2009

The Influence of Learning Communities on the Interaction Levels of English Students

Elizabeth Wilmer PhD,

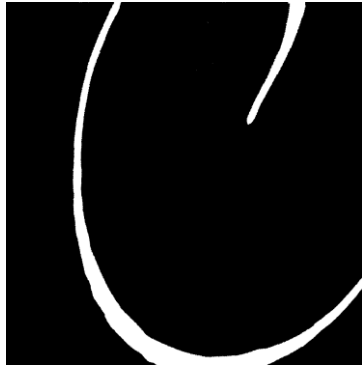# The Influence of Learning Communities on the Interaction Levels of Developmental English Students

···

By Elizabeth Wilmer

Achievement and retention of students are significant concerns for American community colleges. While 86 percent of the students surveyed by the Community College Survey of Student Engagement (CCSSE) (McClenney, 2004) indicated a goal of completing a certificate or associate's degree program, less than a quarter of those enrolled in the 1995-1996 academic year earned this credential in the subsequent six-year period.

For students entering college underprepared, these risks are magnified, increasing the possibility of low satisfaction rates, low achievement rates, and high attrition rates. Demographically, underprepared students are similar to the overall population of community college students. However, research shows that they often have a more difficult time connecting with the academic environment, are uncertain of their goals, have little academic direction, and share many of the non-cognitive characteristics found in first-generation and minority students (McCabe, 2003). These risks are important, because as Stephens (2001) found, 41 percent of freshmen at two-year colleges are enrolled in developmental courses.

Studies on retention that have been applied to developmental students have concentrated on the high attrition rates, but few have considered the theories of Astin or Tinto in relation to these students. Even fewer have reviewed the influence of learning communities on developmental English students.

This study investigates whether learning communities significantly increase the level of interaction of community-college students enrolled in developmental English.

Retention Theories

Two major approaches to improving college student retention are prominent in the existing literature: Astin's theory of student involvement and Tinto's student departure model.

Alexander Astin developed his theory of student involvement as a way of explaining the environmental influences that contribute to student development and

50 | *Inquiry*

retention. He defines student involvement as "the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1999b, p. 518). He postulated that the amount that a student learns and develops as the result of an academic program is directly related to the quality and quantity of involvement that the student has invested in the program. He also asserts that the effectiveness of any educational policy or program lies in its ability to increase the level of student involvement (Astin, 1999b), as simply exposing a student to information or coursework is not enough. The student must become actively involved in the learning process. In many ways, Astin's theory is a theory of student development in which, rather than posing ideas related to the level of development that a student achieves, Astin is concerned with how that student develops and the effects that this development has on long-term retention (Astin, 1999b).

Astin's 1975 longitudinal study on retention, *Preventing Students from Dropping Out*, identified environmental factors that affect students' persistence. He found that all the factors that positively influenced retention could be explained by his involvement theory, while those factors that led to attrition were the results of lack of involvement. However, he concluded that the factor that contributed most to student satisfaction and retention was frequent interaction with faculty (Astin, 1999b). In his 1993 study *What Matters in College?*, Astin found that the three most important forms of involvement are academic involvement, student-faculty involvement, and peer involvement. Based on this study, he recommends that students be given more opportunity for cooperative-learning activities that would increase involvement with faculty and peers inside and outside the classroom (Astin, 1999a). Astin's theories have been cited as part of the basis for several empirical studies. For example, Kuh's *The Effects of Student-Faculty Interaction in the 1990s* (2001) supports Astin's theory by stating that student-faculty interaction motivates students to devote more effort and energy toward educationally purposeful activities.

Tinto's model posits that the more a student becomes socially and academically integrated into the college environment, the more committed to graduation that student will become and the more likely that student is to be retained (Mutter, 1992). Tinto recognized that as students enter college, they are characterized by a host of variables including previous background, expectations, goal commitments, and institutional commitments and that these characteristics, along with the quality of social and academic interactions on campus, ultimately determine persistence (Haplin, 1990). Thus, Tinto's theory is a two-part theory of student attrition, examining the influence of both personal characteristics and student interactions (Guarino and Hocevar, 2005). But according to Tinto, "Other things being equal, the higher the level of academic and social integration of the

The Journal of the Virginia Community Colleges | 51

individual into the college systems, the greater will be [the] commitment to the specific institution and the goal of college completion" (Tinto, 1975, p. 96).

Tinto's study *Classrooms as Communities* (1997a) explores the relationship of active, cooperative learning to his earlier theories. In this study, Tinto states that the classroom is the place where the academic and the social meet and that for many students (especially part-time and commuter students), the classroom is the only place to achieve academic and social integration. Referencing his earlier theories, Tinto explains that while we know that interaction is important to student success and retention, we do not know how different types of interaction affect retention. His study then examines how cooperative learning in the form of a learning community – the Coordinated Studies Program at Seattle Central Community College – influenced learning and persistence. The study concluded that involvement does matter and that classroom involvement in the form of cooperative learning can have positive effects on persistence (Tinto, 1997a).

The role of active learning was further tested in a study by Braxton, Milem, and Sullivan (2000). This study found that active learning in the classroom yielded statistically significant influences on social integration, institutional commitment, and students' intent to persist.

Much of Tinto's writing (Tinto & Russo, 1994; Tinto, 1997a; Tinto, 1998) has centered on the fact that because of time constraints and other barriers, the classroom may be the only place that community-college students can achieve social and academic involvement, highlighting the impact of active and cooperative learning in the classroom, including programs such as learning communities. Tinto and Russo's (1994) study, Tinto's (1997a) study on the Coordinated Studies Program at Seattle Central Community College, and Tinto and Love's (1995) study at LaGuardia Community College revealed that participation in a classroom-based learning community helped students develop a social support system of peers, bonded them to their faculty and to the college, and engaged them in the academics of the program. These characteristics were all found to contribute to continued attendance and participation, as students were able to bridge the academic and social gaps experienced by many community-college students. For Tinto, the most important revelation of these studies was the reaffirmation that involvement matters and that social and academic involvement can be achieved in a place where "going to college is but one of a number of tasks to be completed during the course of the day. Yet, even in that setting, collaborative learning 'works.' Indeed, it may be the only viable path to greater student involvement" (Tinto, 1997a, p. 614).

Retention and Developmental Students

While studies have discussed the higher incidence of attrition among developmental students, this researcher found only a few studies that tested the concepts developed by any of the major theorists on developmental community-college students.

Miller and Gerlach's (1997) study at the University of Toledo Community and Technical College was initiated to define why 31 to 35 percent of developmental students at their medium-size, urban community college in Ohio were leaving before completing their developmental courses. In reviewing the literature, Miller and Gerlach were unable to find any studies that focused purely on the reasons for attrition of developmental students. Citing both Astin and Tinto in their literature review, Miller and Gerlach developed a two-step study. The first step involved surveying all students who had dropped out of a developmental course during the semester under consideration. With a 43 percent return rate, they were able to create demographic data of the non-persisters, to catalog self-reported reasons for quitting, and to identify levels of interaction among the students surveyed. The most frequently given reason for quitting was family problems. In addition, 68 percent indicated that they sought no tutoring assistance even though free, conveniently scheduled tutoring was available. Also, 61 percent stated that they did not interact with faculty outside of the classroom. Of these students, one third left without knowing if they were passing their classes, and 35 percent of those who quit knew that they were passing when they left.

Given this information, Miller and Gerlach developed three separate programs to enhance retention of developmental students. The first was a one-time telephone intervention program. While initially promising, this program yielded no significant sustainable effects on retention. The second intervention strategy was a mentoring program. Here, 87 percent of students participating in this program were retained in the course. Of those, 21 of the 23 students were still in school two semesters later. This was significant when considering that only 65 to 69 percent of developmental students at the college complete developmental classes. The third program was a skills-enhancement program designed to help students while enrolled in their first developmental class. A year later, 84 percent of participants were retained. Based on the success of the second and third programs, Miller and Gerlach (1997) determined that when a college makes significant efforts to increase meaningful interaction with faculty and staff, developmental students are retained at a significantly higher rate than the college average for retention of developmental students.

Defining Learning Communities

Learning communities represent one academic organizational structure that has proven effective in increasing the level of academic and social interaction. Minkler (2002, p. 2) defines a learning community as a way of "deliberately structur[ing] the curriculum so that students are more actively engaged in a sustained academic relationship with other students and faculty over a longer period of time than in traditional course settings." By comparison, Tinto defines learning communities as existing any time students are intentionally registered for two or more of the same classes (Tinto, 1997b).

Active- and collaborative-learning constructs are a central theme of learning communities. Cooperative learning is defined as students and faculty actively working together in a non-competitive environment to achieve shared learning goals. Cooperative learning occurs when students work together to achieve the goals of the group. The group mentality serves to boost the confidence levels of students, thus increasing their self-esteem and potential of academic success (Johnson, Johnson, & Smith, 1998).

Tinto (1997b) found that collaborative learning in a learning community enhances satisfaction, achievement, and retention. Collaborative learning is effective because, rather than using the traditional lecture format, it forces the students to take a more active and responsible role in the learning process, "causing students to look forward to the class, to feel respected and needed in the pursuit of knowledge, and to respect and rely upon each other in these endeavors" (J. H. Gill, as cited in Minkler, 2002).

Cross (1998) described the basis of cooperative learning as the concept that knowledge is socially constructed by people working together rather than being formed through scientific discovery or being transferred by an authoritarian teacher passing along knowledge to students. Instead, knowledge is something that teachers and students build together. Cooperative conversations help students make sense out of ideas. This concept of socially constructed knowledge highlights the value of active over passive learning, of collaborative over individual learning, and of cooperative over competitive learning (Cross, 1998).

Retention Studies on Learning Communities

Much has been written about the relationship between learning communities and retention. Cross (1998) connected learning communities to the retention theories of Astin and Tinto. Her research indicates that learning communities are valuable because they promote frequent interaction with faculty and other students inside and outside of the classroom, which research has shown causes students to be more likely to be satisfied, to achieve, and to persist. Cross cites Tinto and Russo's 1994 study as an example of the success of learning communities in promoting

54 | *Inquiry*

interaction. This study (Tinto and Russo, 1994) compared students in the coordinated-studies program with students taking similar non-learning-community classes. They found that students in the learning community had a more positive outlook, were more involved, and had a greater appreciation for diversity. Tinto and Love (1995) had similar findings in their study of learning communities at LaGuardia Community College. They concluded that students involved in the learning community had a more positive perception of their college experience, had completed more credits, had higher grade-point averages, had a slightly higher retention rate, and had a significantly higher rate of intention to continue their studies beyond their first year. These students identified group work and collaboration as important components of the learning community.

Shapiro and Levine (1999) cataloged studies at the University of Missouri-Columbia, the University of Southern Maine, the University of Wisconsin, and Bowling Green State University, concluding that learning communities increase student involvement. They also listed studies at Temple University, the University of Missouri-Columbia, Indiana University, Purdue University, and the University of Maryland that found learning communities increased achievement and retention.

While originally developed and examined for students at residential four-year institutions, these theories have been revisited and revised to accommodate the more complex needs of non-traditional students, such as those at community colleges. A common thread among these theories is the potential role of academic and social interaction on the personal development, satisfaction, achievement, and retention of students. Unfortunately, the existing literature provides little information to guide retention programs for underprepared learners at community colleges. In particular, there appears to be an "empirical black hole" (Pascarella and Terenzini, 1998, p. 155) concerning the influence of social and academic interaction on the development, satisfaction, achievement, and retention of underprepared English community college students or the influence of the concepts of learning communities.

The purpose of our study was to determine if learning communities increased the level of interaction experienced by community-college students enrolled in developmental English.

Methodology and Design

The research design was a quantitative nonexperimental correlational design. The study explored how demographic characteristics and course format influenced the level of interaction experienced by students. The study was conducted by collecting self-reported data through a questionnaire.

The setting for the study was Virginia Western Community College (VWCC), a suburban, community college in Roanoke, Virginia. During the fall

semester of 2005, we created a pilot learning community for developmental English, organized around an eight-credit English 07 class. English 07 is an integrated reading and writing course, team taught by a reading specialist and a writing specialist. In addition to the academic component, the English 07 learning community includes

- an intrusive advising component,
- use of cooperative- and active-learning techniques,
- a cultural component,
- a series of outside speakers, and
- field trip options.

The mission of this learning community is to build academic skills in reading and writing, to promote personal development, to build an understanding of the college environment, and to engage students through the use of a cohort. The intrusive advising component increases student-faculty involvement by requiring that each student meet with one of the two instructors four times during the course of the semester.

The participants were members of nine purposefully selected developmental English classes from VWCC, who agreed to participate, yielding a sample size of 120 students. Of the 120 students who completed the survey, 50 students were members of a learning-community class and 70 students were members of a non-learning-community class.

Demographic characteristics revealed that the learning-community students surveyed were younger, were less likely to be first-generation students, were more likely to be full-time enrolled, and had lower COMPASS reading and writing scores than non-learning-community students. Otherwise, the two groups were similar in demographic characteristics.

The researcher used a questionnaire that combined several measures. Measures were selected based on their fit with the constructs measured, appropriateness for the audience, and existing data showing high reliability.

First, a locally designed demographic information sheet was developed to collect demographic characteristics. Second, the course format was determined by enrollment. Registration in English 01 or 04 represented a non-learning-community format and registration in English 07 represented a learning-community format. Third, the Institutional Integration Scale (IIS) developed by Pascarella and Terenzini (1980) was used to measure the level of interaction by determining the level of social and academic integration and goal and institutional commitment.

56 | *Inquiry*

Results

The literature suggests that interaction is increased when the learning-community concept is applied. To test this, an independent sample t-test was conducted on each of the five subscales of the Institutional Integration Scale (IIS) to determine if there was a statistically significant difference in the level and type of interaction experienced by learners based on course format.

The results indicated a statistically significant difference ($p < .05$) between students participating in a learning community and those not participating in a learning community in the level of peer interaction, the level of faculty interaction, but not on the perceived level of faculty concern, level of academic and intellectual development, and level of institutional and goal commitment. However on all scales, the learning-community students had a higher perceived level than the non-learning-community students. The test yielded the results found in Table 1.

Table 1. Level and Type of Interaction Based on Course Format

Scale	N	Mean	Std. Dev.	t	df	Sig. (2-tailed
IIS: Peer Interaction				-2.105	118	.037
Non-learning community	70	22.43	5.000			
Learning community	50	24.36	4.890			
IIS: Peer Interaction				-3.601	118	.000
Non-learning community	70	16.69	3.693			
Learning community	50	19.14	3.665			
IIS: Peer Interaction				-1.818	118	.072
Non-learning community	70	20.34	3.930			
Learning community	50	21.62	3.591			
IIS: Peer Interaction				-1.536	118	.127
Non-learning community	70	25.04	3.947			
Learning community	50	26.18	4.069			
IIS: Peer Interaction				-.468	118	.641
Non-learning community	70	26.24	3.173			
Learning community	50	26.52	3.234			

Note: $p < .05$

Lessons Learned

The findings of this study are supportive of the existent literature even though many of the existing studies were conducted at four-year institutions rather than two-year community colleges and much of what exists is more than ten years old.

The results of the study suggest that students participating in a learning-community have a statistically significantly higher level of interaction than do non-learning-community participants on measures of peer interaction and faculty interaction. It should also be noted that while not statistically significantly different, learning-community participants had a higher mean level of interaction on all interaction scales measured and on both types of interaction, interaction with faculty and with peers. These findings support earlier studies that learning communities increase interaction and student involvement (Cross, 1998; Rendon, 1994; Shapiro & Levine, 1999; Tinto & Love, 1995; Tinto & Russo, 1994).

The demographic characteristics of students in this study are similar to the diverse demographic tendencies of community-college students in general in terms of age, gender, ethnicity, full-time employment, part-time enrollment, single-parent status, first-generation- college-student status, and delayed entry to college (Cohen & Brawer, 2003; Kuh, 2001; Reason, 2003; Schmid & Abell, 2003; Vaughan, 2000). These students are at risk not only due to demographic characteristics and underprepared status but also due to their lack of involvement on campus (Cohen & Brawer, 2003). Tinto (1999) found that the classroom is the only place for many community-college students to experience social and academic integration. This finding is supported by this study that illustrates that, despite demographic diversity and demographic influences on interaction, interaction is increased when intentional treatments, such as learning communities, are applied.

Both the statistical analysis and anecdotal analysis support the use of learning communities to increase peer interaction and faculty interaction among students. According to Susan Taylor, learning-community faculty member at VWCC, the learning-community experience has helped her students to develop "supportive relationships" with each other. Ms. Taylor has found that her students are interested in the health and family issues faced by their classmates, as well as the academic issues that they have in common. She has found that they help each other academically by sharing notes and by forming study groups. Ms. Taylor suggested that the support system students form in the learning-community classes are especially important for developmental students, "who need the security of a welcoming, emotionally safe environment as they transition into their first college experience" (S. Taylor, personal communication, July 3, 2008).

Learning-community faculty member Brenda Ashcraft echoed Ms. Taylor's description of the peer relationships that are formed and added that instructor-student relationships are built through participation in the intrusive advising

component of the VWCCs learning community. She found that the learning community "fosters friendship, understanding, appreciation, and mutual respect" (B. Ashcraft, personal communication, July 7, 2008) between students and faculty. In addition, faculty member Kathy Boylan (personal communication, July 8, 2008) found that the interaction created by the intrusive advising component gave faculty insights into the issues faced by students that they might not have otherwise identified and allowed them to assist their students in some unusual ways. One example was the discovery that some of their students needed glasses and hearing aids, but could not afford them. Through the use of campus resources, the faculty members were able to find the funds to help these students and give them an opportunity to overcome these subtle, yet important barriers to their success.

The faculty of VWCC's team-taught learning-community classes have found that the experience is successful in increasing student-student and student-faculty interaction, as well as faculty-faculty interaction and is a positive experience for both students and faculty.

These faculty testimonials, along with the statistical findings, support the conclusions of the existing literature that learning communities do increase student involvement. This increase in involvement has translated into high satisfaction levels from both students and faculty, as indicated in student essays, student evaluations, and faculty commentary, and has resulted in an increase from VWCC's initial offering of two class sections to our current offering of five sections.

For the fall semester 2009, we will pilot the addition of an SDV 108 to the ENG 07 learning community courses. As summarized by Kathy Boylan (personal communication, July 8, 2008), this learning community is a "work in progress. Each year we add a little more to the mix of techniques we are using and delete those strategies that do not seem to be working. We know that so far most of the strategies we have been using are working because we are seeing better retention, more student engagement, and more success stories. We can only hope to improve on these achievements."

Dr. Elizabeth Wilmer is the dean of humanities of Virginia Western Community College. Her research interests include exploring ways to improve the satisfaction, achievement, and retention of developmental English students in the VCCS.

References

Astin, A. W. (1975). *Preventing students from dropping out.* San Francisco: Jossey-Bass.

Astin, A. W. (1993). *What matters in college?* San Francisco: Jossey-Bass.

Astin, A. W. (1999a). Involvement in learning revisited: Lessons we have learned. *Journal of College Student Development, 40*(5), 587-598.

Astin, A. W. (1999b). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 518-29.

Braxton, J. M, Milem, J. F., & Sullivan, A. S. (2000, September-October). The influence of active learning on the college student departure process: Toward a revision of Tinto's theory. *The Journal of Higher Education, 71*(5), 569-590.

Cohen, A. M., & Brawer, F. B. (2003). *The American community college* (4th ed.). San Francisco: Jossey-Bass

Cross, P. (1998). Why learning communities? Why now? *About Campus*, *3*(3), 4-11.

Guarino, A. J., & Hocevar, D. (2005). Tinto's model and locus of control. *College and University Journal, 80*(4), 43-44.

Halpin, R. L. (1990). An application of the Tinto model to the analysis of freshmen persistence in a community college. *Community College Review, 17*(4), 22-32.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). Cooperative learning returns to college. *Change, 30*(4), 26-36. Retrieved June 12, 2004, from http://pqasb.pqarchiver.com/change/doc/31954423.html

Kuh, G. D. (2001). College students today: Why we can't leave serendipity to chance. In P. G. Altbach, P. J. Gumport, & D. B. Johnston (Eds.), *In Defense of American Higher Education* (pp. 277-303). Baltimore: The Johns Hopkins University Press.

McCabe, R. H. (2003) *Yes we can! A community college guide for developing America's underprepared.* United States of America: League for Innovation in the Community College and American Association of Community Colleges.

McClenny, K. M. (Director). (2004). *Engagement by design: Community college survey of student engagement: Community college survey of student engagement: 2004 findings*. The University of Texas at Austin: Community College Leadership Program. Retrieved July 7, 2005 from http://www.ccsse.org/publications/CCSSE_reportfinal2004.pdf

Miller, K., & Gerlach, J. (1997). A study of student departure from developmental courses. *Research and Teaching in Developmental Education, 13*(2), 71-84.

Minkler, J. E. (2002). ERIC review: Learning communities at the community college. *Community College Review, 30*(3), 46-63. Retrieved June 12, 2004, from http://wilsontxt.hwsilson.com/pdffull/03788/W6B9M/VSI.pdf

Mutter, P. (1992). Tinto's theory of departure and community college student persistence. *Journal of College Student Development, 33*(4), 310-317.

60 | *Inquiry*

Pascarella, E. T., & Terenzini, P. T. (1980). Predicting freshman persistence and voluntary dropout decisions from a theoretical model. *The Journal of Higher Education*, *51*(1), 60-75.

Pascarella, E. T., & Terenzini, P. T. (1998). Studying college students in the 21st century: Meeting new challenges. *The Review of Higher Education, 21*(2), 151-165.

Reason, R. D. (2003). Student variables that predict retention: Recent research and new developments. *NASPA Journal*, *40*(4), 172-191.

Rendon, L. I. (1994, August). Beyond involvement: Creating validating academic and social communities in the community college. Keynote address presented at American River Community College, Sacramento, CA.

Schmid, C., & Abell, P. (2003). Demographic risk factors, study patterns, and campus involvement as related to student success among Guilford Technical Community College students. *Community College Review*, *31*(1). Retrieved May 30, 2004 from Wilson Web Database.

Shapiro, N. S., & Levine, J. H. (1999). *Creating learning communities: A practical guide to winning support, organizing for change, and implementing programs*. San Francisco, CA: Jossey-Bass.

Stephens, D. (2001). *Increasing access: Educating underprepared students in U.S. colleges and universities past, present, and future*. Retrieved September 22, 2004 from http://faculty.etsu.edu/Stephen/increasingaccess.htm

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, *45*, 89-125.

Tinto, V. (1997a). Classrooms as communities: Exploring the educational character of student persistence. *The Journal of Higher Education, 68*(6), 599-623.

Tinto, V. (1997b). Enhancing learning via community. *The NEA Higher Education Journal*, *13*(1), 53-58.

Tinto, V. (1998). Colleges as communities: Taking research on student persistence seriously. *The Review of Higher Education, 21*(2), 167-177.

Tinto, V., & Love, A. G. (1995, February). *A longitudinal study of learning communities at LaGuardia Community College* (R117G10037). University Park, PA: National Center for Postsecondary Teaching, Learning, and Assessment. (ERIC Document Reproduction Service No. ED380178)

Tinto, V., & Russo, P. (1994). Coordinated studies programs: Their effect on student involvement at a community college. *Community College Review, 22*(2), 16-25.

Vaughan, G. B. (2000). *The community college story* (2nd ed.). Washington, D. C.: Community College Press.