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Classrooms as Communities

Exploring the Educational Character of Student Persistence

Introduction

            The college classroom lies at the center of the edu-
cational activity structure of institutions of higher education; the educa-
tional encounters that occur therein are a major feature of student educa-
tional experience. Indeed, for students who commute to college,
especially those who have multiple obligations outside the college, the
classroom may be the only place where students and faculty meet, where
education in the formal sense is experienced. For those students, in par-
ticular, the classroom is the crossroads where the social and the acade-
mic meet. If academic and social involvement or integration is to occur,
it must occur in the classroom.
    Seen in this light, it is surprising that the classroom has not played a
more central role in current theories of student persistence (e.g., Bean,
1983; Cabrera, Castañeda, Nora, & Hengstler, 1992; Tinto, 1987).
Though it is evident that classrooms matter, especially as they may shape
academic integration, little has been done to explore *how* the experience
of the classroom matters, how it comes, over time, to shape student per-
sistence.[1] The same may be said of institutions of higher education.
Though they have certainly not ignored the classroom, most have not seen
it as the centerpiece of their efforts to promote student persistence, pre-
ferring instead to locate those efforts outside the classroom in the domain

of student affairs. Therefore while it is the case that student experience outside classrooms have changed, their experience within them has not.

This article presents the results of a multimethod, quantitative and qualitative, study of the efforts of one college, Seattle Central Community College, to alter student classroom experience through the use of learning communities and the adoption of collaborative learning strategies. The study seeks to ascertain to what degree such strategies enhance student learning and persistence and, if so, how they do so. Beyond its obvious policy implications, the study provides the context for a series of reflections on the ways in which current theories of student persistence might be modified to account more directly for the role of classroom experience in the process of both student learning and persistence.

Literature Review

We know that involvement matters. As numerous researchers have pointed out (e.g., Astin, 1984; Mallette & Cabrera, 1991; Nora, 1987; Pascarella & Terenzini, 1980; Terenzini & Pascarella, 1977) the greater students' involvement or integration in the life of the college the greater the likelihood that they will persist. We also know that involvement influences learning (e.g., Astin, 1984, 1993; Friedlander, 1980; Parker & Schmidt, 1982; Ory & Braskamp, 1988; Pascarella & Terenzini, 1991). Generally speaking, the greater students' involvement in the life of the college, especially its academic life, the greater their acquisition of knowledge and development of skills. This is particularly true of student contact with faculty. That engagement, both inside and outside the classroom, appears to be especially important to student development (Endo & Harpel, 1982; Astin, 1993). Even among those who persist, students who report higher levels of contact with peers and faculty also demonstrate higher levels of learning gain over the course of their stay in college (Endo & Harpel, 1982). In other words, high levels of involvement prove to be an independent predictor of learning gain. The same conclusion follows from the growing body of research on the quality of student effort; namely, that there is a direct relationship between the quality of student effort and the extent of student learning (e.g., Pace, 1984; Ory & Braskamp, 1988; Kaufman & Creamer, 1991). Quite simply, the more students invest in learning activities, that is, the higher their level of effort, the more students learn.[2]

What we do not yet know, or at least have not yet adequately documented, is *how* involvement is shaped within the context of differing institutions of higher education by student educational experiences. And though we have a sense of why involvement or integration should matter (e.g., that it comes to shape individual commitments), we have yet to explore the critical linkages between involvement in classrooms, student

learning, and persistence. In effect, we have yet to fully understand the educational character of persistence in higher education.

This is not to say that researchers have ignored the classroom experience. Quite the opposite is the case. In their reviews of the research on college teaching and student learning, for instance, McKeachie (1970, 1994) and Smith (1980, 1983) document the many studies that have sought to disentangle the multiple relationships between teacher behaviors and student participation in classroom discussion and learning. But those and other studies aside, the case remains that there is little empirical data on the impact of faculty members' behavior on student participation (Auster & MacRone, 1994). What we do know is that students' participation in college classrooms is relatively passive, that "learning appears to be a 'spectator sport' in which faculty talk dominates" (Fischer & Grant, 1983) and where there are few active student participants (Smith, 1983; Karp & Yoels, 1976; Nunn, 1996). Interestingly, both Fassinger (1995) and Nunn (1996) find that classroom traits, specifically a supportive atmosphere, is as important to student participation as are student and faculty traits.

The recognition of the importance of classroom environment is part of another area of inquiry, namely the role of classroom context, its educational activities and normative orientations, in student learning. Rather than focus on the behaviors of faculty, a number of researchers have focused on the role of pedagogy (e.g., Karplus, 1974; Lawson & Snitgen, 1982; McMillan, 1987) and, in turn, curriculum (e.g., Dressel & Mayhew, 1954; Forrest, 1982) and classroom activities (e.g., Volkwein, King, & Terenzini, 1986) as predictors of student learning. Generally speaking, these have led to a growing recognition that student learning is enhanced when students are actively involved in learning and when they are placed in situations in which they have to share learning in some positive, connected manner (Astin, 1987).

The issue, then, is not that researchers have ignored the classroom. Clearly they have not. Rather it is that the work they have done has yet to be connected to that in the field of student persistence. The two fields of inquiry have gone on in parallel without crossing. This study represents a beginning effort to bridge that gap.

Background

Though it is apparent that the college classroom is, for many if not most students, the only place where involvement may arise, it remains the case that most college classrooms are less than involving. At the same time, students continue to take courses as detached, individual units, one course separated from another in both content and peer group, one set of understandings unrelated in any intentional fashion, to what is

learned in another setting. There are however a growing number of exceptions. A range of institutions, both two- and four-year, have sought to redefine students' learning experience by restructuring the classroom, altering faculty practice, and linking courses one to another so that students encounter learning as a shared rather than isolated experience. One of these institutions, Seattle Central Community College, and its Coordinated Studies Program is the object of this study.

Coordinated Studies Programs at Seattle Central Community College

The Coordinated Studies Program (CSP) provides students the opportunity to share the curriculum and learn together.[3] Rather than enroll in separate stand alone courses, students in the CSP enroll together in several courses that are tied together by a unifying theme. The theme of the CSP, defined by its title (e.g., Ways of Knowing, Of Body and Mind), crosses disciplinary areas usually in the Humanities Division, but may extend to the Math-Science or Professional-Technical Divisions. During a quarter, CSPs meet for a total of 11 to 18 hours each week in four- to six-hour blocks over two to four days. Generally all instructors are present and active in all class meetings. In addition to sharing the curriculum, students are required to share the experience of learning. They participate in cooperative learning activities that call for them to be interdependent learners (e.g., the learning of the group depends on the learning of each member of the group). In this way, students experience a form of interdisciplinary learning that requires active involvement with their peers.

Methodology

The research project sought to answer two basic questions regarding the program. First, does the program make a difference? Second, if it does, how does it do so? To answer these questions, we used two forms of inquiry, survey (longitudinal panel) and qualitative case study, to study the experiences of a sample of first-year students. Though conducted separately, the two forms of inquiry were linked by a common concern, namely to understand not only what students experienced, but also how those experiences were associated over time with their behaviors and changing views of learning and their subsequent persistence. In this very important manner, the methods were complementary to one another, each yielding information that together provided a richer sense of the impact of program participation than any one method could provide on its own.

In this regard it is important for the reader to understand that as a collaborative research team we sought to uncover those findings that over-

lapped, that together provided deeper insight into the impacts of the program we studied. Therefore, although it is possible to see and report the study as two separate studies, one qualitative, one quantitative, we did not view, nor will we report, our collaborative work in that manner. Though we will describe our work in separate sections, the reader should understand our work as representing two dimensions of a larger, multidimensional study. Given space limitations, this will lead us to provide less information about each method than some readers might prefer. Readers are therefore urged to read the larger research reports from which this article is drawn for more complete details about our methods, sample, and analyses (Tinto & Russo, 1993).

Longitudinal Panel Study

Sampling. We sampled first-year students in both the Coordinated Studies Program and in the traditional curriculum. We did so by first selecting a sample of CSP and comparison classes and then sampling all students in those classes. We did so not only because classrooms served as logical units of analysis, but also because that procedure greatly simplified the task of reaching students.

We selected a total of four CSP classes in the Liberal Arts Division of the College and eleven comparison classes that, in the view of the program staff, best captured a representative sampling of first-year students enrolled in similar subjects but not enrolled in the CSP. Our selection of CSP classes was such that it captured a range of students, some of whom chose to enroll in the program because they had few other options or enrolled in the program for reasons that had little to do with the pedagogical character of the course. The significance of this fact is that it enables us to test for possible self-selection artifacts.[4]

Data collection. Questionnaires were administered in the beginning of the fall quarter and later at the end of that quarter. The first questionnaire collected information on a range of student attributes, prior education, current life situations (e.g., family and work responsibilities), educational intentions, learning preferences, perceptions of ability, and attitudes regarding education. The second questionnaire collected information on current life situations, a range of classroom and out-of-classroom activities, estimates of learning gains, perceptions of the institution, and expectations regarding subsequent enrollment.

Measures of student engagement in classroom and out-of-classroom behaviors were derived from Pace's (1984) Quality of Student Effort Scales. Rather than being adopted in its entirety, Pace's items were modified to suit the specific context of the institution and program being studied. While ruling out comparisons with prior research, the modifica-

tions allowed us to better capture both the intent and impact of program participation upon student behaviors.

The first questionnaire was administered during the second week of the fall quarter by the faculty of the selected classes. Only beginning students were included in the survey administration. We obtained a total of 517 usable questionnaires, 210 and 307 from the CSP and the comparison classes respectively. The second, follow-up, questionnaire was administered during the last two weeks of the fall quarter. Again the questionnaires were distributed in class by the respective faculty. In this instance, students who returned completed questionnaires became eligible for a drawing for a gift certificate to be used in the bookstore. A total of two $50 gift certificates were awarded by blind drawing. Of the 517 students who responded to the first questionnaire, we obtained a total of 287 usable responses (55.5 percent) to the second questionnaire; 121 from program students (57.6 percent) and 166 (53.5 percent) from students in the comparison group.[5]

In the following fall, information was obtained from institutional records about students' earned credits, grade point averages, and quarter to quarter enrollments (winter, spring, and fall of the following academic year). These data, together with students' estimates of learning gains, formed the outcome variable set. Estimates of learning gains, grade point averages and subsequent persistence, in that order, were seen to represent temporarily ordered outcomes that followed from college activities.

The final panel utilized in this study consisted of only those persons who responded to both questionnaires. The resulting panel therefore consisted of 121 program and 166 comparison group students for a total panel sample of 287 students. Comparisons of the attributes of program and comparison group students is provided below in Table 1. All analyses were carried out on this panel of students.[6]

Data Analysis. Several forms of quantitative analysis were carried out. First, descriptive statistics were employed to describe and compare the

TABLE 1

Characteristics of Program and Comparison Group Students

Characteristics	Program Group	Comparison Group
Age (mean years)	20.5	21.7
Gender (% female)	52.6	51.1
Marital status (% married)	2.5	11.5
Employment status (% working)	74.2	67.7
Parental education (% some college or more)	73.1	69.8
High-School GPA (A = 4.0; B = 3.0; etc.)	3.2	3.5

attributes, experiences, and outcomes of students in the program and comparison panels. Z-tests of difference between proportions were used to assess the presence of statistical significance. Second, regression analyses were used to ascertain how attributes and experiences were related, over time, to behaviors and, in turn, to outcomes over the course of the year. Since persistence was measured by a simple dichotomous variable, we used logit regression analysis in the study of persistence into the second year. Stepwise procedures were employed with variables added to the analysis according to a conceptual ordering system that places variables in order of their time occurrence.[7] In all instances, SAS, a statistical package for the mainframe, was employed in the statistical analyses.

Qualitative Case Study

The intent of the qualitative component of the study was to understand, from the students' point of view, how participation in a collaborative learning program influenced students' learning experiences and how those learning experiences fit in with their broader experiences as first-year students. In this case, we focused exclusively on the views of students in the CSP classes. In those classes, students were selected to be interviewed using a purposeful sampling (Bogdan & Biklen, 1992). Our sampling plan included talking to students who were diverse in many ways — age, gender, race, and attitude about the program.

Data collection. We visited each site for three one-week periods during the academic year. The first site visit took place during the early part of the fall quarter. It allowed us to become familiar with the institution. In addition we were able to see how the collaborative learning program was functioning at an early stage. The second site visit took place during the late part of the fall quarter. The program was ending, and the students were able to tell us about their experiences during the quarter. The third site visit was made during the middle of the spring quarter. At that time students were able to reflect upon experiences with and without the program.

Data collection consisted of participant observation, interviews, and document review. Participant observation was conducted in and around classrooms, and on campus and in the surrounding community, wherever possible. Interviews consisted of numerous informal conversations with students, faculty, and staff; over forty-five scheduled open-ended interviews with students and staff; approximately twenty informal telephone interviews with key informants; and thirty-six scheduled interviews with students which followed a semistructured protocol. These latter interviews lasted an average of forty minutes. Document review consisted of gathering school publications and class materials, course syllabi, and schedules.

Data analysis. Data analysis was conducted in an ongoing process that enabled us to explore themes as they emerged and to pursue unexpected leads during the second and third site visits. Data were analyzed by reading and rereading field notes and interview transcripts to familiarize ourselves with them, assigning codes to portions of the data, identifying emerging themes in the data, and generating working hypotheses based on these themes. The working hypotheses were checked against the data and modified, as necessary, before being presented as findings. This process of incorporating emerging themes from the data with hypotheses constructed during the study is characteristic of inductive analysis used in qualitative research (Bogdan & Biklen, 1992). The strength of inductive analysis is that it facilitates the "grounding" of new models or theories (Glaser & Strauss, 1967). To make the mechanical aspects of data analysis more manageable (retrieving and sorting the coded data), we used QUALOG, a qualitative data analysis program for the computer (Shelly & Sibert, 1987).

Results

Longitudinal Panel Study

Patterns of activity and perceptions. In response to survey questions that probed the range and extent of student activities, CSP students reported greater involvement in a range of academic and social activities and greater perceived developmental gains over the course of the year than did students in the comparison classes of the regular curriculum. These differences are reported in factor form in Table 2. Noticeably, the two largest differences between program and nonprogram students are in course and student activities (3.05% and 3.12% versus 2.46% and

TABLE 2

Activity Factor Scores for First-Year Students in CSP and Comparison Classes

Factor Score	CSP	Comparison
Course	3.05*	2.46
Library	2.15*	1.94
Faculty	2.25*	1.99
Students	2.81*	2.25
Writing	3.12*	2.85
Clubs	1.70	1.57
Arts	1.91*	1.60
Perceived gain	2.68*	2.46

NOTE: Variables are measured on a four-point scale from 1 to 4. For activity scores these range from 1 = Never to 4 = Very Often. For perceived gains, they range from 1 = very little to 4 = very much.
* Indicates a significant difference between groups at the 0.05 level.

2.85%). In both cases, students in the CSPs reported being substantially more involved in course (academic) activities and activities involving other students than did students in comparison non-CSP classes.

It is noteworthy that in response to a series of semantic differential questions on college and classroom environment, students in the CSPs also reported significantly more positive views of the college, its students and faculty, its classes and climate, and of their own involvement in the college (Table 3). This was particularly noticeable with student perceptions of their classes (6.03% versus 5.16%) and their own sense of involvement in learning (5.80% versus 5.01%). As we shall see, these differences were reflected in the way students talked about their classroom experiences.

Given these data, it is not surprising that students in the CSPs persisted to the following spring and fall quarters at a significantly higher rate than did similar students in the regular classes (Table 4). Interestingly, differences in persistence in the following fall quarter (66.7% versus 52.0% percent) were considerably greater than those for the spring quarter of that academic year (83.8% versus 80.9%). They were greater still when transfer to four-year institutions was included in our measure of persistence, that is, when we took account of the total rate of educational continuation of students.[8]

TABLE 3
Perceptions of College Environment of CSP and Comparison Class Students

Perceptions of:	CSP	Comparison
Classes	6.03*	5.16
Other students	5.64*	5.19
Faculty	6.00*	5.62
Administrators	4.86*	4.54
Campus climate	5.31*	5.17
Yourself	5.80*	5.01

NOTE: Variables are scored on a scale from 1 to 7, where higher scores indicate a more positive view of college environment. In each case a score of 4 represents a neutral response.
*Indicates a significant difference between groups at the 0.05 level.

TABLE 4
Spring and Fall Re-enrollment among First-year CSP and Comparison Class Students

Student Population	Spring Persistence	Fall Persistence
Coordinated studies program (N = 121)	83.8*	66.7*
Comparison classes (N = 166)	80.9	52.0

*Indicates a significant difference at the 0.05 level.

Multivariate analysis. Though informative, the above descriptive analysis does not demonstrate that participation in the CSP classes is independently associated with enhanced persistence. It merely suggests an association that is univariate in character. To test the question of independent association we carried out a step-wise logit regression analysis that sought to predict second-year persistence as a function of the independent and treatment variables. Table 5 indicates the variables used in each of the multivariate analyses. Logit regression was utilized because the dependent variable, persistence, is a categorical variable (1,0). One interprets parameters in a logistic regression as specifying how changes in an independent variable increases or decreases the likelihood of persisting onto the second year. The results of these analyses are presented in Table 6. Only those variables are shown that are significant at the 0.10 level.

Five variables proved to be significant predictors of persistence among students at Seattle Central Community College. These are participation in the CSP, college grade point average, hours studied per week, perceptions of faculty, and the factor score on involvement with other students. Again, being a member of a CSP proves, even after controlling for performance and other attributes and behaviors of students, an inde-

TABLE 5

Variables in a Multivariate Analysis of Persistence at Seattle Central Community College

AGE	= age.
MAR	= marital status.
HSGPA	= high-school grade point average.
WORK	= working while attending college.
AID	= receiving financial aid.
MED	= mother's educational level.
FED	= father's educational level.
HDEG	= degree aspiration.
HSTUDY	= hours per week studying.
COURSE	= course activity factor score.
FACULTY	= faculty activity factor score.
STUDENT	= student activity factor score.
WRITING	= writing activity factor score.
LIBRARY	= library activity factor score.
CLUBS	= involvement in clubs activity factor score.
ARTS	= involvement in arts activity score.
ENVIRON1	= perceptions of other students.
ENVIRON2	= perceptions of faculty.
ENVIRON3	= perceptions of administrators.
ENVIRON4	= perceptions of classes.
ENVIRON5	= perceptions of campus climate.
ENVIRON6	= perceptions of oneself.
GAIN	= perceptions of intellectual gain.
GPA	= college grade point average.

TABLE 6

Logistic Regression Analysis on Persistence among CSP and Comparison Class Students

Variable	Parameter Estimate	Standard Error	Wald Chi-Square	P > Chi-Square
CSP	1.557	0.539	8.331	0.004
GPA	0.753	0.361	6.482	0.038
HSTUDY	0.279	0.167	2.802	0.094
STUDENT	0.957	0.345	7.681	0.006
ENVIRON1	0.472	0.239	3.869	0.050

NOTE: CSP = participation in CSP
GPA = mean grade point average in college.
HSTUDY = hours studying per week.
STUDENT = student activities factor score.
ENVIRON1 = perceptions of students.

pendent predictor of persistence into the second year of college. It should be noted that similar and even more powerful results were obtained when the rate of total educational continuation was taken as the dependent variable.

Qualitative Case Study

While the quantitative analyses yielded evidence of the impact of learning communities on student persistence and suggested some possible ways of understanding that impact, the qualitative analysis provided direct insight in the ways in which those communities influenced persistence.The results of this analysis can best be summarized under three headings, each of which reveals something about the underlying forces that link classroom experiences to persistence. These are Building Supportive Peer Groups, Shared Learning-Bridging the Academic-Social Divide, and Gaining a Voice in the Construction of Knowledge.

Building supportive peer groups. Participation in a first-year learning community enabled students to develop a network of supportive peers that helped students make the transition to college and integrate them into a community of peers. This community of peers, formed in their learning communities, provided students with a small, knowable group of fellow students with whom early friendships were formed. Some friendships lasted; others faded. But in all cases students saw those associations as an important and valued part of their first-year experience.

Meeting people and making friends during the first year of college is a major preoccupation of student life, especially among younger students who have yet to establish families or acquire significant work obligations. Whereas making friends in smaller, more intimate residential colleges may be a relatively easy task, it is far more difficult in com-

muter institutions and in very large institutions. It is not surprising then
that so many students talked of their learning communities as a place to
meet new people and make new friendships; a way to make the large col-
lege a smaller, more knowable place. A student in the program put it this
way: "That's why the cluster is really great, because right now I've made
a lot of friends. In another school if I had different classmates, it would
have been harder. I've made a lot of friends that I didn't know before, so
that's good."

Not surprisingly, many students saw participation in the learning com-
munity as an important part of being able to manage the many struggles
they faced in getting to and participating in class (see Russo, 1995).
Through seminars, group projects, class discussions, and self-evaluation
reports, the CSPs contributed not only to a high level of student partici-
pation in learning, but also to the development of supportive peer groups
that helped students balance the many struggles they faced in attending
college. The groups, which developed within the classroom, extended be-
yond it providing support that students saw as influencing their desire to
continue college despite the many challenges they faced. One student,
looking back on her experience in the prior fall's program, put it this way:

> In the cluster we knew each other, we were friends, we discussed and studied
> everything from all the classes. We knew things very, very well because we
> discussed it all so much. We had a discussion about everything. Now it's
> more difficult because there are different people in each class. There's not so
> much — oh, I don't know how to say it. It's not so much togetherness. In the
> cluster if we needed help or if we had questions, we could help each other.

It is important to note that students in the CSP often made friends who
fell outside their prior social networks. In these settings, where students
came from a great diversity of backgrounds and traditions, students
spoke not only of making new friends, but also of the diversity of views
and experiences they came to know through those friendships.

Shared learning: Bridging the academic-social divide. The shared
learning experience of learning communities did more than simply ce-
ment new friendships; it served to bridge the academic-social divide that
typically plagues student life. Often, social and academic concerns com-
pete, causing students to feel torn between the two worlds so that stu-
dents have to choose one over the other. Learning communities helped
students draw these two worlds together.

The development of these interpersonal relationships was important,
because it was against this backdrop of a supportive network of peers
that academic engagement arose. And it did so both inside and outside
the classroom. Groups that formed within the classroom often extended

beyond the classroom in informal meetings and study groups. Once these were in operation, students were able to turn toward the material presented in class and their assignments. A common perception among program students was captured in the following comment:

> You know, the more I talk to other people about our class stuff, the home-work, the tests, the more I'm actually learning, . . . and the more I learn not only about other people but also about the subject, because my brain is getting more, because I'm getting more involved with the students. I'm get-ting more involved with the class even after class.

In this and other ways, participation in a shared learning experience enabled new college students to bridge the academic-social divide that typically confronts students in these settings. It allowed them to meet two needs, social and academic, without having to sacrifice one in order to meet the other. But more than simply allowing the social and acade-mic worlds to exist side by side, the learning communities provided a vehicle for each to enhance the other. Students spoke of a learning expe-rience that was different and richer than that with which they were typi-cally acquainted. As one student noted "not only do we learn more, we learn better."

Little surprise then that in our quantitative data, students in the CSP had higher peer and learning activity scores. Their engagement with their peers in and outside the classroom served to involve them more fully in the academic matters of the classroom. They spent more time with their peers and more time with their peers on class matters. As a re-sult, they spent more time studying. Not surprisingly, they also saw themselves as having gained more from participation in the CSPs.

Gaining a voice in the construction of knowledge. Learning commu-nities at Seattle Central Community College met as one large class, and the faculty worked together as a collaborative team in the classroom. They consciously sought to model learning for the students and include students as active participants in the construction of classroom knowl-edge. Equally important, they sought to challenge student assumptions about how knowledge is constructed and have students take personal ownership over the learning process. It was an experience that required students to rethink what they knew and become personally involved in deciding what they knew and how they knew it. In that way, they sought to have students take ownership over the learning process. The result was not only a sense of personal involvement in learning that students saw as very different from past educational experiences, but also a type of learning that students saw as richer and, for some, empowering. As one student observed:

> So you're constantly having to think, rethink, and even re-rethink what's going on in light of all the feedback you're getting from all these different points of view, and what it does is shape and mold your own point of view to a much finer degree. . . . We not only learn more, we learn better.

Students appreciated the contrasting, though complementary, ideas from different instructors. They saw instructors grapple with and analyze their own content and synthesize it with the content from other disciplines into a course with one main theme. The continuity of course activities and assignments provided students with opportunities for guided practice in their own thinking across disciplines, in-depth exploration of key concepts, and relating course materials with their lived experiences. The result was high levels of discussion and activity within the CSP and a sense of personal involvement in learning that students saw as very different from past educational experiences.

The multidisciplinary approach also provided a model of learning that encouraged students to express the diversity of their experiences and world views. In doing so, it allowed age, ethnic, and life experience differences among students to emerge and become part of class content. Many students commented on the range of diversity as a way to learn more than just *about each other*. They saw student (and faculty) diversity as an important factor in their learning *about the content*. They appreciated the multiple perspectives that a diverse population provided in the CSP process and, in turn, felt comfortable expressing their own ideas and questions.

> I think more people should be educated in this form of education. I mean, because it's good. We learn how to interact not only with ourselves, but with other people of different races, different sizes, different colors, different everything. I mean it just makes learning a lot better.

The innovative approach of the CSP encouraged students consciously to address issues of their own learning. The diversity of learning experiences challenged students' understandings of what it means to attend college and to learn and their assumptions about how knowledge is constructed. The process of collaboration between students and faculty and with the course content provided a new model of learning that encouraged students to embrace an expanded picture of the learning process. The students reported that they learned concepts better by seeing them presented from perspectives that crossed content areas and found deeper appreciation of the many ways in which knowledge is created.

Before turning to the conclusions, it should be noted that these findings, both quantitative and qualitative, were the same regardless of when students enrolled in the CSP classes. Students who enrolled late in the CSP, that is to say for whom it was the only available option — indeed

some were not aware of the program prior to enrolling — showed similar outcomes and expressed similar views of their experience. Clearly, one could not dismiss the outcome of program participation as merely the result of the program having allowed particular types of students to self-select themselves into a program that permitted them to engage in behaviors they would have otherwise carried out elsewhere.

Conclusions

These results provide insight into two distinct, yet interrelated, issues: what impact learning communities have on student learning and persistence and what role classroom experience plays in the process of student persistence.

Learning Communities, Learning, and Persistence

The results of our studies lend support to some of the basic tenets of learning communities and the collaborative pedagogy that underlies them. First, it is evident that participation in a collaborative or shared learning group enables students to develop a network of support — a small supportive community of peers — that helps bond students to the broader social communities of the college while also engaging them more fully in the academic life of the institution. This community of classroom-based peers, formed in the CSP, served to support students and encourage their continued attendance and class participation. It did so both inside and outside the classroom. Groups that formed within the classroom often extended beyond the classroom in informal meetings and study groups — or as one student put it, "we are more involved with class after class." In this manner, collaborative learning settings enabled new students to bridge the academic-social divide that typically confronts students in these settings. They were able to meet two needs, social and academic, without having to sacrifice one in order to meet the other. In effect, these classrooms served as the academic and social crossroads out of which "seamless" educational activities are constructed.[9]

Second, it is apparent that students are influenced by participating in a setting in which sources of learning come from a variety of perspectives beyond that of one faculty member. The sharing of a curriculum and the use of collaborative pedagogy that brought students and faculty together to teach added an intellectual richness to student experience that the traditional pedagogy did not. Course activities allowed students to connect their personal experiences to class content and recognize the diversity of views and experiences that marked differing members of the classroom. In opening up the conversation about what is known to many voices, stu-

dent and faculty, the program led many students to discover, or better yet uncover, abilities they had not appreciated until then.

Third, though we did not obtain information about "learning" as measured by tests either of content or skills (e.g., critical thinking, etc.), we know that student perceptions of intellectual gain as well as academic performance as measured by GPA were greater in the learning community setting than in the more traditional learning settings and that these "gains" were independent of student attributes.[10] Just as important, we know from student comments that the quality of learning was seen to be different, indeed deeper and richer, in the collaborative learning settings. Again as one student told us; "we not only learn more, we learn better."

Finally, our findings reveal that it is possible to promote student involvement and achievement in settings where such involvement is not easily attained. Unlike many "involving" colleges that are small, private, and residential, the setting we studied was nonresidential. More importantly, the students we studied, unlike students in residential settings who typically devote most, if not all, of their time, in one form or another, to the life of the college, students in nonresidential settings, such as Seattle Central Community College, have to attend to a multiplicity of obligations outside of college. For them, going to college is but one of a number of tasks to be completed during the course of a day. Yet even in that setting, collaborative learning "works." Indeed, it may be the only viable path to greater student involvement (Tinto & Russo, 1993; Tinto, Russo, & Kadel, 1994).

In this manner, our research fills a critical gap in the work of Astin (1993), Tinto (1987, 1993) and others who have explored the importance of student involvement to student attainment. While reaffirming the fact that involvement matters, our research provides empirical documentation of at least one way in which it is possible to make involvement matter in an urban community college setting. In doing so, it moves our conversation about involvement beyond the recognition of its importance to the practical issue of how involvement can be generated in settings where involvement is not easily obtained, in this case by restructuring the student educational experience of the classroom.

Classrooms as Communities and Theories of Student Persistence

Our research also provides insight into the ways in which classroom experience shapes student persistence and, in turn, the manner in which current theories of student persistence might be modified to better reflect the educational character of college life. Specifically, it suggests important relationships, on one hand, between the educational activity

structure of the classroom, student involvement, and the quality of student effort and, on the other, between quality of student effort, learning, and persistence. And, again, it suggests that these relationships are likely to be especially important for those students and in those collegiate settings where involvement is not easy to achieve, namely, for commuting and working students and on nonresidential campuses, in particular those in urban settings.

Student social involvement in the educational life of the college, in this instance through the educational activity structure of the curriculum and classroom, provides a mechanism through which both academic and social involvement arises and student effort is engaged. The more students are involved, academically and socially, in shared learning experiences that link them as learners with their peers, the more likely they are to become more involved in their own learning and invest the time and energy needed to learn (Tinto, Goodsell, & Russo, 1993). The social affiliations that those activities provide serve as a vehicle through which academic involvement is engaged. Both forms of involvement lead to enhanced quality of effort. Students put more effort into that form of educational activity that enables them to bridge the academic-social divide so that they are able to make friends and learn at the same time. That increased effort leads to enhanced learning in ways that heighten persistence (Endo & Harpel, 1982; Tinto & Froh, 1992). Figure 1 graphically
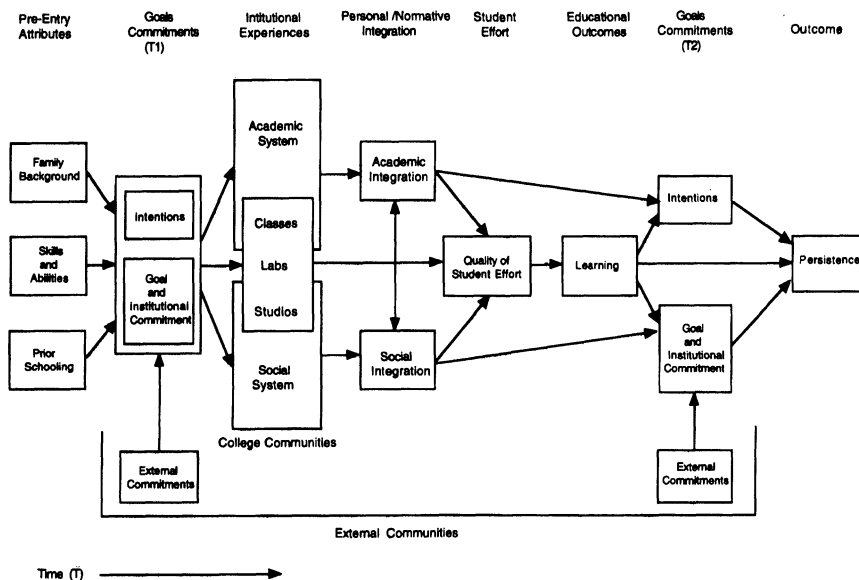

FIG. 1. Suggested Model Linking Classrooms, Learning, and Persistence

represents how a modified theory of student persistence, which links classrooms to effort and persistence, might appear.

It does not follow, however, that the linkage between involvement and learning, on one hand, and between learning and persistence, on the other, is simple or symmetrical. As to the impact of involvement upon learning, one has to ask about the specific nature of student involvement. Not all involvements lead to learning in the same fashion. Much depends on the degree to which student involvement is a meaningful and valued part of the classroom experience. Having a voice without being heard is often worse than having no voice at all. As to the linkage between learning and persistence, though learning is in general positively associated with persistence, it is not the case that learning guarantees persistence or that failure to learn, beyond the obvious case of academic failure ensures departure. Although for most, if not all, institutions academic involvement does matter more than social involvement, it is also true that both social and academic involvement influence persistence. For some students, even high levels of academic involvement and its consequent learning may not be enough to offset the effect of social isolation; for others, sufficient social integration or involvement may counterbalance the absence of academic involvement. These students stay because of the friendships they have developed. Of course, the absence of any academic involvement typically leads to academic failure and thus forced departure.

The informed observers might argue, at this point, that there has been little research to support this claim. Indeed they might note that measures of academic integration have not always been found to be associated with persistence. True enough. But issues of specification aside — that is, of the ways we have measured, or perhaps better yet, mismeasured the concept "academic integration" — it is very likely that what we have measured reflects the fact that most classrooms are not involving and therefore not a factor in student persistence. This does not mean that they *could not* play a role in persistence, only that they have typically *not yet* played that role. This research shows that they can.

Classrooms as learning communities. The results of our research lead us to speak, then, of classrooms as smaller communities of learning which are located at the very heart of the broader academic community of the college. Classrooms serve as smaller academic and social meeting places or crossroads that intersect the diverse faculty and student communities that mark the college generally. Membership in the community of the classroom provides important linkages to membership in communities external to the classroom. For new students in particular, engagement in the community of the classroom becomes a gateway for subse-

quent student involvement in the academic and social communities of the college generally (Tinto, Goodsell, & Russo, 1993).

Colleges can be seen as consisting not merely of multiple communities, but of overlapping and sometimes nested academic and social communities, each influencing the other in important ways. By extension, the broader process of academic and social integration (involvement) can be understood as *emerging from* student involvement with faculty and student peers in the communities of the classrooms. It is a complex multidimensional process, which links classroom engagement with faculty and student peers to subsequent involvement in the larger academic and social communities of the college. Thus the likely link exists between this research and that of Attinasi (1989), Kuh (1993, 1995), Kuh, Schuh, Whitt, & Associates (1991), and Rendon (1994) on the role of out-of-class experiences to student learning and persistence.

This view of the role of classrooms in student academic and social involvement leads us to the recognition of the centrality of the classroom experience and the importance of faculty, curriculum, and pedagogy to student development and persistence (see Pascarella & Terenzini, 1991). This is true not only because contact with the faculty inside and outside the classroom serves directly to shape learning and persistence, but also because their actions, framed by pedagogical assumptions, shape the nature of classroom communities and influence the degree and manner in which students become involved in learning in and beyond those settings. Faculty do matter and not only because of their out-of-classroom activities.

Thinking about the temporal process of learning and persistence. If we take seriously the notion argued above of the dynamic interplay between involvement, quality of effort, learning, and persistence, we can then postulate a more complex view of the longitudinal process of student persistence as it occurs over the course of the first year of college, if not the entire student career, than has thus far been described in the literature on student persistence (Tinto, 1989). Specifically, our preceding conversation suggests that the manner in which social and academic involvements (integration) shape learning and persistence will vary over the course of the college career and do so in differing ways for different students inside and outside the classroom.

During the first several weeks of the first-year of college, the work of Attinasi (1989) and, very recently, Tinto and Goodsell (1994) suggests that issues of social membership may be somewhat more important than those of academic membership, at least for younger students who leave home after high school to attend residential four-year institutions. Attinasi (1989) notes that new students — in this case Mexican American

students entering a large public university — talk about the need to at-
tach themselves to relevant social groups as a way to cope with the diffi-
culties of "getting in" to college. More importantly, this attachment and
the social support it provides may be a necessary precondition for subse-
quent involvements.

The same observation can be made about the first-year experiences of
students attending a large public university on the West Coast (Tinto &
Goodsell, 1994). At first, new student attention is focused on the need to
make social connections with their student peers. Though classes matter,
students' concern regarding academic involvement appears to be played
out against a broader backdrop of social issues and concerns they have
over social membership. As students progress through the first year and
toward their degree, their concerns appear to shift toward a greater em-
phasis on academic issues. Once social membership has been achieved,
or at least once concerns over it have been addressed, student attention
appears increasingly to center on academic involvements.

It is noteworthy, in this regard, that Neumann and Neumann's (1989)
study of junior and senior persistence at a northeastern university indi-
cates that students' progress from freshman to senior years is increas-
ingly shaped by educational rather than social concerns and by their ed-
ucational experiences in the institution. Their study emphasized what
they refer to as a "Quality of Learning Experience" approach, wherein
persistence is conceptually linked to student perceptions of the quality
of their learning environments and their interaction with faculty about
learning issues. The significant predictors of junior and senior persis-
tence proved to be student involvement in learning activities, students'
views of the quality of teaching, advising, and course work, and their
contact with faculty.

The likelihood that persistence is marked over time by a changing bal-
ance of academic and social involvements leads us to consider the paral-
lels between the longitudinal process of persistence we have just de-
scribed and those that describe moral and intellectual development.
Could it be that the process of persistence in being linked to that of
learning is, like Chickering's (1969) or Perry's (1970) model of student
development, also shaped by a shifting need in students for differing
forms of social and intellectual engagements? Might it be that fulfilling
one need, the social, is, for many students, a developmental precondition
for addressing the need for intellectual engagement? We should, of
course, be very cautious about pushing these parallels too far. By noting
the possible parallel between our view of the temporal process of persis-
tence and that of student development, we are forced to ask whether our
impressions are merely a reflection of the types of students who have

thus far been studied, namely youthful students attending four-year in-stitutions. Would the same results apply equally well to older students or to students in two-year institutions who are immersed in external com-munities of work, family, and friends? For older students who commute to school, for instance, early academic involvements may be more im-portant, especially as they shape the person's sense of their own ability to cope with the academic demands of college or, to borrow Rendon's term, "validate" a student's presence on campus (Rendon, 1994). Clearly there is a much research to be done.

Closing Comment

What does all this mean for our existing models of student persis-tence? First it means that we need to remind ourselves that our current two-dimensional graphic representations of interaction, which depict so-cial and academic systems of colleges as two separate boxes, mask the fuller relationship between these two spheres of activity. A more accu-rate representation would have academic and social systems appear as two nested spheres, where the academic occurs *within* the broader social system that pervades the campus. Such a depiction would more accu-rately capture the ways, noted here, in which social and academic life are interwoven and the ways in which social communities *emerge* out of academic activities that take place within the more limited academic sphere of the classroom, a sphere of activities that is necessarily also so-cial in character.

As a methodological aside, this research reminds us that we would be well served by supplementing our use of path analysis to study the process of persistence with network analysis and/or social mapping of student interaction patterns. These will better illuminate the complexity of student involvements and the linkages that arise over time between classroom and out-of-class experiences. More importantly, they will shed important light on how interactions across the academic and social geography of a campus shape the educational opportunity structure of campus life and, in turn, both student learning and persistence.[11]

We have too long overlooked the essentially educational and develop-mental character of persistence as it occurs in most college settings. There is a rich line of inquiry of the linkage between learning and persistence that has yet to be pursued. Here is where we need to invest our time and energies in a fuller exploration of the complex ways in which the experi-ence of the classroom comes to shape both student learning and persis-tence. Among other things, we need to pursue Braxton's (1995) lead and ask about the role of faculty teaching in persistence and more carefully

consider the notion, as we have here, that choices of curriculum structure (e.g., learning communities) and pedagogy invariably shape both learning and persistence on campus (e.g., cooperative teaching), because they serve to alter both the degree to which and manner in which students become involved in the academic and social life of the institution. As we do so, we will discover what many educators have been trying to tell us for years, namely, that at its core college is an educational experience and that conversations about persistence that ignore important questions of educational practice are conversations that are at best shallow.

Notes

[1] Perhaps this arises from the institutional lenses through which most researchers have looked at student persistence. We see the issue as it is conditioned by the settings in which we work, that is, large residential universities with relatively privileged students who have the luxury of being able to spend time on campus.

[2] It is perhaps telling that current versions of Quality of Student Effort Scales are relatively insensitive to the range and degree of educational experiences that arise within the classroom. For the most part, these scales tend to emphasize activities that arise outside the classroom.

[3] For a fuller description of the program at Seattle Central Community College the reader should refer to Tinto and Russo (1993).

[4] For the purposes of this study we took first-year college students as representing those persons who enrolled in the institution in question for the first time, regardless of prior enrollment.

[5] We compared student attributes and persistence outcomes for the initial response group as a way to testing whether the results of the study might have been shaped by the character of those who responded to the follow-up questionnaire. We found nothing to suggest that our results would not have applied to all students, had they all responded to the follow-up questionnaire.

[6] For a more complete discussion of the data (e.g., variables, measures, etc.) the reader is again urged to see Tinto and Russo (1993).

[7] In this case, variables were entered in a logical order as determined by the temporal sequence of events that describe the students' movement from entry through to the start of the second year of college, namely, from preentry attributes to experiences within the time frame of the study to outcomes as measured first by learning and second by persistence over subsequent time periods.

[8] We also developed a measure of educational continuation to capture the fact that a number of students in the CSP transferred to the nearby university after having participated in the CSP. Though subject to some error, logit regression analysis on continuation yielded similar but even stronger results.

[9] The term "seamless" is Kuh's (1995). It refers to that type of collegiate setting where the boundaries between the academic and social are blurred, where there is an integration of the academic and social. In this case, we argue that such seamless settings, from the students' perspective, can be constructed from the classroom experience. Indeed, in the case of nonresidential institutions, the great bulk of institutions of higher education, it may be the only viable mechanism through which seamless institutions are "constructed."

[10] At some point, the researchers run the risk of being excessively intrusive and placing themselves in the position of studying people who are very aware of being studied. We sought to avoid that situation.

[11]Much like the concept "opportunity structure," which sociologists have employed to study the dynamic aspects of social stratification, the term "educational opportunity structure" can be seen as describing the interconnected chains of relationships and interactions out of which personal affiliations are wrought and contextual learning arises.

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