

# Leveraging Cooperative Education to Guide Curricular Innovation

The Development of a Corporate Feedback System for Continuous Improvement

Editors: Cheryl Cates and Kettil Cedercreutz



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# Leveraging Cooperative Education to Guide The Development of a Corporate Feedback System for Continuous Improvement Curricular Innovation

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# Chapter Five

## Case Study: Business

By Marianne W. Lewis, Jenn Wiswell, Darnice Langford, Ann Keeling

*“...changes in the context of business, and the unprecedented pace of change, place added pressures on business schools to continuously experiment with their curricula so as to stay abreast of these changes. . . . Collected evidence from business school alumni suggests that the most important predictor of business success is management effectiveness. Alumni rate interpersonal, leadership, and communication skills as highly important in the business world, yet they often rate these skills as among the least effective components of business school curricula.”*

— **Report of the Management Education Task Force to the AACSB International Board of Directors (2002)**

### Motivations for Joining the Project

At the time the FIPSE project was awarded to the University of Cincinnati, the College of Business was in the midst of a major curriculum revision to meet requirements from the State of Ohio to aid in transfer and articulation agreements. Immediately following the state mandated change, the college embarked on a curricular change based upon pedagogic enhancements including a drive to increase co-op employer satisfaction and to enhance the college’s national reputation. The opportunity to participate in the project was seen as a way to help accomplish these goals while building a deeper and stronger relationship with the Division of Professional Practice and the co-op employer base for the College of Business.

The College of Business sought to leverage the FIPSE project Developing a Feedback Loop for Curricular Reform to guide revisions of its first-year curriculum. This curricular revision, which began in 2002, was driven by two factors. First, momentum was building nationally around the importance of providing a cohesive “First-Year Experience” (FYE). Managing this transition from high school to college was

deemed critical to setting students’ expectations, building their institutional commitment, and developing essential curricular foundations. Yet the UC business program, like most at that time, included only a single business course. Freshmen typically focused on completing their general education requirements across campus. Second, the accrediting body of business schools confirmed what many had long known, that personal and managerial effectiveness – the “soft” skills, such as communication, leadership, and interpersonal skills – best predict business success. These same skills, however, were found to be least developed in business programs. A targeted and effective FYE could emphasize and start to build these soft skills.

The First-Year Experience has grown into an international movement. It began nearly 25 years ago, as a community of faculty and administrators started sharing resources, in hopes of solving challenges related to orienting diverse students to college, engaging them in learning, and encouraging their persistence through graduation. According to John Gardner, arguably the movement’s most influential leader, interest in FYE started during the

Vietnam War, soon after the Civil Rights Act, the Voting Rights Act, and the Higher Education Act brought a new wave of students to higher education. Over time, the movement's emphasis shifted from offering a stand-alone course—typically a first-year seminar—as the primary vehicle for advancing students' college success to broader efforts seeking continuous improvements to almost every aspect of first-year collegiate life, in and beyond the classroom.

A large body of research has amassed findings that indicate FYE interventions can increase retention and student engagement. Indeed, several national centers now are devoted fully or in part to such research (e.g., Policy Center on the First Year of College, the Higher Education Research Institute, Center for the Study of Higher Education, Washington Center for Improving the Quality of Undergraduate Education, and National Survey of Student Engagement). Trade publications, academic presses, and a wide spectrum of journals devote considerable coverage to this effort. Indeed, the positive impact of FYE initiatives upon student persistence and engagement is now widely accepted.

In business programs, FYE programs increasingly are initiated to enable the socialization and learning that foster both retention and vital soft-skill development. Cox, Schmitt, Bobrowski, and Graham called for courses that use an experiential approach to bridge more technical, discipline-specific competencies with the broader personal and interpersonal skills needed in today's business world. The University of Pennsylvania's Wharton School, for instance, launched a freshmen course stressing such areas as leadership, teamwork, and communication skills. Yet a recent study of that program noted the challenge of evaluating the students' subsequent success in these areas. According to Tuleja and Greenhalgh (2008), "At best, data

take the form of multiple self-report surveys describing student satisfaction and instructor approval."

The UC College of Business recognized the tremendous retention and learning opportunities and looming assessment challenges of FYE. As a design team began work on the curriculum, conversations started with the Division of Professional Practice regarding their FIPSE project. The employer survey instrument offered a unique means of evaluating students' soft skills in practice. More specifically, the design team focused on students' performance in their first co-op positions, comparing students who had participated in the new FYE with those prior to the curriculum revision. We now detail this case, its results and future implications.

## Description of the College and the Program

The College of Business at the University of Cincinnati has a nationally ranked undergraduate program. In 2007, *BusinessWeek Magazine* ranked UC's College of Business as one of the top undergraduate degree programs in the Midwest along with the likes of the University of Michigan, Indiana University, the University of Notre Dame and Washington University. The UC College of Business is a high impact research college with a strong tradition of experience based learning including one of the largest optional business co-op programs in the nation and a ground breaking mandatory co-op program that is designed to produce Cincinnati's future business leaders. The mandatory co-op program, Lindner Honors-PLUS, is designed for highly academically motivated students and includes six quarters of cooperative education, a freshman year internship experience, at least one quarter of study abroad experience, and a myriad of cohort based learning experiences designed to develop leadership skills. The

college attracts a quality student body with average SAT scores between 1020 and 1190. There are over 2,000 undergraduate students and 500 graduate students enrolled in the College of Business annually.

In 2002, the College of Business was a first-mover in FYE on the UC campus, spurred by two factors. First, unacceptable retention rates highlighted the need to better socialize incoming students. The freshman year was seen a pivotal time for setting student expectations and building curricular foundations. FYE efforts, such as Learning Communities, also offered opportunities to engage students, building stronger links between students and between students and the institution.

Second, survey and qualitative feedback from business faculty and employers suggested that our students lacked professional development, particularly in the personal and managerial “soft skills.” That same year the AACSB published an extensive study mirroring these concerns. Specifically, the report identified communication, leadership, and interpersonal skills as the best predictors of business success. Yet targeted development of these same skills was scarce in U.S. business programs. The college turned to FYE as a means of emphasizing and starting to build these core competencies.

### **The Curricular Reform Effort**

The College of Business’s FYE initiative began with a Learning Communities (LCs) pilot project in 2002. A dedicated team of faculty and staff, university- and college-level leadership, and funding from an Ohio Learning Network Grant fueled the effort. Starting small, the team initiated four LCs comprised of 20-25 students each taking courses together throughout their freshman year. The LCs included a set of common courses: the lone business course labeled

Management Skills Practicum (MSP), and the general education requirements (which typically included English, math, psychology and/or communication). Interestingly, the most valuable outcome of the pilot was the development of a learning community among the involved faculty, staff and administrators. Ongoing conversations among the design team spurred creativity and higher aspirations for FYE.

Working through that summer, this team expanded the FYE efforts dramatically. First, they determined that all first-year business students would participate in a learning community. Second, they focused on revising MSP to make the most of freshmen’s only course within the college. This course had been taught lecture-style, two days a week in a large classroom. To enable both socialization and efficiency, the team developed a creative solution. One day a week, the class would meet in 70-student sections (combining three LCs per section) for lectures and guest speakers. The other day, students would meet with their learning community in breakout sessions dedicated to cases, discussions and problem-solving applications. In addition, each LC breakout session was led by a student mentor, serving as the teaching assistant.

The most innovative element of the expanded FYE, however, became labeled Project Fast Track. The design team sought an experiential project that students could complete with their LC and that would demand application of their soft skills. The result paired each LC with a leading corporation to conduct intensive research. Greater Cincinnati is home to some of the world’s most admired corporations from Procter & Gamble and Chiquita to Kroger and General Electric. A comprehensive list of all sponsors is presented in Table 5.1.

The opportunity to learn about and from such business leaders offered a tremendous learning collaboration.

American Financial	Cincinnati Bell	Cinergy	Cintas
Convergys	Delta	E.W. Scripps	Federated
Fifth Third Bank	Frisch's	General Electric	Johnson & Johnson
Kroger	Procter & Gamble	Toyota	US Bank

Table 5.1 Corporate partners for Project Fast Track.

Participating firms provided freshmen a “live” context for exploring key business concepts and best practices, and opportunities to interact professionally with the firms’ managers in different business functions. The first class of Project Fast Track teams is shown Figure 5.1.

### Results and Impact of the Project

Raising student retention between their first and second year, was a central goal of the College’s FYE initiative. More specifically, the development team sought to raise retention dramatically from 78 percent in 2002, to a rate more in line with the most selective and prestigious colleges on campus (Design, Art, Architecture and Planning at 89 percent, and Engineering at 86 percent). Monitoring College of Business retention rates closely, the team saw a slow but steady increase. Four years after its launch (entering class of 2006, returning autumn 2007), retention had risen to

83 percent. Such data encouraged the team, while spurring them to continue examining areas for improvements.

The much more challenging goal was evaluating the development of students’ soft skills. Thankfully, the College had a unique resource at their disposal: cooperative education. Managed by UC’s Division of Professional Practice, co-op is central to the University and strongly encouraged within the College of Business. Indeed, cooperative education was founded at the University of Cincinnati in 1906. Involving alternating quarters of coursework and professional experience, co-op offered the potential for employers to evaluate students’ skills. At the end of each co-op rotation, students’ supervisors complete an extensive survey, gauging the student performance.

Recognizing the potential wealth in this employer feedback, the Division of Professional Practice had launched an extensive project (funded by FIPSE – Fund



Figure 5.1 The 2003 Business Freshmen in their Project Fast Track Teams.

for the Improvement of Postsecondary Education) to systematize co-op evaluations so that they might guide ongoing curriculum development. The employer evaluation form was revised using employer focus groups to evaluate the most critical skills. Conducting an exploratory factor analysis on resulting survey questions, these items loaded onto five factors often noted in management education research: professionalism, expressive communication, work management, leadership and teamwork. Factor loadings are presented in Table 5.2. Not surprisingly, the final co-op evaluation survey included items assessing personal and managerial soft skills.

Leveraging this instrument, the design team explored the question: does the new first-year experience positively impact stu-

dents' performance on their initial co-op experience? Business students' first co-op occurs in their sophomore year, offering excellent timing to address this question. The design team compared the performance of students who had no First Year Experience to those who had completed the new program. The goal of this preliminary study was to identify early indicators of program effectiveness and/or areas needing further revision.

Analyzing the results, the design team hoped to see student means increase, indicating improvements in the skill areas, while standard deviations decrease, indicating greater consistency among student performance. Table 5.3 addresses the development of the measured factors on a parameter level. Development of the under-

Table 5.2. Exploratory Factor Analysis for Soft Skill Items (*F* = factor).

	F1	F2	F3	F4	F5
Shows initiative/is self-motivated	0.87	0.18	0.11	0.04	0.25
Demonstrates a positive attitude toward change	0.83	0.16	0.27	0.19	0.14
Exhibits good listening and questioning skills	0.77	0.29	0.34	0.17	-0.04
Assumes responsibility/accountable for actions	0.74	0.34	0.16	0.24	0.17
Demonstrates flexibility/adaptability	0.68	0.00	0.23	0.11	0.54
Possesses honesty/integrity/personal ethics	0.64	0.36	0.12	0.01	0.43
Understands/contributes to the organization's goals	0.54	0.28	0.29	0.21	0.41
Allocates time to meet deadlines	0.23	0.87	0.09	0.10	0.18
Sets goals and prioritizes	0.25	0.75	0.28	0.34	0.15
Manages several tasks at once	0.32	0.71	0.44	0.15	0.11
Manages projects and/or other resources effectively	0.29	0.69	0.16	0.32	0.37
Writes clearly and concisely	0.33	0.25	0.83	0.15	-0.04
Makes effective presentations	0.25	0.09	0.73	0.25	0.21
Speaks with clarity and confidence	0.11	0.17	0.66	0.18	0.50
Exhibits self-confidence	0.27	0.39	0.63	0.26	0.32
Motivates others to succeed	0.08	0.28	0.19	0.86	0.05
Gives direction, guidance and training	0.12	0.00	0.16	0.85	0.06
Manages conflict effectively	0.20	0.26	0.17	0.76	0.04
Works effectively with others	0.36	0.31	0.07	-0.14	0.73
Functions well on multidisciplinary team	0.24	0.26	0.38	0.30	0.70

Extraction Method: Principal Component Analysis. Rotation Method Varimax with Kaiser Normalization. Rotation converged in 7 iterations.

Table 5.3: Measurement results pertaining to all underlying parameters.

Measured parameter PROFESSIONALISM [Cronbach Alpha = 0.935]		MEAN		STDEV		n		MEAN		STDV	
		GR1	GR2	GR1	GR2	GR1	GR2	Δ	Cnf.	Δ	Conf.
P1	Exhibits good listening and questioning skills	4.29	4.15	0.71	0.99	28	20	-0.14		0.28	> 90%
P2	Assumes responsibility/accountable for actions	4.50	4.35	0.65	0.75	26	20	-0.15		0.10	
P3	Possesses honesty/integrity/personal ethics	4.59	4.70	0.75	0.57	27	20	0.11		-0.18	
P4	Shows initiative/is self-motivated	4.41	4.30	0.80	1.08	27	20	-0.11		0.28	> 90%
P5	Demonstrates a positive attitude toward change	4.35	4.30	0.63	0.86	26	20	-0.05		0.24	> 90%
P6	Understands/contributes to organization goals	4.27	4.42	0.60	0.84	26	19	0.15		0.23	> 90%
P7	Demonstrates flexibility/adaptability	4.48	4.60	0.64	0.60	27	20	0.12		-0.04	
<b>EXPRESSIVE COMMUNICATION [Cronbach Alpha = 0.926]</b>											
EC1	Writes clearly and concisely	4.00	4.11	0.76	0.76	25	18	0.11		-0.01	
EC3	Speaks with clarity and confidence	3.96	4.20	0.84	0.70	28	20	0.24		-0.14	
EC3	Makes effective presentations	4.06	4.36	0.94	0.67	18	11	0.31		-0.26	
EC4	Exhibits self-confidence	3.96	4.32	0.85	0.75	27	19	0.35	>90%	-0.10	
<b>WORK MANAGEMENT [Cronbach = 0.923]</b>											
OP1	Manages projects and/or resources effectively	4.08	4.37	0.84	0.60	26	19	0.29		-0.25	> 90%
OP2	Sets goals and prioritizes	4.04	4.06	0.89	0.73	25	18	0.02		-0.16	
OP3	Manages several tasks at once	4.27	4.22	0.83	0.73	26	18	-0.05		-0.10	
OP4	Allocates time to meet deadlines	4.23	4.26	0.95	0.73	26	19	0.03		-0.22	
<b>LEADERSHIP [Cronbach Alpha = 0.893]</b>											
L1	Gives direction, guidance and training	4.08	4.00	0.86	0.50	13	9	-0.08		-0.36	> 90%
L2	Motivates others to succeed	3.93	4.00	0.88	0.60	15	12	0.07		-0.28	> 90%
L3	Manages conflict effectively	4.06	4.25	0.83	0.75	17	12	0.19		-0.07	
<b>TEAMWORK [Cronbach Alpha = 0.782]</b>											
T1	Works effectively with others	4.41	4.75	0.75	0.44	27	20	0.34	>90%	-0.30	> 90%
T2	Functions well on multidisciplinary team	4.28	4.65	0.61	0.61	25	17	0.37	>90%	-0.01	

Group 1: no First Year Experience (control group)

Group 2: Integrative First Year Experience

lying parameters is further illustrated factor by factor in Figures 5.2–5.6.

Although the sample was small, the results provided insightful direction to the design team. The items indicating expressive communication, work management, leadership and teamwork showed nearly unanimous improvement. Regarding teamwork, Figure 5.6 conveys that both the ability to work with others, as well as the

ability to work on a multidisciplinary team improved with a 90 percent confidence level. This is certainly no surprise, considering that the pedagogic improvement is focusing on teamwork abilities. The confidence level of the development of means can be considered conservative as the calculations account for the bias uncertainty of different assessor populations through an expanded t-test as described in Chapter 3.



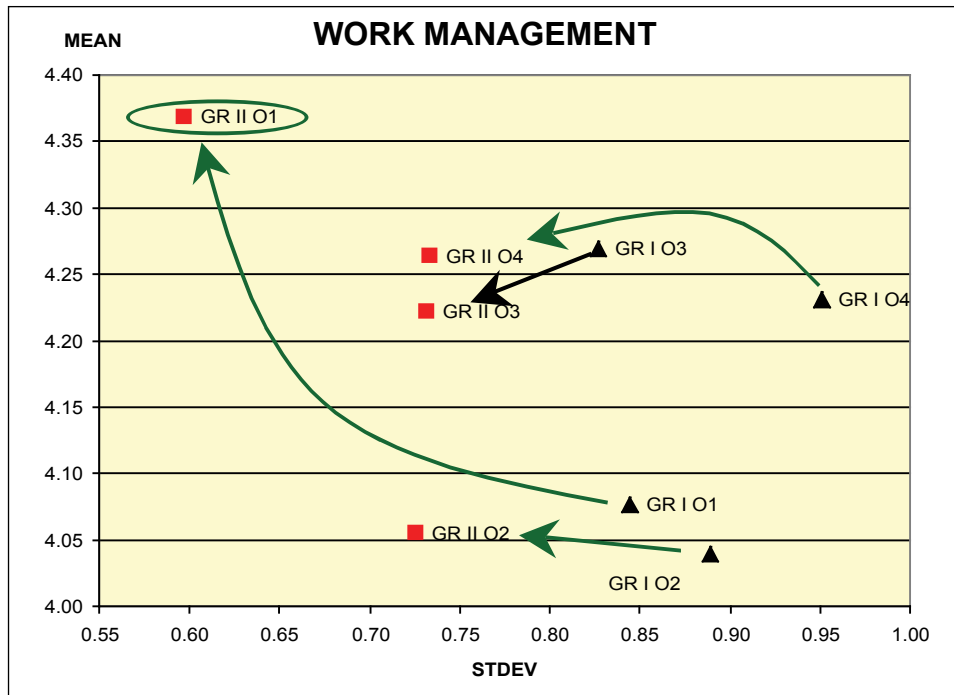


Figure 5.4 Changes in the underlying parameters of work management.  
Green = pos. change; Circle = significant change.

GRI = Group 1  
 OP1 = Manages projects and/or resources effectively  
 OP3 = Manages several tasks at once  
 GR II = Group 2  
 OP2 = Sets goals and prioritizes  
 OP4 = Allocates time to meet deadlines

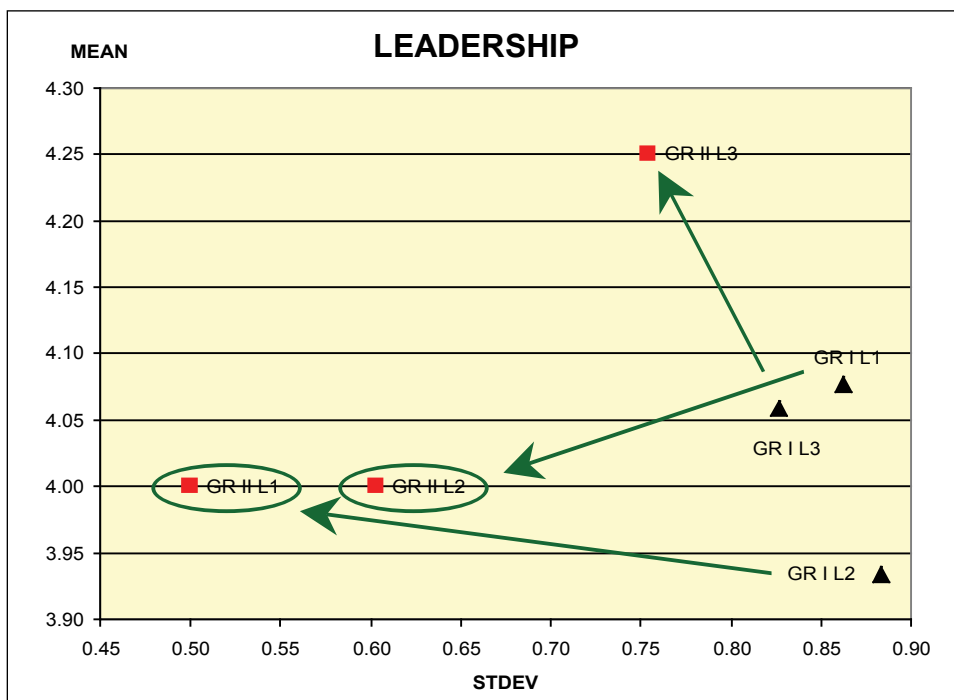


Figure 5.5 Changes in the underlying parameters of leadership.  
Green = pos. change; Circle = significant change

GRI = Group 1  
 L1 = Gives direction, guidance and training  
 GR II = Group 2  
 L2 = Motivates others to succeed  
 L3 = Manages conflict effectively

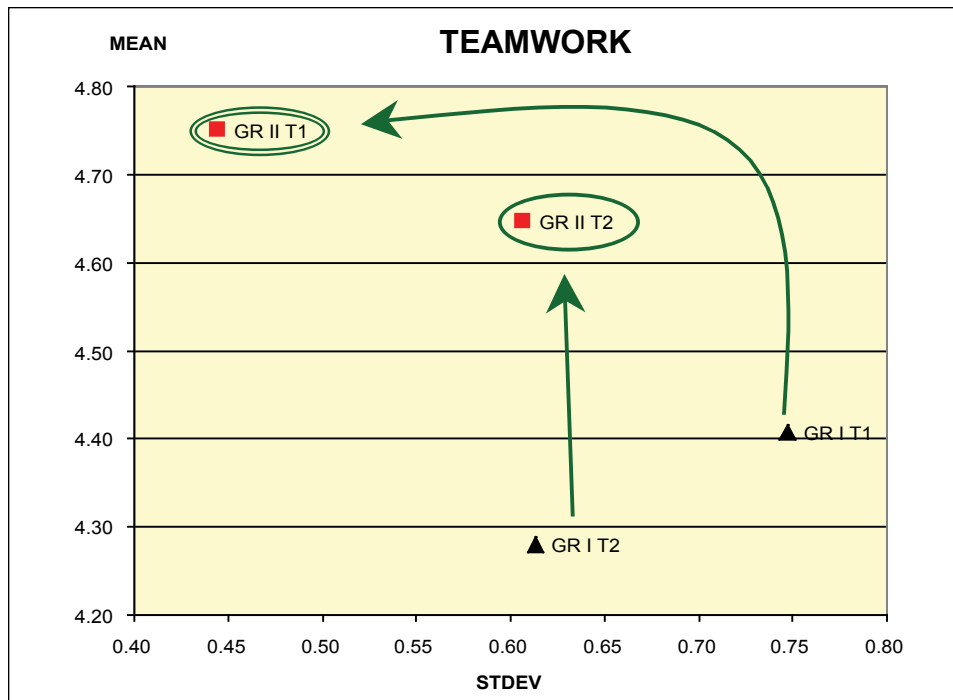


Figure 5.6 Changes in the underlying parameters of teamwork.  
Green = pos. change; Circle = significant change.

GRI = Group 1  
T1 = Works effectively with others

GRII = Group 2  
T2 = Functions well on multidisciplinary team

Similar positive trends can be observed with regard to leadership and work management. All underlying parameters show an increase in mean and a decrease in standard deviation. The curricular change appears to not only produce better results, but the student performance is also more homogeneous. Here again *Gives Direction, Guidance and Training; Motivates Others to Succeed; and Manages Projects and/or Resources Effectively*; show a statistically significant improvement in the homogeneity of outcomes.

Before moving to discuss professionalism and expressive communication, it might be interesting to reflect on the outcome of the factor analysis. The factor analysis splits issues related to communication such as *Writes Clearly and Concisely; Speaks with Clarity and Confidence; Makes Effective Presentations; Exhibits Self-confidence; Exhibits Good Listening*

and *Questioning Skills; Understands/Contributes to Organization Goals* over two factors. The first four parameters (writing, speaking, presenting, and exhibiting self confidence) are explicitly student driven, a fact that caused the authors of this chapter to name the factor Expressive Communication. These parameters showed a positive development both with regard to standard deviations and means. The remainder of communications related parameters, such as *Exhibits Good Listening and Questioning Skills* and *Understands/Contributes to Organization Goals*, in contrast, showed a negative trend. One can only speculate regarding reasons for this development. It is tempting to hypothesize that an enhanced opportunity to practice teamwork encourages communication between team members; the situation is particularly suited for training students in lateral communication. Because of the large team

size, the educational situation fosters an atmosphere where only some portion of students is provided an opportunity to develop leadership. The students assuming these leadership roles will have opportunities to practice vertical communication. The role that each student played in the team could certainly be reflected in their subsequent work performance.

It is further important to remember that the assessment data at hand solely reflects the aggregated opinion of supervisors. In a work situation, students that have not had leadership roles on campus might be more comfortable in taking guidance from their team, rather than from a supervisor. As the voice of the supervisor is the only one reflected in the data, it should be no surprise that *Exhibits Good Listening and Questioning Skills, Shows Initiative/is Self-motivated, Demonstrates a Positive attitude Toward Change, and Understands/Contributes to Organization Goals* show an increased heterogeneity in behavior. It is further important to recognize that there is no significant difference in the means between the control and the treated group. The difference is solely reflected in behavioral heterogeneity. Based on the data, the design team noted the importance of rotating leadership responsibilities within the group, making sure that all students get exposed to both lateral and vertical communication.

## Future Directions

As FYE efforts within the College of Business gathered momentum, the FIPSE project provided valuable direction. This early study, combined with rising retention rates, encouraged broadened support for the freshmen curriculum. Since its initial, college-wide launch, the design team has added a second course with elements targeted explicitly at enhancing professionalism. This one-credit course for each of three quarters, titled, “Pathways to Business,” includes class sessions addressing image management, networking, professional etiquette, and goal setting.

The potential for the FIPSE project, however, goes well beyond the depicted FYE initiative. The College of Business has recently revised its junior- and senior-level curriculum, adding substantial depth to its varied majors. Again, employer feedback will enable comparisons of student performance before and after the revision. As reporting of the co-op data becomes institutionalized, the opportunities will magnify. Similar to any curriculum preparing students for a dynamic workplace, continuous improvement and change are essential. Future uses may be proactive, signaling the need for curricular, as well as reactive, testing the impact of revisions. In combination, co-op data may become part of an ongoing cycle of institutional learning.