporated the students' ideas and their feedback on the form and

content of the questionnaire through a pilot study. The final question-naire consisted of 233 items for assessing students' perceptions of a wide range of issues pertaining to their experiences with teaching and learning. Students' responses to various survey questions formed the basis for all of the variables used in the analysis. Since we relied on the survey rather than on direct observation, all variables in the study reflect students' self-reports, which may depart to some degree from reality as others observe it.

The university's spring 2000 course catalog served as the sampling frame. A purposive sampling procedure was followed to select classes proportionate to the total number of courses offered by all departments from all six colleges, at all class levels, and during the day and the evening. To avoid including the same student more than once in our sample, we dismissed anyone who had previously completed the survey from the class. A total of 1,805 students, or 16.6% of the entire popula-tion of 10,872 undergraduate and graduate students enrolled during the spring 2000 term, participated in the survey. After deleting cases with missing values on pertinent variables, the sample resulted in 1,550 valid cases, or approximately 86% of the entire sample. Of the valid cases, the sample approximated the population parameter along three key demo-graphic variables—age, sex, and ethnicity. The average age of students in the sample was 23.9 years (compared to 24.9 years in the entire pop-ulation). The sample included 56% women and 44% men (compared to 54% and 46% in the population). In terms of ethnicity, 87% were white, 7.5% were African American, and 4.5% were from other ethnic groups (compared to 88%, 7.8%, and 3.2% in the population). Further, fresh-man and graduate students were somewhat underrepresented in our sam-ple (20.2% and 3.6% compared to 25.5% and 10.5% in the population), while juniors were overrepresented (25.3% compared to 17.8% in the population). Finally, proportionately more full-time (88% compared to 74% in the population) than part-time students responded to the survey (12% compared to 26% in the population).

Variables, Measures, and the Path Model

We developed a path model to estimate how students' perceptions of the formal and informal structures, as well as students' attributes, di-rectly and indirectly influence class participation (see Figure 1). We measured our dependent variable—*class participation*—by asking stu-dents about the extent of their participation in class discussions: never, seldom, sometimes, usually, or always. This measure requires that stu-dents offer a global assessment of their participation. Although not

without limitations, it might be more reliable than, for instance, one that requires students to recall and specify the number of times they raise questions or offer responses within a particular time frame.

Among the predictor variables, four measure perceptions of the formal structure: *class size and opportunity, faculty-student interaction, professor as the authority of knowledge,* and *fear of professor's criticisms.* Two variables measure the perceived influence of the informal structure: *fear of peer disapproval* and *para-participation.* Students' attributes are measured by their *gender, age*, *preparation*, and *confidence.* *Class participation* serves as the dependent variable.

Four of the predictor variables—perceived *class size and opportunity, professor as the authority of knowledge, faculty-student interaction,* and *para-participation*—are latent constructs, each measured by two or more items derived from a factor analysis. The value of each construct is a factor score. Appendix A identifies the variables included in each construct. In brief, we measure *class size and opportunity* using two items concerning students' perception if large class size and lack of opportunities hindered their class participation. We measure *professor as the authority of knowledge* using two items that pertain to students' attitudes and behaviors toward faculty authority—if they perceive their role is to passively absorb the knowledge the professor provides, and if they are willing to openly question the professor's views. Five items that measure *faculty-student interaction* reflect the extent of academic-related faculty-student interaction beyond the classroom, such as discussing course work and various issues, exchanging emails, participating in the professor's scholarly work, or meeting the professor in informal settings. All items in the three constructs used a standard 5-point scale (1 = strongly disagree and 5 = strongly agree). The last latent construct, *para-participation*, is measured by three variables reflecting students' informal norm of engaging in verbal and nonverbal communications with the professor without direct participation in class. These include: converse with the professor before or after the class, discussing course assignments, or choosing a seat to be visible to the professor. Items comprising this construct used a 5-point scale (1 = never and 5 = always). We measure *class participation* using students' responses to the statement "I regularly participate in class," with a 5-point scale (1 = never and 5 = always). *Gender* is measured by sex identity as male or female. *Age* is measured by students' self-reported years of age. Other variables—self-reported *confidence, fear of professors' criticisms, fear of peer disapproval,* and *preparation*—are measured by single items as responses to the question "my class participation is hindered by . . ." To simplify the interpretation and presentation, *lack of preparation* and *lack*

of confidence were reverse coded to produce the variables *preparation* and *confidence*.

The path model begins with four constructs measuring the impact of the formal structure as perceived by the students. Most students will view large *class size and* lack of *opportunity* as negatively affecting participation both directly and indirectly, through its influence on students' emotions—particularly by increasing their *fear of professors' criticisms* and *fear of peer disapproval*. Similarly, *professor as the authority of knowledge* will negatively affect participation directly and indirectly by increasing students' *fear of professors' criticisms* and *fear of peer disapproval* and by reducing their *confidence*. On the other hand, perceptions of *faculty-student interaction* will positively affect participation directly as well as indirectly through enhancing students' *confidence* and reducing their *fear of professors' criticisms* and *fear of peer disapproval*. The last variable measuring the formal structure, *fear of professors' criticisms*, will have negative effects on participation both directly and indirectly by reducing students' *confidence*. The path model then proceeds with the influence of the informal structure as perceived by the students. *Fear of peer disapproval* will negatively affect participation directly and indirectly by reducing students' *confidence*. *Para-participation*, however, will have positive direct effects on participation. It also mediates the indirect effect of *faculty-student interaction* on participation. Finally, the path model specifies the influence of students' attributes on participation. Both *gender* and *age* will affect participation directly and indirectly by affecting students' emotions—*fear of professors' criticisms, fear of peer disapproval*, and *confidence*. *Preparation* affects participation both directly and indirectly by increasing students' *confidence* and reducing their *fear of professors' criticisms* and *fear of peer disapproval*. Finally, *confidence* will have positive direct effects on participation.

Results

Figure 1 presents a recursive model estimated by the path-diagram for decomposing the direct, indirect, and total effects of the causal variables on class participation method (Chen, 1983; Duncan, Featherman, & Duncan, 1972; McClendon, 1994). Table 1 displays the amount of variance explained in dependent variable self-reported participation and for four other dependent variables—*confidence, fear of professors' criticisms, fear of peer disapproval*, and *para-participation*. Path coefficients (i.e., betas) of the direct, indirect, and total effects on reported class participation and on four other dependent variables also are

presented in Table 1. These pertain to the theoretical arguments presented above. What follows further elaborates on these various relationships.

Influence of the Formal Structure

Class size and opportunity. We predicted that large *class size and* lack of *opportunity* would intensify students' *fear of peer disapproval* and *fear of professors' criticisms*, and thus would be viewed as hindering class participation. The path coefficients fail to support this argument. As shown in Table 1, perceived *class size and* lack of *opportunity* fail to show an effect on participation. Not only is the coefficient insignificant, it also points in the wrong direction (beta = 0.039 and 0.010). Although students view *class size and opportunity* as having a moderate and significant effect on *fear of professors' criticisms* (beta = 0.119, p < 0.01)*, it has the weakest total effect on *confidence* (beta = −0.008) and the second-weakest effect on *fear of peer disapproval* (beta = 0.076, p < 0.01). As a result, the indirect effect is insignificant and negligible (beta = −0.029). Our results run contrary to those of most others that suggest that class size significantly shapes participation (Auster & MacRone,
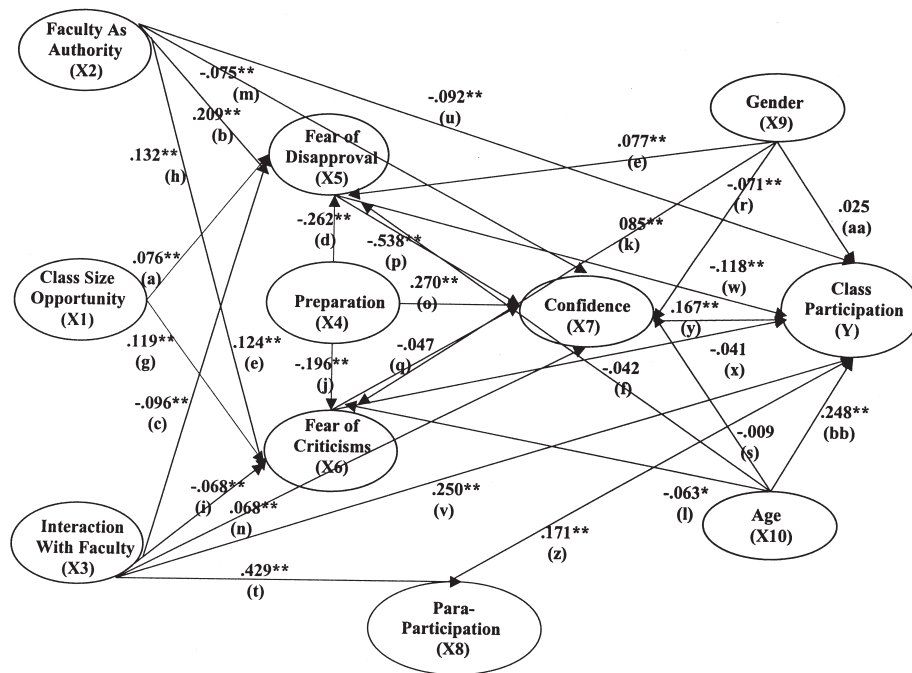

FIG.1. Path model of direct and indirect influences on class participation

TABLE 1

Standardized Coefficients for the Direct and Total Effects of Predictor Variables on Endogenous Variables

(1) Dependent Variable	(2) Independent Variables	(3) Direct Effect	(4) Indirect Effect	(5) Total Effect
BLOCK 1	(1) Class Size & Opportunities	0.039	−0.029	0.010
	(2) Faculty-Student Interaction	0.250**	0.108	0.358**
Class Participation	(3) Professors as Authority of	−0.092**	−0.063	−0.155**
R2 =0.337	Knowledge			
Standard error of	(4) Fear of Professors' Criticisms	−0.041	−0.008	−0.049
the estimate =0.77	(5) Fear of Peer Disapproval	−0.118**	−0.090	−0.208**
	(6) Para-participation	0.171**	———	0.171**
	(7) Confidence	0.167**	———	0.167**
	(8) Preparation	−0.053*	0.109**	0.056*
	(9) Gender	0.025	−0.024	0.001
	(10) Age	0.248**	0.011	0.259**
BLOCK 2	(1) Class Size & Lack of			
	Opportunities	0.039*	−0.047	−0.008
Confidence	(2) Faculty-Student Interaction	0.068**	0.055	0.123**
R2 =0.524	(3) Professors as Authority of			
Standard error of	Knowledge	−0.075**	−0.118	−0.193**
the estimate =0.84	(4) Fear of Professors' Criticisms	−0.047	———	−0.047
	(5) Fear of Peer Disapproval	−0.538**	———	−0.538**
	(6) Preparation	0.270**	———	0.270**
	(7) Gender	−0.071**	−0.045	−0.116**
	(8) Age	−0.009	0.025	0.016
BLOCK 3	(1) Class Size & Lack of	0.119**	———	0.119**
	Opportunities			
	(2) Interaction with Professors	−0.068**	———	−0.068**
Fear of	(3) Professors as Authority of	0.132**	———	0.132**
Professors'	Knowledge			
Criticisms	(4) Preparation	−0.196**	———	−0.196**
R2 =0.104	(5) Gender	0.085**	———	0.085**
Standard error of	(6) Age	−0.063*	———	−0.063*
the estimate=1.15				
BLOCK 4	(1) Class Size & Opportunities	0.076**	———	0.076**
	(2) Interaction with Professor	−0.096**	———	−0.096**
Fear of Peer	(3) Professors as Authority of	0.209**	———	0.209**
Disapproval	Knowledge			
R2 =0.156	(4) Preparation	−0.262**	———	−0.262**
Standard error of	(5) Gender	0.077**	———	0.077**
the estimate=1.16	(6) Age	−0.042	———	−0.042
BLOCK 5	(1) Faculty-Student Interaction	0.429**	———	0.429**
Para-participation				
R2 =0.184				
Standard error of				
the estimate =0.90				

* p < 0.05;   ** p < 0.01.

1994; Constantinople et al., 1988; Crawford & MacLeod, 1990; Fassinger, 1995; Howard & Henney 1998; Howard et al., 2002; Howard et al., 1996), but agree with Karp and Yoel's (1976) conclusion that size only weakly affects participation. Further, students' misperceptions in reporting the actual impact of class size might also account for its lack of significance in our study.

Role of faculty: Authority, fear, and faculty-student interaction. In examining the effects of the formal structure on participation, we emphasize the central role faculty play in influencing class participation as reported by students in our survey. As shown in Table 1, the path coefficients indicate that the perception of *professor as an authority of knowledge* has a moderate negative direct effect (beta = −0.092, p < 0.01) on self-reported *participation*. This variable also has the second-largest effect on *fear of professors' criticisms* (beta = 0.132, p < 0.01) and *fear of peer disapproval* (beta = 0.209, p < 0.01), and the third-largest direct and total effects on students' *confidence* (beta = −0.075 and −0.193 respectively, p < 0.01). Thus, through increasing students' fears and reducing their confidence to speak up in class, perception of *professor as the authority of knowledge* indirectly affects class participation as reported by students. Overall, this variable has a moderate and significant total effect on self-reported participation (beta = −0.155, p < 0.01). This supports the argument that the more students perceive the professor as an authority of knowledge, the less likely it is that they will participate in class.

Somewhat surprisingly, *fear of professors' criticisms* does not exert important effects on students' self-reported participation. Results of the regression analysis (see Table 1) show the direct effect (beta = −0.041) and the indirect effect (beta = −0.008) to be insignificant and negligible. These findings indicate that, in assessing the role of the faculty, other predictor variables, rather than *fear of professors' criticisms*, exert greater relative importance to the understanding of class participation.

One of the most crucial roles professors can play in influencing students' classroom participation involves their engagement with students *outside* the classroom. As Figure 1 shows, students perceive *faculty-student interaction* as influencing their participation rate both directly and indirectly through increasing students' *confidence* and rates of "*para-participation*" and through reducing their *fear of professor's criticisms* and *fear of peer disapproval*. In fact, *faculty-student interaction* has the largest direct, indirect, and total effects (beta = 0.250, 0.105, and 0.358 respectively, p < 0.01) on self-reported *participation*. This evidence supports the contentions of other researchers that *faculty-student interaction* is one of the most powerful sources of influence on student learning and persistence (Terenzini et al., 1999; Tinto & Russo, 1993; Tinto,

1997). We thus conclude that our findings support the argument that faculty-student interaction outside of the classroom helps students learn professionalism, view criticism in a constructive way, and enhance students' *confidence* in the classroom. *Faculty-student interaction* is thus critical for explaining class participation.

Influence of the Informal Structure

Fear of peer disapproval. In exploring the influence of the informal structure on class participation, we emphasize the role peers play in defining various rules for regulating in-class behavior, and *peer disapproval* is a way of exacting conformity to them. While certain rules might discourage too much participation, they do not necessarily require complete withdrawal from participation either. What, then, is students' informal norm surrounding the appropriate rate of participation, or a "fair day's work"? In our sample, of those who responded to the item regarding frequency of class participation, 2.2% reported "never," 15.7% "seldom," 38.3% "sometimes," 32.5% "usually," and 11.4% "always" (see Table 2). We suspect that students would be biased toward reporting that they participate more rather than less frequently (Howard & Baird, 2000). Nonetheless, the students' responses suggest that an informal norm that defines acceptable levels of participation exists. Since 70.8% of students reported that they either sometimes or usually participate in class, we suggest that "sometimes" and "usually" might be the informal norm of acceptable rates of participation. Students who reported "always" (11.4%) might be those who tend to dominate class discussion, while those who answered "never" (2.2%) or "seldom" (15.7%) might make little, if any, contribution to class discussion. Either way, that pattern of behavior in class might not be highly valued by peers.

TABLE 2

Rates of Class Participation: Traditional and Nontraditional Students (Chi Square)

How often do you participate in Class?	Traditional Students		Non-Traditional Students	
	N	%	N	%
Never or Seldom	247	20.9	30	8.2
Sometimes or Usually	841	71.2	256	69.6
Always	94	8.0	82	22.3
Total	1,182	100.0	368	100.0

Chi Square Test 2-tailed Sig. $p < 0.01$

In assessing the role peers play in exacting conformity to the informal norm that circumscribes participation, students report *fear of peer disapproval* as affecting *participation* both directly and indirectly, which produced the third largest total effect (beta = −0.208, p < 0.01; see Table 1). The indirect effect of *fear of peer disapproval* mainly derives from its influence on *confidence.* In fact, among all variables studied, it has the largest negative effect on *confidence* (beta = 0.538, p < 0.01). These findings support our and others' argument that conformity to peer pressures and group norms will restrict the amount of students' participation in class (Fassinger, 1995; Howard & Henney 1998; Howard et al., 2002; Howard et al., 1996).

Para-participation. If conventional forms of class participation are regulated by informal rules, it is reasonable to suggest that other forms of class participation are as well. These other forms of participation, what we call "para-participation," might well substitute for forms of participation that are more conventional, or they could be seen as a precursor to that participation. We contend that *para-participation* serves as a precursor to class participation, positively affecting it. Our findings support this proposition: Students report that *para-participation* has the third-largest direct effect and fourth-largest total effect on *participation*, and this effect is positive (beta = 0.171, p < 0.01). This suggests that indirect, "para-participation" increases the likelihood of more conventional participation in the classroom.

Student Attributes and Class Participation

Age. Research has consistently found *age* to be a strong predictor of class participation—older students are more likely to participate than younger ones (Fritschner, 2000; Howard & Baird, 2000; Howard & Henney, 1998; Howard et al., 1996). Our results support the earlier findings—as age increases, so does students' self-reported participation. The path coefficients show that *age* has both the second-largest direct effect and the second-largest total effect (beta = 0.248 and 0.259, respectively, p < 0.01; see Table 1) on self-reported *participation*.

We also divided our sample into two groups—traditional students (students 18–24 years old) and nontraditional students (students 25 or more years old)—for comparison. As Table 2 shows, about 70% of both groups reported that they "sometimes or usually" participate in class (71.2% and 69.6% respectively). The majority of students, both traditional and nontraditional, reported conforming to the peer "normative pressure" (Weidman, 1989a) of participation at a level of "sometimes or usually." Nonetheless, traditional students were 2.5 times more likely to report that they "never" or "seldom" participate in class, while

nontraditional were nearly 3 times more likely to report that they "always" participate. Once again, this suggests that the few who assume primary responsibility for participating are more likely to be nontraditional students.

Finally, viewing *age* as a primary status variable helps us understand why nontraditional students may perceive power differences differently from traditional students, and why, perhaps, they report their participation to be less influenced by student "peers," fear of faculty criticism, and other variables. *T*-test results shown in Table 3 compare traditional and nontraditional students on all the predictor variables. These results suggest that nontraditional students were less likely to view large *class size* and lack of *opportunity* (p < 0.01) as a hindrance to participation or to be restrained by *fear of peer disapproval* or *fear of professors' criticisms* (p < 0.01). Nontraditional students report having a higher level of *confidence* (p < 0.01). They also were less likely to view *preparation* (p < 0.01) as a hindrance to *participation*. Further, nontraditional students were slightly less likely to view the *professor as an authority of knowledge*, and engaged in a slightly higher level of *faculty-student interaction* and *para-participation*, but these differences were statistically insignificant.

TABLE 3

Comparing Traditional and Non-traditional Students on Class Participation and Predictor Variables (T-Test)

Variables	Students' Age	N	Mean	Sig. (2-tailed)
Class Participation	Traditional students	1182	3.21	0.000
	Non-traditional students	368	3.80	
Class Size & Opportunities	Traditional students	1182	3.1933	0.000
	Non-traditional students	368	2.7174	
Faculty-Student Interaction	Traditional students	1182	2.4073	0.071
	Non-traditional students	368	2.4880	
Professor as Authority of Knowledge	Traditional students	1182	3.2847	0.080
	Non-traditional students	368	3.1943	
Fear of Professor's Criticisms	Traditional students	1182	2.32	0.000
	Non-traditional students	368	2.02	
Fear of Peer Disapproval	Traditional students	1182	2.44	0.000
	Non-traditional students	368	2.13	
Para-Participation	Traditional students	1182	2.6943	0.057
	Non-traditional students	368	2.7935	
Preparation	Traditional Students	1182	2.23	0.001
	Non-traditional Students	368	2.46	
Confidence	Traditional students	1182	2.22	0.001
	Non-traditional students	368	2.47	

Gender. Research findings regarding the influence of gender on class participation are inconsistent. Some indicate that male students participate in class disproportionately; others find that gender has no significant effect. Our results indicate that gender has little or no effect on self-reported participation rates. As Table 1 shows, *gender* has the smallest direct and total effect (beta = 0.025 and 0.001, respectively) among all predictor variables.

*Preparation***.** *The results lend partial support to the argument that preparation affects self-reported participation both directly and indirectly. The direct effect is weak and, unexpectedly, in a negative direction (beta* = −0.053, p < 0.05). Yet, as reported by students, preparation shows positive indirect effects by enhancing students' confidence and reducing their *fear of professors' criticisms* and *fear of peer disapproval. I*n fact, this variable has the largest indirect effect (beta = 0.109, p < 0.01) among all predictor variables on self-reported participation. It also has the second-largest total effect (beta = 0.270, p < 0.01) on increasing confidence, and the largest effects on reducing *fear of professors' criticism* (beta = −0.196, p < 0.01) and *fear of peer disapproval* (beta = 0.262, p<0.01). In discussing the role preparation plays, some researchers found it to be an important factor of students' nonparticipation (Howard & Henney, 1998; Howard et al., 2002), while others found it not to be the case from the student's point of view (Fassinger, 1995). Based on our path analysis findings, we contend that although preparation does not exhibit direct effects on self-reported participation, it exerts an indirect effect by influencing students' *confidence* or *fears*.

Confidence. As Collins (1984) points out, *confidence* is a form of social energy both that upholds and that is produced by social structure. Our findings support this view. In the path model, formal and informal structural variables explain over 52% of the variance in students' *confidence* as a hindrance to class participation as reported by students. The model also shows that *confidence* (or the lack thereof) directly affects self-reported participation (beta = 0.167, p < 0.01). Although in the path model *confidence* is found to have only the fourth-largest direct effect and the fifth-largest total effect on *participation,* the findings nevertheless support the view that *confidence* is both affected by and sustains the social structure of the classroom.

Discussion and Conclusion

This article recommends that we understand factors that influence students' participation in class within the framework of the classroom as a social organization, and our data offer evidence to support this notion.

The path model shows that elements of the classroom's formal and informal structures and of students' attributes directly and indirectly influence self-reported participation. These findings help clarify sometimes-contradictory arguments in the literature about the role faculty, students, and the classroom structure play in affecting participation. Several variables from our survey of students' perceptions exhibit substantial influence on self-reported participation. Most notably, these include two measures of the formal structure as reported by students: *faculty-student interaction* and students' perception of *professor as the authority of knowledge*; two measures of the informal structure: students' *fear of peer disapproval* and *para-participation*; and two measures of students' attributes: *age* and *confidence*. The most important finding that we take from this investigation, however, pertains to faculty-student interaction outside of class. While our survey results suggest that participation largely is constrained by the organization of the classroom, students report that faculty interaction outside the classroom influences their participation within it. We take students' perceptions of *faculty-student interaction* as a starting point to discuss the theoretical and practical implications of our findings.

Formal and Informal Structure

Although scholars have suggested that faculty-student interaction might yield benefits in terms of decreasing the social distance between professors and students (Auster & MacRone, 1994) and in promoting students' learning and persistence (Astin, 1993; Endo & Harpel, 1982; Tinto, 1997), systematic empirical examination of the scope and variety of faculty-student interaction as related to class participation has been lacking. Our findings show that among 10 causal variables studied, *faculty-student interaction* seems to have the largest direct, indirect, and total effects on participation as reported by students. We suggest, therefore, that faculty members not only indirectly shape classroom dynamics (Fassinger, 1995) but also directly influence students' behaviors in class through the relationship they develop with their students during out-of-class activities. This finding helps us understand how faculty-student interaction might influence class participation.

Significant faculty-student interaction outside the classroom often is considered an advantage of small, private, and residential liberal arts colleges. In contrast, the classroom itself remains the focal point of student-student and faculty-student interactions in the larger, public, commuter colleges (Tinto, 1997). This does not mean, however, that college students at such colleges do not interact with professors outside the

classroom. Although the numbers might be inflated due to reporting error, Table 4 shows that most students do visit professors during their office hours to discuss various issues. When we combine the categories of "sometimes," "usually," and "always," 84% of the students reported that they visited professors in their offices; 49% reported that they talked with their professors about various issues concerning employment or graduate school application; and 43% reported that they exchanged e-mails with their professors. A much lower percentage, however, reported that they engaged in other forms of interaction with their professors. Again, when we combine the categories of "sometimes," "usually," and "always," 25% of the students indicated that they were involved in their professors' scholarly work, and only 21% of the students met professors in informal settings. Comparisons of female and male students showed little difference regarding interaction with faculty. Only for office visits were differences statistically significant, with females reporting a greater likelihood of visiting faculty (86% to 81%, $p < 0.01$). When age is considered, a higher percentage of nontraditional students than traditional students reported that they visited their professors in office (91% to 82%, $p < 0.01$) and discussed various issues (58% to 46%, $p < 0.01$).

Even in the less personal campus environment that we studied, according to the students we surveyed, faculty-student interaction outside of class remained the most important variable affecting self-reported class participation. As others point out, narrowing the social distance between the faculty and the student can diminish this negative influence on participation (Auster & MacRone, 1994). Moreover, our data suggest that students' view of faculty as the authority of knowledge reduces self-confidence, increases fears of criticisms, and hinders participation. Thus, while faculty-student interaction might be expected and encouraged in small, private, liberal arts colleges, this is probably not so in most larger, public universities, particularly on urban commuter campuses like our own. Faculty and administrators would do well to acknowledge and even reward this important activity, particularly in contexts where faculty-student interaction is otherwise undervalued. Only by recognizing the value of establishing and sustaining strong faculty-student relationships will resources and rewards be available to encourage them.

In examining the informal structure, our evidence suggests that conformity to group norms, and thus *fear of peer disapproval*, has a large negative effect on self-reported participation. Moreover, students' fear appears to be influenced by their level of *preparation* on the one hand and their perception of the classroom's formal structure on the other. One implication of this finding is that we might lessen students' anxiety

TABLE 4

Frequency Distribution of Faculty-Student Interaction

How often do you visit professors in office?	N	%	Cumulative %
Never	32	2.1	100.0
Seldom	218	14.1	97.9
Sometimes	425	27.4	83.8
Usually	543	35.0	56.4
Always	332	21.4	21.4
Total	1,550	100.0	

How often do you exchange e-mail with professors?	N	%	Cumulative %
Never	462	29.8	100.0
Seldom	426	27.5	70.2
Sometimes	394	25.4	42.7
Usually	200	12.9	17.3
Always	68	4.4	4.4
Total	1,550	100.0	

How often do you talk with professors about various issues?	N	%	Cumulative %
Never	342	22.1	100.0
Seldom	450	29.0	77.9
Sometimes	464	29.9	48.9
Usually	212	13.7	19.0
Always	82	5.3	5.3
Total	1,550	100.0	

How often do you participate in professors' scholarly work?	N	%	Cumulative %
Never	764	49.3	100.0
Seldom	392	25.3	50.7
Sometimes	210	13.5	25.4
Usually	116	7.5	11.9
Always	68	4.4	4.4
Total	1,550	100.0	

How often do you meet with professors in informal settings?	N	%	Cumulative %
Never	823	53.1	100.0
Seldom	406	26.2	46.9
Sometimes	226	14.6	20.7
Usually	68	4.4	6.1
Always	27	1.7	1.7
Total	1,550	100.0	

and fear of peer pressure by restructuring the classroom's formal structure. For instance, this might be accomplished by employing a collaborative pedagogy to create a learning community within the classroom (Tinto, 1997). Fear emerges from a lack of knowledge, uncertainties in the environment, and insecurity within oneself. Characteristics of the conventional large classroom typically promote such feelings. For example, the lecture mode, closed-book exams, and segregation of faculty and students and of students themselves create social isolation within the classroom, often accompanied by stress, fear, and the development of an informal system to either survive or "beat" the formal system. Fostering a learning community using a collaborative approach may entail, for instance, forming smaller work groups within a larger class, opening channels for horizontal communication among students, and empowering students by partially shifting course goal setting and knowledge creation from the professor to the student. Moreover, one might argue that doing so also encourages students to come to class better prepared, since their action affects not just themselves but others as well.

Our experience with sequencing students through sociology courses in statistics, theory, research methods, and social research illustrates the role student interaction both inside and outside the classroom might play in encouraging participation (Jiang & Weaver, 2000; Weaver, Corbin, & Converse, 1995). The sequence serves to create a "learning community" of the sort Tinto (2002) recommends. Although an informal structure continues to operate within the classroom, the informal norm that might curtail active participation seems to diminish. This example is exceptional in that all courses are at the upper level, designed for specific majors, and class size is kept fairly small (less than 25 students). Nonetheless, it does illustrate how classroom "communities" can emerge and the significant affect they have on class participation.

Student Attributes

Our classrooms are undoubtedly enriched by the greater diversity of students that populate them, and this is surely the case with regard to the influx of non-traditional students now attending colleges and universities throughout the country. As other investigations have found (Fritschner, 2000; Howard & Henney, 1998; Howard et al., 2002; Howard et al., 1996), students' age showed an important influence on self-reported participation in our study. Do campuses and classrooms that serve large numbers of nontraditional students enjoy higher levels of student participation? It remains unclear to us what larger

numbers of nontraditional students might mean in terms of *overall* class participation. At first, one might expect that classrooms with more nontraditional students who bring both wider experiences and a greater willingness to share them would elevate overall participation. At the same time, if what persistently constrains class participation remains operative, then contributions might continue to be limited to a few. The "consolidation of responsibility" might well persist and simply be located with nontraditional students. Indeed, the division between those who participate and those who mainly maintain "civil attention" might simply harden. It remains an open question whether larger numbers of older students who enter the classroom will alter this overarching tendency toward responsibility consolidation.

Although earlier investigations suggest that the classroom presents a "chilly climate" for women that discourages their participation (Hall & Sandler, 1982), recent studies indicate that students' gender has little influence (Cornelius et al., 1990; Fritschner, 2000; Howard & Henney, 1998; Howard et al., 2002; Howard et al., 1996). Likewise, our study found gender to have little effect on self-reported participation. Its modest influence on student fears (of professor's criticism and peer disapproval), confidence, and preparation however, might affect learning in other ways not measured in the present study. A more detailed understanding and investigation of how gender influences these variables and other measures of student participation and learning is surely warranted.

Our investigation supports Fassinger's (1995) contention that *confidence* significantly affects participation, although the effect is not as large as what Fassinger found in her study. Our path model further shows that reports of students' *confidence* not only directly influences self-reported participation but also mediates the effect of almost all other predictor variables. Confidence not only represents a core ingredient that provides the energy that animates social organization, but it is also simultaneously produced by it. For instance, although *preparation* (a student attribute) significantly affects confidence, *fear of disapproval* (a measure of the informal structure) has the greatest effect on students' confidence. Because emotions such as confidence so greatly affect classroom dynamics, it becomes essential to understand how we might enhance student confidence and so energize the classroom. Confidence's influence no doubt extends beyond direct class participation and into various other measures of learning as well. Future research might further examine how various structural variables enhance or depress student confidence as well as how confidence relates to various dimensions of student learning.

Limitations

Our broad survey identified what students *perceive* to be the primary influences on participation and relied on students' awareness of their own motivation and the emotional (e.g., fear of peer disapproval) and structural hindrances (e.g., class size, authority) to class participation, along with an awareness of their own behaviors. To varying degrees, such perceptions may depart from what external observations would suggest about the "reality" of classroom organization and participation. For instance, our survey asked students to report their own level of participation using a single item, and such self-reports often exceed what actual observations would indicate (Howard & Baird, 2000). While reliance on self-reports may do as much to suppress real relationships as to inflate them, we cannot determine this from our data. Our study would benefit from in-class observations of actual participation that, in turn, might be compared to students' perceptions thereof.

Further, our path model did not explore the nonreciprocal effects of the variables in our study, though surely many are at play. Although we suspect these effects to be moderate and believe that knowing them would not substantially alter our conclusions, we cannot know this for sure. Future research is needed to investigate such nonreciprocal effects and to assess their impact on our model and understanding of class participation.

Our research is also circumscribed by the kind of university in which it was conducted. Colleges and universities vary along several significant dimensions—e.g., public versus private, residential versus commuter, geographic location, size, cost, "prestige," number of graduate programs, and so on—and it is difficult to know what the "typical" college is. Ours is a medium-sized, public, mostly commuter campus in the Midwest, with a significant number of first-generation university students from working-class backgrounds. In some ways, this complements the work done by others in smaller, private, and residential campuses. Although we have little reason to think our student sample is highly exceptional, it is impossible to know just how and to what extent we might generalize to other colleges and universities.

Apart from the type of university in which this study was conducted, the sample itself was purposive rather than random, and certain students were over- or underrepresented. For instance, different colleges or different majors likely attract or repel certain types of students who may differ in terms of their propensity to participate in class. Moreover, faculty in different disciplines might vary in terms of their pedagogy, and these variations in approaches to teaching, in turn, probably affect class participation. Graduate and undergraduate students (and classes) might

also vary in regards to participation, as well as full-time or part-time students. These differences might interact with other attributes—e.g., age or gender—to confound our results. Future research will no doubt be required to supplement the survey method used here and to specify more distinctly whether and to what extent the relationships we found can be validated in classrooms within, for instance, particular colleges within the university, for part-time and full-time students, or for lower-level and upper-level undergraduate and graduate students.

Concluding Remarks

Notwithstanding these limitations, our investigation supports and supplements findings that others have presented regarding the antecedents to class participation, and it integrates those findings within a broader framework that understands the college classroom as a social organization. It seems essential to recognize what faculty can do to support student participation and learning, as well as to acknowledge how their efforts might be limited by conditions beyond their control. The path model we propose helps sort through the myriad factors that do influence self-reported participation and situates them within a framework that understands the classroom as a social organization with formal and informal structures.

Above all, our analysis suggests that there are ways whereby faculty can foster participation and learning. Encouraging faculty interaction with students *outside* the classroom to cultivate learning communities, for instance, is one such way. Nonetheless, faculty are influenced by the broader social context within which they operate and which constrains their ability to devote the time and energy necessary to engage students and move toward the development of learning communities. For instance, faculty behaviors probably are conditioned by the reward structures in their university. Time spent with students outside the classroom often goes unrewarded and takes faculty away from other activities that are more highly valued. Further, curricula in some disciplines might be structured in ways that require or encourage frequent and intense faculty-student interaction—e.g., in art and music studios, science labs, or clinical practicums. As discussed, significant faculty-student interaction might be expected in smaller, private colleges, and such interaction might not be the case in other campuses. It would be worthwhile for future research to investigate those characteristics of the faculty and of the faculty's environment that encourage interaction with students inside and outside the classroom setting. Either way, recognizing the ways whereby faculty can influence student participation and learning, along with the limits of their influence, represents an initial and necessary step toward promoting the changes needed to cultivate it.

APPENDIX A

Description of Variables

Variable	Description
Class Size and Opportunity	My participation in class is hindered by . . . 1) the large classes that I take. 2) the lack of opportunity afforded by the lecture format. (Coded: 1 =strongly disagree; 2 =disagree; 3 =agree/disagree; 4 =agree; 5 =strongly agree.)
Faculty-Student Interaction	In interaction with professors I . . . 1) see the professor when I have questions or problems with my course work. 2) exchange emails with the professor. 3) discuss various issues with the professor (graduate school, career opportunities, etc.). 4) participate in the professor's scholarly work (research projects, conference papers, or publications, etc.). 5) meet with the professor in less formal/social settings. (Coded: 1 =never; 2 =seldom; 3 =sometimes; 4 =usually; 5 =always.)
Faculty As Authority of Knowledge	In the teaching and learning process I . . . 1) view the professor as the authority and my role is to absorb the knowledge he/she provides. 2) won't openly question the professor's views in regard to course material. (Coded: 1 =strongly disagree; 2 =disagree; 3 =agree/disagree; 4 =agree; 5 =strongly agree.)
Fear of Professors' Criticisms	My participation in class is hindered by my fear that the professor will criticize me or put me down. (Coded: 1 =strongly disagree; 2 =disagree; 3 =agree/disagree; 4 =agree; 5 =strongly agree.)
Fear of Peer Disapproval	My participation in class is hindered by my fear of peer disapproval or embarrassment. (Coded: 1 =strongly disagree; 2 =disagree; 3 =agree/disagree; 4 =agree; 5 =strongly agree.)
Para-Participation	To get better grades, I . . . 1) Sit in the front of the class to make myself visible to the professor. 2) Talk with the professor before or after class. 3) Obtain feedback from faculty before I submit an assignment for grading. (Coded: 1 = never; 2 = seldom; 3 = sometimes; 4 = usually; 5 = always.)
Age	(Coded: 1 =Traditional students (18-14 years); 2 =Nontraditional students (25 years or older)
Gender	(Coded: 1 =Male; 2 =Female)
Preparation	My participation in class is hindered by my lack of preparation. (Coded: 1 =strongly disagree; 2 =disagree; 3 =agree/disagree; 4 =agree; 5 =strongly agree.)
Confidence	My participation in class is hindered by my lack of confidence. (Coded: 1 =strongly disagree; 2 =disagree; 3 =agree/disagree; 4 =agree; 5 =strongly agree.)

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